

***THE SUPER GUIDE***

***to***

**READING  
COMPREHENSION**

***for***

**GRE**

**10 CATEGORIES  
550 AUTHENTIC QUESTIONS**

**AMERICAN EDUCATION AIDS**

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## Chapter 1

### INTRODUCTION

***The contents of comprehension passages as well as the types of questions under them are similar in GRE and GMAT.***

The Verbal Ability portion of the *computerised version of GRE* contains 3 reading passages, with 2 + 2 + 4, or 2 + 3 + 3 = 8 questions to be answered based on their content.

The earlier *paper-based GRE* used to contain two full sections on Verbal Ability, each section having 2 comprehension pages. Each of these sections used to contain 11 questions under comprehension, totalling 22 for the entire test.

So, the number of comprehension questions you will be called upon to answer in the computer-based GRE is *just less than half* the number you would have answered in a paper-based test.

The Verbal Ability portion of the *computerised version of GMAT* contains 4 reading passages, with 3 + 4 + 4 + 3 = 14 questions to be answered based on their content.

The earlier *paper-based GMAT* used to contain one full section on Reading Comprehension with as many as 25 questions under three passages.

So, the number of comprehension questions you will be called upon to answer in the computer-based GMAT is *just a little more than half* the number you would have answered in a paper-based test.

*There is an important difference between the comprehension questions and the other questions in the computer-based GRE.*

For the other types of questions, once you have answered a question, confirmed it and have been posed the next question on the computer screen, you cannot go back to it and change your answer.

This rule does not apply to comprehension questions. ***You can go back to an earlier question and change your answer if you wish to.***

***You cannot go back to a previous question in the computer-based version of GRE or GMAT.***

The subject matter of the comprehension passages in GRE and GMAT will relate to any of the four different areas:

***Biological sciences*** (Botany, Zoology, Microbiology, Pharmacy, Medicine etc)

***Physical sciences*** (Mathematics, Physics, Chemistry, Geology, Astronomy, Astrophysics etc)

***Humanities*** (Literature, Art, Music, Photography, Cinema etc.)

***Social Sciences*** (Economics, Politics, Sociology, History, Anthropology, Public Administration, Business History etc.)

The passage under Sociology often has an ethnic content relating to Blacks, minorities and women's rights. The passage under Literature also often relates to women or Black authors.

GRE and GMAT are taken by candidates irrespective of whether they had studied science, humanities or social sciences for their undergraduation. So, the content of at least two of the three passages would be totally new to every GRE or GMAT candidate.

So, do not despair of the science passage if you are not a science student, or of the humanities passage if you are not a humanities student.

***For answering questions under a comprehension passage, no prior knowledge of the subject dealt in it is required or expected. The answer to each question is available in the given passage itself.***

### SHORT DESCRIPTION OF THE CHARACTERISTICS OF COMPREHENSION PASSAGES

#### HUMANITIES PASSAGES

A ***Humanities passage*** usually takes a specific point of view regarding literature, music, art etc, or may compare several views. The language may sometimes be abstract, and the sentences will be tightly written.

#### SOCIAL SCIENCE PASSAGES:

A ***Social Science passage*** usually describes an event or an era with special focus on the role played by a

particular person or group of persons. The tone may be neutral, or partisan, or may be opinionated.

### SCIENCE PASSAGES

These passages fall under two broad categories: *General* and *Specific*.

A **General Science passage** will deal with the history of a scientific discovery, the development of a scientific method or procedure, the success or failure of science in explaining an observed phenomenon and similar 'soft' themes. These passages usually support a specific point of view, and the tone may be opinionated and not neutral.

A **Specific Science passage** usually deals with some dry facts, and may use a number of scientific expressions unknown to you, some of them (particularly in botany and zoology) consisting of Greek or Latin words and phrases. But you need not be cowed down by these expressions, because the main idea or theme will not be complex, and it is possible for you to answer the questions *even if you do not understand the scientific expressions or jargons*.

Specific Science passages are always *neutral* or *objective* in tone.

### TYPES OF COMPREHENSION QUESTIONS

Though the passages featured under comprehension relate to different topics, the questions asked under them follow some definite patterns.

These are:

1. Questions asking you to spot an information *specifically mentioned* in the passage.
2. Questions asking you to identify an information or idea which is *implied or suggested* in the passage, or which can be *inferred from* the passage.
3. Questions asking you to identify *the main idea or primary purpose* of the author.
4. Questions asking you to identify the *tone* of the passage or the *attitude* of the author towards a person or a topic referred to in the passage.
5. Questions asking you to state the *technique* adopted by the author in presenting the facts of the topic or his views.
6. Questions asking you to *extrapolate* the author's ideas to other situations, including the identification of *situations analogous* to those described in the passage.
7. *Negative or exception questions*: Questions asking you which among the five choices is *not true* according to the information contained in the passage, or with which the author of the passage *would not agree*.
8. *Roman numeral questions*: Questions asking you to analyze three statements identified with Roman numerals I, II, III, and identify *which among them is / are true*.

Here are examples of such questions and how to crack them:

#### 1. 'SPECIFIC FACT' QUESTIONS

Examples of such questions are:

According to the passage, the New Critics considered the ideas found in a novelist's work to be ....

According to the passage, an issue facing Black poets in the 1920's was whether they should ....

The passage says that endocasts are of limited value in the study of evolution because they are ....

For answering such questions, look for the *key word or phrase* in that question, and locate the sentence in the passage *in which this key word or phrase occurs*.

For example, the key phrases in the three questions given above can be identified as "New Critics", "Black poets in the 1920's" and 'endocasts' respectively.

Now, locate the sentence in the passage in which these phrases occur. Then read the three sentences - the one *preceding* this sentence, *this sentence itself* and the one *following* this sentence, and you will usually find the answer there.

In the computer-based test, scroll the passage on the computer window *until the sentence in which the key phrase occurs is in the middle of the screen*, and then read the sentences *above* and *below* it.

Very often, the lines of a comprehension passage would be *numbered* on the left side. A specific fact question will sometimes refer to the line numbers and will be based on the information in those lines. Examples of such questions are:

According to the passage, the role of the flow restriction (lines 16-17) in a heat pump is to ....

The author refers to 'many formations' (line 16) primarily in order to ....

Which of the following best paraphrases Flaubert's statement in lines 1-4?

For answering such questions also, scroll the passage on the screen *till the lines mentioned come to the middle of the screen*, and read the three sentences visible on the screen.

**'Specific answer' questions under a comprehension passage will usually be sequential, meaning that the answer to an earlier question can be found in an earlier part of the passage, and the answer to a later question can be found in a later part of the passage.**

## 2. 'INFERENCE' QUESTIONS

Examples of such questions are:

*It can be inferred from the passage that the author finds the work of the majority of Black poets at the turn of the century to be ....*

*It can be inferred from the passage that, in evaluating the Vinaver theory, some critics were ....*

*It can be inferred from the passage that, before 1910, the normal running time of a film was ....*

*It can be inferred from the passage that the 'first theory' of grazer control mentioned in line 4 would have been more convincing if researchers had been able to ....*

*The passage suggests that the age of Shergottites is probably ....*

*The passage suggests that if there were a slight global warming at the present time, it would be ....*

The difference between the 'specific fact' question and the 'inference' question is that the answer to the former will be found *directly* in the passage itself (even though in a *different phraseology* from that found in the correct answer choice), while the answer to the latter will *not be directly available* but will have to be *inferred* by you *through a slight logical extension* of what is specifically stated in the passage.

For answering an 'inference' question also, you should first identify the *key word or phrase* in the question, locate the sentence in which that key word or phrase occurs, and read three consecutive sentences in its neighbourhood.

The key phrases in the above examples are 'Black poets at the turn of the century', 'critics of Vinaver theory', 'normal running time of a film before 1910', 'theory of grazer control', 'age of shergottites' and 'global warming at present time' respectively.

Where the line number is mentioned as in example 3 above, your task becomes easier.

As stated above, the inference you are asked to draw from an information contained in the passage will be just a *simple logical extension*, and will not be far removed from it.

## 3. 'MAIN IDEA' QUESTIONS

Examples of such questions are:

*In this passage, the author is primarily concerned with .....*

*The primary purpose of the passage is to ....*

*Which of the following would be the most appropriate title for the passage?*

*Which of the following summarizes the author's main point?*

Remember that the primary purpose of a passage is one *which is mentioned repeatedly in the passage*, and aspects of which are stated in *each paragraph*.

The hint on the primary purpose of the passage will *usually be found in the first two sentences of the passage*, and also in the first sentence of each paragraph.

The *wrong* answer choices to a 'main idea' question will often consist of ideas which are touched upon *only in just one or two sentences* of the passage. You must *reject these choices* in favour of the one *which is referred to repeatedly in a major part of the passage*.

If all the paragraphs of the passage are about Tolstoi as a writer, then any answer choice that talks *generally of literature* but *does not even refer to Tolstoi by name* can straightaway be *rejected* as inappropriate.

***While trying to answer a 'main idea' question, it is often possible to arrive at the correct answer through a process of elimination of the wrong answers on the basis of the above considerations.***

## 4. 'TONE OF THE PASSAGE' QUESTIONS

These questions ask you to gauge the author's *attitude towards a person or a thing or a quality* discussed in the passage.

Examples of such questions are:

*The author's attitude towards photography in the cinema before Griffith can best be described as ....*

*The author regards the idea that all highly creative artistic activity transcends limits with ....*

*In terms of its tone and form, the passage can best be characterized as ....*

*The author's discussion of Black Fiction can be best described as ....*

The answer choices to 'tone of the passage' questions will normally consist of single words or short phrases. Some examples of sets of answer choices are:

*indifferent; nostalgic; amused; condescending; hostile*

*deep skepticism; strong indignation; marked indifference; moderate amusement; sharp derision*

*dogmatic explanation; indignant denial; enthusiastic praise; speculative study; lukewarm review*  
*serious reservation; grudging respect; enthusiastic endorsement; qualified admiration; unresolved ambivalence*  
*enthusiastic; indifferent; wary; derisive; defensive*

GRE/GMAT passages are usually neutral in tone, and *do not criticize anyone harshly*. Also, unless a subject or a person is important enough, it is not likely that ETS would have chosen a passage relating to it or to him/her for being featured in the test.

Therefore, without even reading the passage, phrases *which are extremely negative or abusive in tone can straightaway be discarded* so that, by a process of elimination, the choices can be restricted to just two or three.

In the first set of words given above, the choices 'indifferent' and 'hostile' can straightaway be eliminated.

In the second set, the choices 'strong indignation', 'marked indifference' and 'sharp derision' can be eliminated.

In the third set, 'dogmatic explanation' and 'indignant denial' are not likely to be the correct answers.

In the fourth set, 'serious reservation' and 'unresolved ambivalence' can be discarded.

In the fifth set, 'indifferent' and 'derisive' can be eliminated.

The answer choices to 'tone of the passage' questions may sometimes use a less familiar term to express the same idea, and could also be a test of your vocabulary as shown below.

<i>Common word</i>	<i>Less familiar word</i>
neutral	objective
cautious	wary
praising	laudatory
respectful	reverential
admiring	adulatory
ridiculing	lampooning
criticizing	denigrating; disparaging
critical	derisive
model	exemplary
example	metaphor
suspicious	skeptical
humorous	facetious
strange	abnormal
happy	euphoric
controversial	polemical; disputatious
harmonious	conciliatory
unlikely	implausible
neutral	ambivalent
guessing	speculative
unenthusiastic	lukewarm
consistent	unrelenting

## 5. 'TECHNIQUE' QUESTIONS

Examples of such questions are:

*Which of the following is the most accurate description of the organization of the passage?*

*Which of the following statements best describes the organization of the lines 27 to 41?*

Though you may be unfamiliar with questions of this type, it is usually easy to spot the correct choice on the basis of information in the passage.

## 6. 'EXTRAPOLATION' QUESTIONS

This type of question asks you to extend the author's reasoning to *another situation that is analogous or similar to the one described in the passage*, and then determine whether the reasoning would or would not work in that situation. Some examples are:

*Which of the following situations is most closely analogous to the situation described by the author as one of nature's great ironies in lines 28 - 32?*

*Most nearly parallel, in its fundamental approach, to the research program described in the passage would be a program designed to ....*

*Which of the following describes a situation most analogous to the situation described in lines 9 - 13?*

These questions are the most difficult under comprehension passages, and ***you have to carefully evaluate the answer choices and determine which one among them is analogous to the idea referred to from the given passage.***

### 7. 'NEGATIVE OR EXCEPTION' QUESTIONS

Such questions constitute another form of 'specific fact' questions, the difference being that, among the five choices, *four* would have been specifically stated in the passage, and one would *not* have been stated. You will be asked to spot the choice that is *not stated*.

In another variation of this type, four of the five choices will *logically follow from an argument of the author* (and will therefore be agreed to by him), while *one will not*, and you will be asked to spot the last one.

Some examples of this type are:

*The passage states all of the following about photographs EXCEPT:*

*The author asserts that Griffith introduced all of the following into American cinema EXCEPT:*

*The passage supplies information for answering all of the following questions EXCEPT:*

*According to the passage, John Coltrane did all of the following during his career EXCEPT:*

*The author of the passage uses all of the following in the discussion of Rosenblatt's book EXCEPT:*

*The author of the passage is likely to agree to all of the following statements EXCEPT:*

These questions are not difficult to answer, but can be time-consuming because you will have to spot *not just one*, but *as many as four*, facts or statements that may occur in different parts of the passage, and then *select that choice which does not occur anywhere*. Once you identify the key word or phrase in each choice and locate where they occur in the passage, you can arrive at the correct answer through a process of elimination.

### 8. 'ROMAN NUMERALS' QUESTIONS

Such questions are not difficult, but are time-consuming.

An example of such question is:

2. Which of the following statements about milkweed is (are) made in the passage

I. They repel insects which feed on them

II. They are the exclusive diet of some insects

III. They produce substances which repress the growth of other plant life.

(A) I only (B) II only (C) I and II only

(D) III only (E) I, II and III

One advantage with such questions is that if you find, for instance, that II is wrong in the example above, you can eliminate *all the choices (B), (C) and (E) which contain II*, thereby shortlisting the possible answer to (A) and (D), from which the correct answer can then be chosen easily.

### 9. 'NEXT SENTENCE' QUESTIONS

One variation of the 'Inference' question asks you to choose, from among the answer choices, *the probable next sentence if the given passage is continued further*.

Examples of such questions are:

*Which of the following statements would be most likely to begin the paragraph immediately following the passage?*

*Which of the following statements would most logically conclude the last paragraph of the passage?*

*Which of the following statements is most likely to be a continuation of the passage?*

The correct choice to such questions must be one **which has immediate relevance to the very last sentence in the given passage**.

The computer-based GRE may incorporate a different version of this question. A sentence will be given, and you will be asked to state where that sentence, among five answer choices, will fit in logically *within the passage*..

### 10. 'AUDIENCE OR SOURCE' QUESTIONS

Examples of such questions are:

*The author is probably addressing which of the following audiences?*

*The above passage is most probably an extract from ....*

Such questions are also in the nature of *inferences*, and can be answered quite easily on the basis of the substance of the passage.

We shall now answer questions under one passage under each category - Humanities, Social Science and Science - and analyze them.

Try to answer the questions by yourself first before looking into the analysis.

**All these passages have been taken from earlier GRE and GMAT question papers, and represent the exact level of difficulty of the questions you will face when you sit for your test.**

Picture-taking is a technique both for annexing the objective world and for expressing the singular self. Photographs depict objective realities that already exist, though only the camera can disclose them. And they depict an individual photographer's temperament, discovering itself through the camera's cropping of reality. That is, photography has two antithetical ideals: in the first, photography is about the world and the photographer is a mere observer who counts for little; but in the second, photography is the instrument of intrepid, questing subjectivity and the photographer is all.

These conflicting ideals arise from a fundamental uneasiness on the part of both photographers and viewers of photographs toward the aggressive component in "taking" a picture. Accordingly, the ideal of a photographer as observer is attractive because it implicitly denies that picture-taking is an aggressive act. The issue, of course, is not so clear-cut. What photographers do cannot be characterized as simply predatory or as simply, and essentially, benevolent. As a consequence, one ideal of picture-taking or the other is always being rediscovered and championed.

An important result of the coexistence of these two ideals is a recurrent ambivalence toward photography's means. Whatever the claims that photography might make to be a form of personal expression on a par with painting, its originality is inextricably linked to the powers of a machine. The steady growth of these powers has made possible the extraordinary informativeness and imaginative formal beauty of many photographs, like Harold Edgerton's high-speed photographs of a bullet hitting its target or of the swirls and eddies of a tennis stroke. But as cameras become more sophisticated and more automated, some photographers are tempted to disarm themselves or to suggest that they are not really armed, preferring to submit themselves to the limits imposed by premodern camera technology because a cruder, less high powered machine is thought to give more interesting or emotive results, to leave more room for creative accident. For example, it has been virtually a point of honor of many photographers, including Walker Evans and Cartier-Bresson, to refuse to use modern equipment. These photographers have come to doubt the value of the camera as an instrument of "fast seeing". Cartier-Bresson, in fact, claims that the modern camera may see too fast.

This ambivalence toward photographic means determines trends in taste. The cult of the future (of faster and faster seeing) alternates over time with the wish to return to a purer past - when images had a handmade quality. This nostalgia for some pristine state of the photographic enterprise is currently widespread and underlies the present-day enthusiasm for daguerreotypes and the work of forgotten nineteenth century provincial photographers. Photographers and viewers of photographs, it seems, need periodically to resist their own knowingness.

1. According to the passage, interest among photographers in each of photography's two ideals can be described as
  - (A) rapidly changing
  - (B) cyclically recurring
  - (C) steadily growing
  - (D) unimportant to the viewers of photographs
  - (E) unrelated to changes in technology
2. The author is primarily concerned with
  - (A) establishing new technical standards for contemporary photography
  - (B) analyzing the influence of photographic ideals on picture-taking
  - (C) tracing the development of camera technology in the twentieth century
  - (D) describing how photographers' individual temperaments are reflected in their work
  - (E) explaining how the technical limitations imposed by certain photographers on themselves affect their work



3. The passage states all of the following about photographs EXCEPT:
- (A) They can display a cropped reality
  - (B) They can convey information
  - (C) They can depict the photographer's temperament
  - (D) They can possess great formal beauty
  - (E) They can change the viewer's sensibilities
4. The author mentions the work of Harold Edgerton in order to provide an example of
- (A) how a controlled ambivalence toward photography's means can produce outstanding pictures
  - (B) how the content of photographs has changed from the nineteenth century to the twentieth
  - (C) the popularity of high-speed photography in the twentieth century
  - (D) the relationship between photographic originality and technology
  - (E) the primacy of formal beauty over emotional content
5. The passage suggests that photographers such as Walker Evans prefer old-fashioned techniques and equipment because these photographers
- (A) admire instruments of fast seeing
  - (B) need to feel armed by technology
  - (C) strive for intense formal beauty in their photographs
  - (D) like the discipline that comes from self-imposed limitations
  - (E) dislike the dependence of photographic effectiveness on the powers of a machine
6. According to the passage, the two antithetical ideals of photography differ primarily in the
- (A) value that each places on the beauty of the finished product
  - (B) emphasis that each places on the emotional impact of the finished product
  - (C) degree of technical knowledge that each requires of the photographer
  - (D) extent of the power that each requires of the photographer's equipment
  - (E) way in which each defines the role of the photographer
7. Which of the following statements would be most likely to begin the paragraph immediately following the passage?
- (A) Photographers, as a result of their heightened awareness of time, are constantly trying to capture events and actions that are fleeting
  - (B) Thus the cult of the future, the worship of machines and speed, is firmly established in spite of efforts to the contrary by some photographers
  - (C) The rejection of technical knowledge, however, can never be complete and photography cannot for any length of time pretend that it has no weapons
  - (D) The point of honor involved in rejecting complex equipment is, however, of no significance to the viewer of a photograph
  - (E) Consequently the impulse to return to the past through images that suggest a handwrought quality is nothing more than a passing fad

### Analysis

{The difficult words in this passage are *depict* (portray); *antithetical* (mutually opposite); *ambivalence* (indecision); *nostalgia* (fond memory of past events); *pristine* (pure); and *daguerreotype* (early photographic process using mercury vapor for developing films.)}

1. (Note that the opening phrase is 'According to the passage, ....' So, this is a 'specific fact' question in which the key phrase is 'two ideals'.) In the last sentence of the first para, the author says that photography has *two antithetical ideals*. In the last sentence of the second paragraph, he says that '*one* (ideal) or *the other* is *always* being *rediscovered and championed*', meaning that these two ideals score over each other *periodically* and *alternately*. Among the choices, it is (B) which states this, and is the answer.

2. (The phrase used is '"The author is primarily concerned with ...", which means that this is a 'main idea' question. Remember that the 'main idea' of a passage is one which is touched upon repeatedly in the passage, and which can often be answered with reference to the opening sentences of the passage.) The very first sentence of the passage says that picture-taking is a technique with *two* aims - (i) annexing the objective world and (ii) expressing the singular self. The last sentence of the first paragraph says that photography has *two antithetical ideals*, and explains them. The second paragraph opens with a reference to these 'conflicting ideals' and analyzes them.

The next paragraph opens with a reference to the 'co-existence of these two ideals' and elaborates on that theme. Among the choices, it is only (B) which mentions 'photographic ideals' and is the answer.

3. (This is an 'EXCEPTION' question dealing with specific facts, and we must arrive at the answer through a process of elimination.) 'Cropped reality - (A)' is mentioned in line 5.

'Extraordinary informativeness - (B)' is mentioned in lines 21-22.

'Photographer's temperament - (C)' is mentioned in line 4.

'Imaginative formal beauty - (D)' is mentioned in line 22.

It is 'viewers' sensibilities - (E)' which is *not mentioned* anywhere in the passage, and is the answer.

4. (Note that the phrase used is 'The author mentions'. So, this is also a 'specific fact' question, with 'the work of Harold Edgerton' as the key phrase.) Harold Edgerton's work is mentioned in the third sentence of para 3, as an example of 'the steady growth of the power of the camera as a machine to make possible the extraordinary informativeness and imaginative formal beauty of photographs taken with it'.

Among the choices, (D) best summarises this statement, and is the answer.

5. (The phrase used in this question is 'The passage suggests ....'. So, this is an 'inference question' and the correct answer must be obtained by logically extending a statement specifically mentioned in the passage.) The key-word in this question is 'Walker Evans', and the only place where his name occurs is line 30. We must therefore look for the answer to this question in the few lines above and below it. The first of these state, ".... some photographers are tempted to *disarm themselves* or to suggest that they are not really armed, *preferring to submit themselves to the limits imposed by premodern camera technology, because a cruder, less high powered machine is thought to give more interesting or emotive results, to leave more room for creative accident*". Walker Evans is then mentioned as an example of such photographers. We can therefore infer that these photographers wish to produce *interesting and emotive photographs without depending upon the capabilities of modern cameras*. Among the choices, it is (E) which means this, and is the answer.

6. (The phrase used here is 'According to the passage'. So, this is a 'specific fact' question) The key phrase in this question is 'the two antithetical ideals of photography'. Since this phrase occurs in the last sentence of the first paragraph, we must look for the answer hereabouts. This phrase is elaborated in this sentence as: "in the first, photography is about the world and *the photographer is a mere observer who counts for little*; but in the second, photography is the instrument of intrepid, questing *subjectivity*, and *the photographer is all*". So the main difference between the two ideals is that the photographer *counts for little* in the first case, but he is *all* in the second case. In other words, the two antithetical ideals *define the role of the photographer totally differently*. Among the choices, it is (E) which says this, and is the answer.

7. (This is a 'next sentence' question, and the answer choice must be one which logically follows from the last sentence in the light of what precedes it.) The second sentence of the last para says, 'The cult of the future alternates over time with the wish to return to a purer past - when images had a handmade quality', implying that each of the two antithetical ideals mentioned earlier scores over the other *cyclically*. In the next sentence, he says that the *current* favourite is 'the nostalgia for some pristine (or pure) state of photographic enterprise'. We can therefore infer that the next sentence will talk of a *future period when technology will again gain pre-eminence*. Among the choices, it is only (C) which indicates this, and is the answer.

In the summer of 1905, twenty-five Black intellectuals met at Niagara Falls. They hoped to form a national organization that would battle all forms of segregation and discrimination and also oppose Booker T. Washington's moderate and conciliatory policy. That policy, they felt, not only endangered Blacks' rights but also inhibited protest. Opposed by Washington and all of his powerful friends, Black and White, the Niagara movement never enlisted the active support of more than a small group of Black leaders. Young Blacks who wanted to help the Black community felt that it was not politically wise to be associated with this new organization.

Booker T. Washington advocated hard work and political passivity: he argued that Blacks should devote their energies to getting rid of political agitators in their ranks and that they should always abide by the law of the land. Believing that hard work was the highest virtue, Washington urged Blacks to learn trades, and he established schools to make that possible. He assured them that if their work were perceived as indispensable to society, they would eventually achieve all the rights of citizenship. On the other hand, Niagara movement leader W. E. B. Du Bois wrote: "We claim for ourselves every single right that belongs to a free-born American - political, civil, and social; until we get these rights we will never cease to protest and assail the ears of America." Washington and Du Bois became national symbols of, as well as the respective leaders of, these two mainstreams of Black thought.

Du Bois and his followers did not, for a long time, seriously encroach on Washington's influence. But increasingly these more militant leaders forced Washington to concede his position as the sole Black spokesperson to the White community. Eventually Washington had to watch his own words and deeds carefully, for he had to reckon with reactions not only from the White community but from the Black community as well. Perhaps not surprisingly, by the time of his death in 1915, Washington's position had moved noticeably toward that of his critics.

By the year 1910 the Niagara movement had ceased to be a serviceable organization. By this time, however, the stage was set for the founding of the National Association for the Advancement of Colored People (NAACP), which became one of the principal organizations protesting racial discrimination in the United States.

Though small and short-lived, the Niagara movement was important. It was the first organization founded to protest the way that Blacks had been treated since Reconstruction. It brought to open conflict and wide public debate two types of Black resistance, one stressing accommodation and the other urging overt protest. The Niagara movement's strategy of active resistance to racial discrimination was later adopted by many organizations that sought to foster equal and just treatment for all people.

1. The primary purpose of the passage is to
  - (A) explain the reasons for the growth and success of the Niagara movement in the first decade of the twentieth century
  - (B) reveal the differences between the leadership techniques of W. E.B. Du Bois and those of Booker T. Washington in the early 1900's
  - (C) show the impact of Booker T. Washington's views on Black political movements in the twentieth century
  - (D) discuss the nature of the Niagara movement and its historical role in the struggle for civil rights
  - (E) trace the origins of the NAACP and other political organizations to the Niagara movement
2. The author's presentation of the material includes all of the following EXCEPT
  - (A) chronological arrangement of events
  - (B) comparison and contrast
  - (C) direct quotation
  - (D) statement of cause and effect
  - (E) development of an extended analogy

3. According to the passage, the strategy of W.E.B. Du Bois differed from the strategy of Booker T. Washington in that the strategy of Du Bois emphasized
- (A) conciliation
  - (B) protest
  - (C) neutrality
  - (D) compromise
  - (E) caution
4. Which of the following statements about the Niagara movement does the passage best support?
- (A) It opposed the idea that Black Americans should have to earn the inherent rights of citizenship through hard work
  - (B) It had a sudden impact on Washington's ability to help Blacks achieve their rights
  - (C) It caused Washington to concede to his critics and adopt a more compliant position in relation to White society
  - (D) It was opposed by much of the White community, but supported by most of the Black community
  - (E) It was a Black organization that arose during the Reconstruction period
5. It can be inferred that the followers of W.E.B. Du Bois were interested in all of the following EXCEPT
- (A) challenging Booker T. Washington's pre-eminence as spokesperson for all Black Americans
  - (B) developing an organization controlled by a small group of prominent Black leaders
  - (C) opposing segregation, discrimination, and all other denials of Blacks' political, civil or social rights
  - (D) protesting the policy of acquiescence in race relations
  - (E) increasing opportunities for Blacks to participate fully in American society
6. The passage contains information that would answer which of the following questions about the history of the Niagara movement?
- I. How was Booker T. Washington's policy of moderation affected by the Niagara movement?
  - II. Why, by the year 1910, had the Niagara movement ceased to serve its purpose?
  - III. In what respect might the NAACP be viewed as a successor of the Niagara movement?
- (A) I only
  - (B) II only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II, and III
7. Which of the following titles best summarizes the content of the passage?
- (A) Booker T. Washington's Strategy: Progress Through Education and Work
  - (B) The Niagara Movement: Early Advocate of Organized Black Resistance
  - (C) The History of Social Change in the Twentieth Century
  - (D) A History of Racial Protest Groups in Twentieth-Century America
  - (E) Black Leadership and Black Organizations

### Analysis

{The difficult words in this passage are *segregation* (the social practice of keeping the Blacks isolated from the Whites); *conciliatory* (appeasing; peaceable); *inhibit* (restrain); *passivity* (submission; obedience); *assail* (attack); *accommodation* (conciliation); *overt* (open) and *foster* (promote)}

1. (*This is a 'Main Idea' question, and you should answer it on the basis of the theme that flows throughout the entire passage.*) The passage first refers to the birth of the Niagara movement in 1905, the reason why it was born, its main aims, why some others among the Blacks disagreed with its aims, and the reasons for its not growing in strength. It also describes how, even though the movement itself did not gather strength but died a natural death within ten years, even its opponents had slowly come closer to its views and how, after its ceasing to exist, NAACP, which later played an important role in the fight for civil rights, was born. In the last paragraph, it notes the importance of this short-lived movement in a historical context.

Thus, (D) is the correct answer.

Each of the other choices is an *individual element* in the narration of the history of the Niagara movement, and cannot be considered to be *the primary purpose* of the *entire* passage.

2. (This is an 'Exception' question relating to the technique of presentation. You should therefore arrive at the answer through a process of elimination.) In his narration of the passage, the author *chronologically* covers the period from 1905 to 1915. So, (A) is *not* the answer.

He also *compares* and *contrasts* the attitude of *hardliners* (represented by Du Bois) and the *softliners* (represented by Washington). So, (B) is *not* the answer.

In para 2, he *also quotes directly* from Du Bois. So, (C) is *not* the answer.

He also states that the effect of the movement was that Washington *ceased to be the sole spokesman* of the Blacks, that *he had to watch his words more carefully*, and that, over a period of time, *even he had to move towards the movement's main principles*. Thus, the passage includes a description of *cause* and *effect* also. So, (D) is *not* the answer.

The passage *does not provide an analogy* to the Niagara movement either within the American history or the history of any other country. So, (E) is what is *not* attempted by the author, and is the answer.

3. (From the phrase 'According to the passage ....', we immediately know that this is a 'specific fact' question. The key word in the question is 'Du Bois', and it occurs first in the middle of the second paragraph. We must therefore look for the answer to this question here.) The answer (B) is got from Du Bois' own words quoted here ".....; until we get all these rights, we will never cease to protest and assail the ears of America".

4. (From the phrase "which of the following .... does the passage *best support*?", we can decide that this is not a 'Specific Fact' question, but is an 'Inference' question. The key phrase 'Niagara movement' occurs in a number of places in the passage, and we must refer to each of them for answering this question.) In lines 5-6 of the second paragraph, Washington's view that Blacks must *progressively acquire* all the rights of citizenship *through hard work* has been mentioned. The view of Du Bois (the leader of the Niagara movement) is then *contrasted* with this view and it says that Du Bois held that the Blacks were *born with these rights* just as any white man, and that they do not have to *earn* them. So, (A) itself is the answer.

(B) is incorrect, since the passage says that Niagara movement *never enlisted the support of more than a small group of Black leaders* (line 6 of para 1), and Washington's leadership of the Blacks was *not immediately threatened by the Niagara movement*. (Lines 1-2 of para 3).

(C) is wrong because Washington's attitude from the beginning was to be *compliant* in relation to White society, and the impact of the Niagara movement was in fact *to slowly shift him away from that position*.

(D) is also wrong for the reason mentioned for (B).

(E) is wrong, because it is stated in the second sentence of the last paragraph that Niagara movement was the *first organization since Reconstruction* to protest against the way the Blacks were treated, meaning that this movement was born *long after* and not *during*, the Reconstruction period.

5. (This is an 'Exception' question, and you should arrive at the answer through a process of elimination.) (A) is mentioned in the second sentence of para 3, and is *not* the answer.

(C) can be inferred from the view of Du Bois quoted in the penultimate sentence of para 2, and is *not* the answer.

The very second sentence of the passage says that one of the aims of Niagara Movement was to '*oppose Booker T. Washington's moderate and conciliatory policy*'. So, (D) can also be inferred from the passage, and is not the answer.

From the statement of Du Bois "We claim for ourselves *every right that belongs to a free-born American - political, civil, and social*" quoted in the penultimate sentence of para 2, we can infer (E) also.

The last two sentences of para 1 say that the Niagara movement never enlisted the active support of more than a small group of Black leaders. But *this was not because its leaders wanted it that way*, but *because of opposition from Washington and all his powerful friends*, and *because young Blacks who wanted to help the Black community thought that it was not politically wise to be associated with this new organization*. So, it is (B) which was *not* the aim of Du Bois and his cohorts in the Niagara Movement. So, (B) is the answer.

6. (This is a 'Roman Numerals' question relating to inference, and we should examine each of the numbered statements for its validity and choose the answer on that basis.) In the third paragraph, the passage says that, though Washington's overall leadership of the Black people was not affected by the Niagara movement, *he had to watch his words more and more because of the movement*. It also says that, by the time of his death, Washington's views had themselves *become closer to those of his critics* (namely Du Bois and others). Thus, I is answered from the information in the passage.

In para 3, the author says that the Niagara movement had an impact even on the moderates. He abruptly says in the first sentence in para 4 that, by the year 1910, the movement *had ceased to be a serviceable organization*,

but he does *not* explain *why it had become so*. So, II is *not* answered from the information in the passage.

The Niagara movement was the first to 'protest' against racial discrimination in the US. NACCP was founded just about the time that the Niagara movement died ("By this time, the stage was set ...."), and had, as its main plank, opposition to racial discrimination. NACCP could therefore be considered to be a *successor* of the Niagara movement *in continuing the protest against racial discrimination*. Thus, III is also answered from the information in the passage.

Thus, only I and III *are answered* in the passage, while II *is not answered*.

So, (C) is the answer.

7. (*This is a repetition of the 'main idea' question in different words, and can be answered as (B) with reference to our analysis of Qn. No. 1.*) Another way of spotting the correct answer is to note that, while the entire passage is about the Niagara movement, the choices (A), (C), (D) and (E) *do not even mention this name*, enabling us to discard all of them *for that reason alone*, and choose (B) as the ready answer.

The energy contained in rock within the earth's crust represents a nearly unlimited energy source, but until recently, commercial retrieval has been limited to underground hot water and steam recovery systems. These systems have been developed in areas of recent volcanic activity, where high rates of heat flow cause visible eruption of water in the form of geysers and hot springs. In other areas, however, hot rock also exists near the surface but there is insufficient water present to produce eruptive phenomena. Thus a potential hot dry rock (HDR) reservoir exists whenever the amount of spontaneously produced geothermal fluid has been judged inadequate for existing commercial systems.

As a result of the recent energy crisis, new concepts for creating HDR recovery systems - which involve drilling holes and connecting them to artificial reservoirs placed deep within the crust are being developed. In all attempts to retrieve energy from HDR's, artificial stimulation will be required to create either sufficient permeability or bounded flow paths to facilitate the removal of heat by circulation of a fluid over the surface of the rock.

The HDR resource base is generally defined to include crustal rock that is hotter than 150°C, is at depths less than ten kilometers, and can be drilled with presently available equipment. Although wells deeper than ten kilometers are technically feasible, prevailing economic factors will obviously determine the commercial feasibility of wells at such depths. Rock temperatures as low as 100°C may be useful for space heating; however, for producing electricity, temperatures greater than 200°C are desirable.

The geothermal gradient, which specifically determines the depth of drilling required to reach a desired temperature, is a major factor in the recoverability of geothermal resources. Temperature gradient maps generated from oil and gas well temperature-depth records kept by the American Association of Petroleum Geologists suggest that tappable high-temperature gradients are distributed all across the United States. (There are many areas, however, for which no temperature gradient records exist.)

Indications are that the HDR resource base is very large. If an average geothermal temperature gradient of 22°C per kilometer of depth is used, a staggering 13,000,000 quadrillion B.T.U.'s of total energy are calculated to be contained in crustal rock to a ten kilometer depth in the United States. If we conservatively estimate that only about 0.2 percent is recoverable, we find a total that is comparable to the estimated resource base of all the coal remaining in the United States. The remaining problem is to balance the economics of deeper, hotter, more costly wells and shallower, cooler, less expensive wells against the value of the final product, electricity and/or heat.

1. The primary purpose of the passage is to

- (A) alert readers to the existence of HDR's as an available energy source
- (B) document the challenges that have been surmounted in the effort to recover energy from HDR's
- (C) warn the users of coal and oil that HDR's are not an economically feasible alternative

- (D) encourage the use of new techniques for the recovery of energy from underground hot water and steam
- (E) urge consumers to demand quicker development of HDR resources for the production of energy
2. The passage would be most likely to appear in a
- (A) petrological research report focused on the history of temperature-depth records in the United States
  - (B) congressional report urging the conservation oil and natural gas reserves in the United States
  - (C) technical journal article concerned with the recoverability of newly identified energy sources
  - (D) consumer report describing the extent and accessibility of remaining coal resources
  - (E) pamphlet designed to introduce homeowners to the advantage of HDR space-heating systems
3. According to the passage, an average geothermal gradient of 22°C per kilometer of depth can be used to
- (A) balance the economics of HDR energy retrieval against that of underground hot water or steam recovery systems
  - (B) determine the amount of energy that will be used for space heating in the United States
  - (C) provide comparisons between hot water and HDR energy sources in the United States
  - (D) revise the estimates on the extent of remaining coal resources in the United States
  - (E) estimate the total HDR resources base in the United States
4. It can be inferred from the passage that the availability of temperature-depth records for any specific area in the United States depends primarily on the
- (A) possibility that HDR's may be found in that area
  - (B) existence of previous attempts to obtain oil or gas in that area
  - (C) history of successful hot water or steam recovery efforts in that area
  - (D) failure of inhabitants to conserve oil or gas reserves in that area
  - (E) use of coal as a substitute for oil or gas in that area
5. According to the passage, in all HDR recovery systems, fluid will be necessary in order to allow
- (A) sufficient permeability
  - (B) artificial stimulation
  - (C) drilling of holes
  - (D) construction of reservoirs
  - (E) transfer of heat
6. According to the passage, if the average geothermal gradient in an area is 22°C per kilometer of depth, which of the following can be reliably predicted?
- I. The temperature at the base of a 10-kilometer well will be sufficient for the production of electricity
  - II. Drilling of wells deeper than 10 kilometers will be economically feasible
  - III. Insufficient water is present to produce eruptive phenomena
- (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II and III
7. Which of the following would be the most appropriate title for the passage?
- (A) Energy from Water Sources: The Feasibility of Commercial Systems
  - (B) Geothermal Energy Retrieval: Volcanic Activity and Hot Dry Rocks
  - (C) Energy Underground: Geothermal Sources Give Way to Fossil Fuels
  - (D) Tappable Energy for America's Future: Hot Dry Rocks
  - (E) High Geothermal Gradients in the United States: Myth or Reality?

### Analysis

{The difficult words in this passage are: *crust* (outer layer); *retrieval* (recovery); *geysers* (hot fountains); *geothermal* (heat from the earth); *gradient* (slope)}

*(The passage talks of a new source of energy, namely, Hot Dry Rocks. Hot rocks are found at various depths under the earth's surface. In places where there are no volcanoes, or where volcanoes have ceased to exist, such rocks would be located deep under the earth's surface, may be even hundreds of miles below. But, in places where volcanic activity has been recent, such rocks are available at shallower depths. In places where there are such HDRs, and also where there is a large quantity of subsoil water in the vicinity, the water gets heated by the HDRs, and erupts from the surface of the earth in the form of hot springs or geysers. It is possible to use these hot springs for the production of electricity, because they represent thermal energy. But there are vast areas where HDRs are present but there is no underground water nearby. New research suggests that if we can find a method by which artificial reservoirs of water are created deep within the earth's surface and near the HDRs, if water from these reservoirs is then made to circulate around the HDRs, and if the water heated thereby is brought to the surface in the form of artificial hot springs, we can thereby get another source of energy. In this passage, the author explains in general terms this possibility, and also estimates the amount of energy available in this form in HDRs in USA within a depth of 10 kms. He makes the point that, if an economically feasible way to tap this source of energy is developed, the HDRs could be a good alternative source of energy for the USA.)*

1. *(This is a 'Primary Purpose' question, and we must answer it by identifying the overall theme that runs through the passage.)* Most of us laymen are not aware of the existence of HDRs as an alternative energy source. The passage (as summarised above) *informs us, without much of technicalities, of the existence of this new energy source.* So, (A) can be stated to be the main purpose of the passage.

(B) is wrong, because the passage does not mention any challenge that has already been surmounted in the recovery of energy from HDRs.

(C) *contradicts* what the article explicitly speculates - that it will become possible to extract energy from HDRs through new economically feasible developments.

A new technique (namely, circulating water around the HDRs from artificially created reservoirs at sufficient depths) has been mentioned in the passage *as one which has already been developed, and no other technique has been mentioned.* So, it cannot be said that the primary purpose of the passage is to *encourage the use of new techniques.* So, (D) is also wrong.

Even in the last sentence, the author mentions that the development of this source of energy *depends on its relative cost vis-a-vis the conventional sources of energy.* He does not 'urge' consumers that they should 'demand' quicker development of HDR resources. So, (E) is also wrong.

2. *(This is a 'Source' question.)* (A) is wrong, since the temperature-depth (or gradient) records are *just mentioned in passing* in the fourth para, whereas the focus of the passage is on HDRs.

(B) is wrong, since the *conservation of oil and natural gas is not even mentioned* in the passage.

The *coal reserves* in the US are *just mentioned* in the penultimate sentence of the last para, and (D) is therefore wrong.

The commercial development of HDR energy has *not yet* taken place, and therefore there can be no pamphlet *presently describing its advantages for home heating systems.* Therefore, (E) is also wrong.

This passage could very well be an extract from a much longer article *regarding newly identified energy sources.* So, (C) is the answer.

3. *(The phrase used in the question is 'According to the passage'. So, this is a 'Specific Fact' question, and must be answered with reference to what is specifically stated in the passage. 'Geothermal gradient of 22 degrees per kilometer of depth' means that, for every additional depth of one kilometer you drill into the earth, you will reach a temperature higher by 22 degrees C.)* The key phrase in this question is 'geothermal gradient of 22° per kilometer', which occurs in the second sentence of the last paragraph. The complete sentence here is, "If an average geothermal temperature gradient of 22°C per kilometer of depth is used, a staggering 13,000,000 quadrillion BTUs of total energy are calculated to be contained in crustal rock to a ten kilometer depth in the United States". So, according to the passage, the geothermal gradient can be used to *estimate the total HDR resources base in the United States.* So, (E) is the answer.

None of the other choices is referred to in the proximate sentences.

4. *(This is an 'Inference' question, and must be answered by logically extending a fact mentioned in the passage.)* The key phrase in this question is 'temperature-depth records' which is mentioned in the second sentence of para 4. It says that temperature-depth records are kept by the American Association of Petroleum Geologists,



and *these* relate to oil and gas wells. The next sentence within brackets states that there are many areas for which such records *do not* exist. We can therefore *infer* that such records are available only in respect of areas *in which the Petroleum Geologists have attempted to tap oil or natural gas*. So, (B) is the answer.

5. (From the phrase 'According to the passage', we can say that this is a 'Specific Fact' question.) The key word in this question is 'fluid' which occurs at the end of the second paragraph, the phrase being "... or bounded flow paths to facilitate *the removal of heat by circulation of a fluid over the surface of the rock*". So, the purpose of the fluid in HDR recovery systems is 'the removal of the heat'. Among the choices, it is (E) - transfer of heat - that means this, and is the answer.

6. (This is a combination of a 'Specific Fact' and 'Roman Numerals' question, and must be answered with reference to specific pieces of information available in the passage.) In the second sentence of the last para, the author says that a staggering 13,000,000 quadrillion BTUs of total energy is contained within a 10 kilometer depth in USA. So, the passage predicts that the temperature at the base of a 10-kilometer well is sufficient for the production of electricity. So, I is true.

In the last sentence of the passage, the author refers to *the still unsolved problem of balancing the economics of deeper wells* against the value of the final product - electricity or heat. So, he *does not predict* that drilling of wells *deeper than 10 kilometers* is economically feasible. So, II is *not* true.

The absence of sufficient water near *some* hot rocks is mentioned in the first paragraph, while areas where the average geothermal gradient is 22°C is mentioned in the last paragraph. There is no information in the passage *to reliably connect these two*. So, III *cannot be predicted* from the passage.

So, only I is true, and (A) is the answer.

7. (This is another form of the 'Main Idea' question which we have already analyzed with reference to Qn. 1) Since the passage is *not* about energy from *water sources*, but about energy from *Hot Dry Rocks*, (A) is wrong.

Since volcanic activity is *just mentioned in passing* in the second sentence, (B) is not an appropriate title to the passage.

Since the economic recovery of geothermal energy is *not yet* established, it is too early to give title (C) to the passage.

The passage does not indicate whether 22°C is a *high or low* geothermal gradient. So, (E) is wrong.

In the penultimate sentence, the author says, "If we conservatively estimate that only about 0.2 percent (of the 13,000,000 trillion British Thermal Units of total energy) is recoverable, *we find a total that is comparable to the estimated resource base of all the coal remaining in the United States*". He then adds that the *remaining problem* is merely one of balancing the economics. So, he foresees a day when this problem will be sorted out and geothermal energy is, in fact, retrieved and used. So, (D) is an appropriate title to the passage, and is the answer.

You can thus see that, if you first identify the type of question and then proceed methodically, each question can be answered correctly, ***even though you really do not fully comprehend the entire passage***.

Notice that the questions do not cover *all* the information covered in the passage, but relate to *only about 50% of it*. So, it is not necessary for you spend too much time *understanding and remembering* every bit of detail contained in the passage. Read the passage *at the optimum speed (neither too fast nor too slow)* in order to understand what it is *generally* about, so that you are able to correctly answer the 'main idea' question if it is there.

The other questions can be answered by first identifying *the significant phrases* in them, *locating where they occur in the passage*, and with reference to the limited information *in their neighbourhood*.

The paper-based GRE used to contain at least one longish passage with 7 or 8 questions under it, and we have chosen such passages in the three illustrations given above so as to cover all types of questions asked.

The computer-based GRE will contain two passages with 2 or 3 questions each, and one passage with 3 or 4 questions.

***For each question, you should arrive at the answer only after reading all the answer choices and evaluating each of them. Just because it appears to you that choice (A) is itself the correct answer, you should not prematurely select it without reading each of the other choices and without eliminating them one by one after due evaluation.***

*In the following chapters we shall give you a number of comprehension passages selected from past GRE and GMAT question papers. Try to answer them using the above-mentioned techniques. Try to be as fast as you can, but your emphasis should be to spot the correct answer to each question.*

## Chapter 2

### PASSAGES RELATING TO HUMANITIES

#### *Passage 1*

All of Francoise Duparc's surviving paintings blend portraiture and genre. Her subjects appear to be acquaintances whom she has asked to pose; she has captured both their self-consciousness and the spontaneity of their everyday activities, the depiction of which characterizes genre painting. But genre painting, especially when it portrayed members of the humblest classes, was never popular in eighteenth-century France. The Le Nain brothers and Georges de La Tour, who also chose such themes, were largely ignored. Their present high standing is due to a different, more democratic political climate and to different aesthetic values: we no longer require artists to provide ideal images of humanity for our moral edification but rather regard such idealization as a falsification of the truth. Duparc gives no improving message and discretely refrains from judging her subjects. In brief, her works neither elevate nor instruct. This restraint largely explains her lack of popular success during her lifetime, even if her talent did not go completely unrecognized by her eighteenth-century French contemporaries.

1. According to the passage, modern viewers are not likely to value which of the following qualities in a painting?
  - (A) The technical elements of the painting
  - (B) The spontaneity of the painting
  - (C) The moral lesson imparted by the painting
  - (D) The degree to which the painting realistically depicts its subjects
  - (E) The degree to which the artist's personality is revealed in the painting
2. If the history of Duparc's artistic reputation were to follow that of the Le Nain brothers and Georges de La Tour, present-day assessments of her work would be likely to contain which of the following?
  - (A) An evaluation that accords high status to her work
  - (B) Acknowledgment of her technical expertise but dismissal of her subject matter as trivial
  - (C) Agreement with assessments made in her own time but acknowledgments of the exceptional quality of a few of her paintings
  - (D) Placement of her among the foremost artists of her century
  - (E) A reclassification of her work as portraiture rather than genre painting
3. It can be inferred from the passage that the term "genre painting" would most likely apply to which of the following?
  - (A) A painting depicting a glorious moment of victory following a battle
  - (B) A painting illustrating a narrative from the Bible
  - (C) A portrayal of a mythological Greek goddess
  - (D) A portrayal of a servant engaged in his work
  - (E) A formal portrait of an eighteenth-century king
4. The argument of the passage best supports which of the following contentions concerning judgements of artistic work?
  - (A) Aesthetic judgements can be influenced by the political beliefs of those making the judgement
  - (B) Judgements of the value of an artist's work made by his or her contemporaries must be discounted before a true judgement can be made
  - (C) Modern aesthetic taste is once again moving in the direction of regarding idealistic painting as the most desirable form of painting
  - (D) In order to be highly regarded, an artist cannot be solely identified with one particular kind of painting
  - (E) Spontaneity is the most valuable quality a portrait painter can have

**Passage 2**

Great comic art is never otherworldly, it does not seek to mystify us, and it does not deny ambiguity by branding as evil whatever differs from good. Great comic artists assume that truth may bear all lights, and thus they seek to accentuate contradictions in social action, not gloss over or transcend them by appeals to extrasocial symbols of divine ends, cosmic purpose, or laws of nature. The moment of transcendence in great comic art is a social moment, born out of the conviction that we are human, even though we try to be gods. The comic community to which artists address themselves is a community of reasoning, loving, joyful, compassionate beings, who are willing to assume the human risks of acting rationally. Without invoking gods or demons, great comic art arouses courage in reason, courage which grows out of trust in what human beings can do as humans.

1. The passage suggests that great comic art can be characterized as optimistic about the ability of humans to
  - (A) rid themselves of pride
  - (B) transcend the human condition
  - (C) differentiate clearly between good and evil
  - (D) avoid social conflicts
  - (E) act rationally
2. It can be inferred from the passage that the author admires great comic artists primarily for their
  - (A) ability to understand the frequently subtle differences between good and evil
  - (B) ability to reconcile the contradictions in human behavior
  - (C) ability to distinguish between rational and irrational behavior
  - (D) insistence on confronting the truth about the human condition
  - (E) insistence on condemning human faults and weaknesses
3. Which of the following is the most accurate description of the organisation of the passage?
  - (A) A sequence of observations leading to a prediction
  - (B) A list of inferences drawn from facts stated at the beginning of the passage
  - (C) A series of assertions related to one general subject
  - (D) A statement of the major idea, followed by specific examples
  - (E) A succession of ideas moving from specific to general

**Passage 3**

Practically speaking, the artistic maturing of the cinema was the single-handed achievement of David W. Griffith (1875-1948). Before Griffith, photography in dramatic films consisted of little more than placing the actors before a stationary camera and showing them in full length as they would have appeared on stage. From the beginning of his career as a director, however, Griffith, because of his love of Victorian painting, employed composition. He conceived of the camera image as having a foreground and a rear ground, as well as the middle distance preferred by most directors. By 1910 he was using close-ups to reveal significant details of the scene or of the acting and extreme long shots to achieve a sense of spectacle and distance.

His appreciation of the camera's possibilities produced novel dramatic effects. By splitting an event into fragments and recording each from the most suitable camera position, he could significantly vary the emphasis from camera shot to camera shot.

Griffith also achieved dramatic effects by means of creative editing. By juxtaposing images and varying the speed and rhythm of their presentation, he could control the dramatic intensity of the events as the story progressed. Despite the reluctance of his producers, who feared that the public would not be able to follow a plot that was made up of such juxtaposed images, Griffith persisted and experimented as well with other elements of cinematic syntax that have become standard ever since. These included the flashback, permitting broad psychological and emotional exploration as well as narrative that was not chronological, and the crosscut between two parallel actions to heighten suspense and excitement. In thus exploiting fully the possibilities of editing, Griffith transposed devices of the Victorian novel to film and gave film a mastery of time as well as space.

Besides developing the cinema's language, Griffith immensely broadened its range and treatment of subjects. His early output was remarkably eclectic: it included not only the standard comedies, melodramas, westerns, and thrillers, but also such novelties as adaptations from Browning and Tennyson, and treatments of social issues. As his successes mounted, his ambitions grew, and with them the whole of American cinema.

When he remade *Enoch Arden* in 1911, he insisted that a subject of such importance could not be treated in the then conventional length of one reel. Griffith's introduction of the American-made multireel picture began an immense revolution. Two years later, *Judith of Bethulia*, an elaborate historicophilosophical spectacle, reached the unprecedented length of four reels, or one hour's running time. From our contemporary viewpoint, the pretensions of this film may seem a trifle ludicrous, but at the time it provoked endless debate and discussion and gave a new intellectual respectability to the cinema.

1. The primary purpose of the passage is to
  - (A) discuss the importance of Griffith to the development of the cinema
  - (B) describe the impact on cinema of the flashback and other editing innovations
  - (C) deplore the state of American cinema before the advent of Griffith
  - (D) analyze the changes in the cinema wrought by the introduction of the multireel film
  - (E) document Griffith's impact on the choice of subject matter in American films
2. The author suggests that Griffith's film innovations had a direct effect on all of the following EXCEPT
  - (A) film editing
  - (B) camera work
  - (C) scene composing
  - (D) sound editing
  - (E) directing

3. It can be inferred from the passage that before 1910 the normal running time of a film was
- (A) 15 minutes or less
  - (B) between 15 and 30 minutes
  - (C) between 30 and 45 minutes
  - (D) between 45 minutes and 1 hour
  - (E) 1 hour or more
4. The author asserts that Griffith introduced all of the following into American cinema EXCEPT
- (A) consideration of social issues
  - (B) adaptations from Tennyson
  - (C) the flashback and other editing techniques
  - (D) photographic approaches inspired by Victorian painting
  - (E) dramatic plots suggested by Victorian theater
5. The author suggests that Griffith's contributions to the cinema had which of the following results?
- I. Literary works, especially Victorian novels, became popular sources for film subjects
  - II. Audience appreciation of other film directors' experimentations with cinematic syntax was increased
  - III. Many of the artistic limitations thought to be inherent in filmmaking were shown to be really nonexistent.
- (A) II only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
6. It can be inferred from the passage that Griffith would be most likely to agree with which of the following statements?
- (A) The good director will attempt to explore new ideas as quickly as possible
  - (B) The most important element contributing to a film's success is the ability of the actors
  - (C) The camera must be considered an integral and active element in the creation of a film
  - (D) The cinema should emphasize serious and sober examinations of fundamental human problems
  - (E) The proper composition of scenes in a film is more important than the details of their editing
7. The author's attitude toward photography in the cinema before Griffith can best be described as
- (A) sympathetic
  - (B) nostalgic
  - (C) amused
  - (D) condescending
  - (E) hostile

**Passage 4**

*(This passage is from a book published in 1975).*

That Louise Nevelson is believed by many critics to be the greatest twentieth-century sculptor is all the more remarkable because the greatest resistance to women artists has been, until recently, in the field of sculpture. Since Neolithic times, sculpture has been considered the prerogative of men, partly perhaps for purely physical reasons: it was erroneously assumed that women were not suited for the hard manual labor required in sculpting stone, carving wood, or working on metal. It has been only during the twentieth century that women sculptors have been recognized as major artists, and it has been in the United States, especially since the decades of the fifties and sixties, that women sculptors have shown the greatest originality and creative power.

Their rise to prominence parallels the development of sculpture itself in the United States: while there had been a few talented sculptors in the United States before the 1940's, it was only after 1945 - when New York was rapidly becoming the art capital of the world - that major sculpture was produced in the United States. Some of the best was the work of women.

By far the most outstanding of these women is Louise Nevelson, who in the eyes of many critics is the most original female artist alive today. One famous and influential critic, Hilton Kramer, said of her work, "For myself, I think Ms. Nevelson succeeds where the painters often fail".

Her works have been compared to the Cubist constructions of Picasso, the Surrealistic objects of Miro, and the Merzbau of Schwitters. Nevelson would be the first to admit that she has been influenced by all of these, as well as by African sculpture, and by Native American and pre-Columbian art, but she has absorbed all these influences and still created a distinctive art that expresses the urban landscape and the aesthetic sensibility of the twentieth century. Nevelson says, "I have always wanted to show the world that art is everywhere, expect that it has to pass through a creative mind".

Using mostly discarded wooden objects like packing crates, broken pieces of furniture, and abandoned architectural ornaments, all of which she has hoarded for years, she assembles architectural constructions of great beauty and power. Creating very freely with no sketches, she glues and nails objects together, paints them black, or more rarely white or gold, and places them in boxes.

These assemblages, walls, even entire environments create a mysterious, almost awe-inspiring atmosphere.

Although she has denied any symbolic or religious intent in her works, their three-dimensional grandeur and even their titles, such as Sky Cathedral and Night Cathedral, suggest such connotations. In some ways, her most ambitious works are closer to architecture than to traditional sculpture, but then neither Louise Nevelson nor her art fits into any neat category.

1. The passage focuses primarily on which of the following?
  - (A) A general tendency in twentieth-century art
  - (B) The work of a particular artist
  - (C) The artistic influences on women sculptors
  - (D) Critical responses to twentieth-century sculpture
  - (E) Materials used by twentieth-century sculptors
2. Which of the following statements is supported by information given in the passage?
  - (A) Since 1945 women sculptors in the United States have produced more sculpture than have men sculptors.
  - (B) Since 1950 sculpture produced in the United States has been the most original and creative

- sculpture produced anywhere.
- (C) From 1900 to 1950 women sculptors in Europe enjoyed more recognition for their work than did women sculptors in the United States.
- (D) Prior to 1945 there were many women sculptors whose work was ignored by critics.
- (E) Prior to 1945 there was little major sculpture produced by men or women sculptors working in the United States.
3. The author quotes Hilton Kramer in lines 20-21 most probably in order to illustrate which of the following?
- (A) The realism of Nevelson's work
- (B) The unique qualities of Nevelson's style
- (C) The extent of critical approval of Nevelson's work
- (D) A distinction between sculpture and painting
- (E) A reason for the prominence of women sculptors since the 1950's
4. Which of the following is one way in which Nevelson's art illustrates her theory as it is expressed in lines 28-29?
- (A) She sculpts in wood rather than in metal or stone
- (B) She paints her sculptures and frames them in boxes
- (C) She makes no preliminary sketches but rather allows the sculpture to develop as she works.
- (D) She puts together pieces of ordinary objects once used for different purposes to make her sculptures.
- (E) She does not deliberately attempt to convey symbolic or religious meanings through her sculptures.
5. It can be inferred from the passage that the author believes which of the following about Nevelson's sculptures?
- (A) They suggest religious and symbolic meanings.
- (B) They do not have qualities characteristic of sculpture.
- (C) They are mysterious and awe-inspiring, but not beautiful.
- (D) They are uniquely American in style and sensibility.
- (E) They show the influence of twentieth-century architecture.
6. The author regards Nevelson's stature in the art world as "remarkable" (line 2) in part because of which of the following?
- (A) Her work is currently overrated.
- (B) Women sculptors have found it especially difficult to be accepted and recognized as major artists.
- (C) Nevelson's sculptures are difficult to understand.
- (D) Many art critics have favored painting over sculpture in writing about development in the art world.
- (E) Few of the artists prominent in the twentieth century have been sculptors.
7. Which of the following statements about Nevelson's sculptures can be inferred from the passage?
- (A) They are meant for display outdoors.
- (B) They are often painted in several colors.
- (C) They are sometimes very large.
- (D) They are hand-carved by Nevelson.
- (E) They are built around a central wooden object.

**Passage 5**

Extraordinary creative activity has been characterized as revolutionary, flying in the face of what is established, and producing not what is acceptable but what will become accepted. According to this formulation, highly creative activity transcends the limits of an existing form and establishes a new principle of organization. However, the idea that extraordinary creativity transcends established limits is misleading when it is applied to the arts, even though it may be valid for the sciences. Differences between highly creative art and highly creative science arise in part from a difference in their goals. For the sciences, a new theory is the goal and end result of the creative act. Innovative science produces new propositions in terms of which diverse phenomena can be related to one another in more coherent ways. Such phenomena as a brilliant diamond or a nesting bird are relegated to the role of data, serving as the means for formulating or testing a new theory. The goal of highly creative art is very different: the phenomenon itself becomes the direct product of the creative act. Shakespeare's *Hamlet* is not a tract about the behavior of indecisive princes or the uses of political power; nor is Picasso's painting *Guernica* primarily a propositional statement about the Spanish Civil War or the evils of fascism. What highly creative artistic activity produces is not a new generalization that transcends established limits, but rather an aesthetic particular. Aesthetic particulars produced by the highly creative artist extend or exploit, in an innovative way, the limits of an existing form, rather than transcend that form.

This is not to deny that a highly creative artist sometimes establishes a new principle of organization in the history of an artistic field; the composer Monteverdi, who created music of the highest aesthetic value, comes to mind. More generally, however, whether or not a composition establishes a new principle in the history of music has little bearing on its aesthetic worth. Because they embody a new principle of organization, some musical works, such as the operas of the Florentine Camerata, are of signal historical importance, but few listeners or musicologists would include these among the great works of music. On the other hand, Mozart's *The Marriage of Figaro* is surely among the masterpieces of music even though its modest innovations are confined to extending existing means. It has been said of Beethoven that he toppled the rules and freed music from the stifling confines of convention. But a close study of his compositions reveals that Beethoven overturned no fundamental rules. Rather, he was an incomparable strategist who exploited limits - the rules, forms, and conventions that he inherited from predecessors such as Haydn and Mozart, Handel and Bach - in strikingly original ways.

1. The author considers a new theory that coherently relates diverse phenomena to one another to be the
  - (A) basis for reaffirming a well-established scientific formulation
  - (B) byproduct of an aesthetic experience
  - (C) tool used by a scientist to discover a new particular
  - (D) synthesis underlying a great work of art
  - (E) result of highly creative scientific activity
2. The author implies that Beethoven's music was strikingly original because Beethoven
  - (A) strove to outdo his predecessors by becoming the first composer to exploit limits
  - (B) fundamentally changed the musical forms of his predecessors by adopting a richly inventive strategy
  - (C) embellished and interwove the melodies of several of the great composers who preceded him
  - (D) manipulated the established conventions of musical composition in a highly innovative fashion
  - (E) attempted to create the illusion of having transcended the musical forms of his predecessors



3. The passage states that the operas of the Florentine Camerata are
- (A) unjustifiably ignored by musicologists
  - (B) not generally considered to be of high aesthetic value even though they are important in the history of music
  - (C) among those works in which popular historical themes were portrayed in a musical production
  - (D) often inappropriately cited as examples of musical works in which a new principle of organization was introduced
  - (E) minor exceptions to the well-established generalization that the aesthetic worth of a composition determines its importance in the history of music
4. The passage supplies information for answering all of the following questions EXCEPT:
- (A) Has unusual creative activity been characterized as revolutionary?
  - (B) Did Beethoven work within a musical tradition that also included Handel and Bach?
  - (C) Is Mozart's an example of a creative work that transcended limits?
  - (D) Who besides Monteverdi wrote music that the author would consider to embody new principles of organization and to be of high aesthetic value?
  - (E) Does anyone claim that the goal of extraordinary creative activity in the arts differs from that of extraordinary creative activity in the sciences?
5. The author regards the idea that all highly creative artistic activity transcends limits with
- (A) deep skepticism
  - (B) strong indignation
  - (C) marked indifference
  - (D) moderate amusement
  - (E) sharp derision
6. The author implies that an innovative scientific contribution is one that
- (A) is cited with high frequency in the publications of other scientists
  - (B) is accepted immediately by the scientific community
  - (C) does not relegate particulars to the role of data
  - (D) presents the discovery of a new scientific fact
  - (E) introduces a new valid generalization
7. Which of the following statements would most logically conclude the last paragraph of the passage?
- (A) Unlike Beethoven, however, even the greatest of modern composers, such as Stravinsky, did not transcend existing musical forms.
  - (B) In similar fashion, existing musical forms were even further exploited by the next generation of great European composers.
  - (C) Thus, many of the great composers displayed the same combination of talents exhibited by Monteverdi.
  - (D) By contrast, the view that creativity in the arts exploits but does not transcend limits is supported in the field of literature.
  - (E) Actually, Beethoven's most original works were largely unappreciated at the time that they were first performed.

**Passage 6**

Proponents of different jazz styles have always argued that their predecessors' musical style did not include essential characteristics that define jazz as jazz. Thus, 1940's swing was belittled by beboppers of the 1950's, who were themselves attacked by free jazzers of the 1960's. The neoboppers of the 1980's and 1990's attacked almost everybody else. The titanic figure of Black saxophonist John Coltrane has complicated the arguments made by proponents of styles from bebop through neobop because in his own musical journey he drew from all those styles. His influence on all types of jazz was immeasurable. At the height of his popularity, Coltrane largely abandoned playing bebop, the style that had brought him fame, to explore the outer reaches of jazz.

Coltrane himself probably believed that the only essential characteristic of jazz was improvisation, the one constant in his journey from bebop to open-ended improvisations on modal, Indian, and African melodies. On the other hand, this dogged student and prodigious technician - who insisted on spending hours each day practicing scales from theory books - was never able to jettison completely the influence of bebop, with its fast and elaborate chains of notes and ornaments on melody.

Two stylistic characteristics shaped the way Coltrane played the tenor saxophone: he favored playing fast runs of notes built on a melody and depended on heavy, regularly accented beats. The first led Coltrane to "sheets of sound", where he raced faster and faster, pile-driving notes into each other to suggest stacked harmonies. The second meant that his sense of rhythm was almost as close to rock as to bebop.

Three recordings illustrate Coltrane's energizing explorations. Recording *Kind of Blue* with Miles Davis, Coltrane found himself outside bop, exploring modal melodies. Here he played surging, lengthy solos built largely around repeated motifs - an organizing principle unlike that of free jazz saxophone player Ornette Coleman, who modulated or altered melodies in his solos. On *Giant Steps*, Coltrane debuted as leader, introducing his own compositions. Here the sheets of sound, downbeat accents, repetitions and great speed are part of each solo, and the variety of the shapes of his phrases is unique. Coltrane's searching explorations produced solid achievement. *My Favorite Things* was another kind of watershed. Here Coltrane played the soprano saxophone, an instrument seldom used by jazz musicians. Musically, the results were astounding. With the soprano's piping sound, ideas that had sounded dark and brooding acquired a feeling of giddy fantasy.

When Coltrane began recording for the *Impulse!* label, he was still searching. His music became raucous, physical. His influence on rockers was enormous, including Jimi Hendrix, the rock guitarist, who, following Coltrane, raised the extended guitar solo using repeated motifs to a kind of rock art form.

1. The primary purpose of the passage is to
  - (A) discuss the place of Coltrane in the world of jazz and describe his musical explorations
  - (B) examine the nature of bebop and contrast it with improvisational jazz
  - (C) analyze the musical sources of Coltrane's style and their influence on his work
  - (D) acknowledge the influence of Coltrane's music on rock music and rock musicians
  - (E) discuss the arguments that divide the proponents of different jazz style
2. The author implies that which of the following would have been an effect of Coltrane's having chosen to play the tenor rather than the soprano saxophone on *My Favorite Things*?
  - (A) The tone of the recording would have been more somber.
  - (B) The influence of bebop on the recording would have been more obvious.
  - (C) The music on the recording would have sounded less raucous and physical.
  - (D) His influence on rock music might have been less pervasive.
  - (E) The style of the recording would have been indistinguishable from that on *Kind of Blue*.

3. Which of the following best describes the organization of the fourth paragraph?
- (A) A thesis referred to earlier in the passage is mentioned and illustrated with three specific examples.
  - (B) A thesis is stated and three examples are given, each suggesting that a correction needs to be made to a thesis referred to earlier in the passage.
  - (C) A thesis referred to earlier in the passage is mentioned, and three examples are presented and ranked in order of their support of the thesis.
  - (D) A thesis is stated, three seemingly opposing examples are presented, and their underlying correspondence is explained.
  - (E) A thesis is stated, three dissimilar examples are considered, and the thesis is restated.
4. According to the passage, John Coltrane did all of the following during his career EXCEPT
- (A) improvise on melodies from a number of different cultures.
  - (B) perform as leader as well as soloist
  - (C) spend time improving his technical skills
  - (D) experiment with the sounds of various instruments
  - (E) eliminate the influence of bebop on his own music
5. The author mentions the work of Ornette Coleman in the fourth paragraph in order to do which of the following?
- (A) Expand the discussion by mentioning the work of a saxophone player who played in Coltrane's style
  - (B) Compare Coltrane's solos with the work of another jazz artist
  - (C) Support the idea that rational organizing principles need to be applied to artistic work
  - (D) Show the increasing intricacy of Coltrane's work after he abandoned bebop
  - (E) Indicate disagreement with the way Coltrane modulated the motifs in his lengthy solo
6. According to the passage, a major difference between Coltrane and other jazz musicians was the
- (A) degree to which Coltrane's music encompassed all of jazz
  - (B) repetition of motifs that Coltrane used in his solos
  - (C) number of his own compositions that Coltrane recorded
  - (D) indifference Coltrane maintained to musical technique
  - (E) importance Coltrane placed on rhythm in jazz
7. In terms of its tone and form, the passage can best be characterized as
- (A) dogmatic explanation
  - (B) indignant denial
  - (C) enthusiastic praise
  - (D) speculative study
  - (E) lukewarm review

**Passage 7**

The history of responses to the work of the artist Sandro Botticelli (1444-1510) suggests that widespread appreciation by critics is a relatively recent phenomenon. Writing in 1550, Vasari expressed an unease with Botticelli's work, admitting that the artist fitted awkwardly into his (Vasari's) evolutionary scheme of the history of art. Over the next two centuries, academic art historians denigrated Botticelli in favour of his fellow Florentine, Michelangelo. Even when anti-academic art historians of the early nineteenth century rejected many of the standards of evaluation espoused by their predecessors, Botticelli's work remained outside of accepted taste, pleasing neither amateur observers nor connoisseurs. (Many of his best paintings, however, remained hidden away in obscure churches and private homes.)

The primary reason for Botticelli's unpopularity is not difficult to understand: most observers, up until the mid-nineteenth century, did not consider him to be noteworthy because his work, for the most part, did not seem to these observers to exhibit the traditional characteristics of the fifteenth-century Florentine art. For example, Botticelli rarely employed the technique of strict perspective and, unlike Michelangelo, never used chiaroscuro. Another reason for Botticelli's unpopularity may have been that his attitude toward the style of classical art was very different from that of his contemporaries. Although he was thoroughly exposed to classical art, he showed little interest in borrowing from the classical style. Indeed, it is paradoxical that a painter of large-scale classical subjects adopted a style that was only slightly similar to that of classical art.

In any case, when viewers began to examine more closely the relationship of Botticelli's work to the tradition of fifteenth-century Florentine art, his reputation began to grow. Analyses and assessments of Botticelli made between 1850 and 1870 by the artists of the Pre-Raphaelite movement, as well as by the writer Pater (although he, unfortunately, based his assessment on an incorrect analysis of Botticelli's personality), inspired a new appreciation of Botticelli throughout the English-speaking world. Yet Botticelli's work, especially the Sistine frescoes, did not generate worldwide attention until it was finally subjected to a comprehensive and scrupulous analysis by Horne in 1908. Horne rightly demonstrated that the frescoes shared important features with paintings by other fifteenth-century Florentines - features such as skillful representation of anatomical proportions, and of the human figure in motion. However, Horne argued that Botticelli did not treat these qualities as ends in themselves - rather, that he emphasized clear depiction of a story, a unique achievement and one that made the traditional Florentine qualities less central. Because of Horne's emphasis on the way a talented artist reflects a tradition but yet moves beyond that tradition, an emphasis crucial to any study of art, the twentieth century has come to appreciate Botticelli's achievements.

1. Which of the following would be the most appropriate title for the passage?
  - (A) Botticelli's Contribution to Florentine Art
  - (B) Botticelli and the Traditions of Classical Art
  - (C) Sandro Botticelli: From Denigration to Appreciation
  - (D) Botticelli and Michelangelo : A Study in Contrasts.
  - (E) Standards of Taste: Botticelli's critical Reputation up to the Nineteenth Century
2. It can be inferred that the author of the passage would be likely to find most beneficial a study of an artist that
  - (A) avoided placing the artist in an evolutionary scheme of the history of art
  - (B) analyzed the artist's work in relation to the artist's personality.
  - (C) analyzed the artist's relationship to the style and subject matter of classical art
  - (D) analyzed the artist's work in terms of both traditional characteristics and unique achievements
  - (E) sanctioned and extended the evaluation of the artist's work made by the artist's contemporaries

3. The passage suggests that Vasari would most probably have been more enthusiastic about Botticelli's work if that artist's work
- (A) had not revealed Botticelli's inability to depict a story clearly
  - (B) had not evolved so straightforwardly from the Florentine art of the fourteenth century
  - (C) had not seemed to Vasari to be so similar to classical art
  - (D) could have been appreciated by amateur viewers as well as by connoisseurs
  - (E) could have been included more easily in Vasari's discussion of art history
4. The author most likely mentions the fact that many of Botticelli's best paintings were "hidden away in obscure churches and private homes" (lines 10-11) in order to
- (A) indicate the difficulty of trying to determine what an artist's best work is
  - (B) persuade the reader that an artist's work should be available for general public viewing
  - (C) prove that academic art historians had succeeded in keeping Botticelli's work from general public view
  - (D) call into question the assertion that anti-academic art historians disagreed with their predecessors
  - (E) suggest a reason why, for a period of time, Botticelli's work was not generally appreciated
5. The passage suggests that most seventeenth- and eighteenth-century academic art historians and most early nineteenth-century anti-academic art historians would have disagreed significantly about which of the following?
- I. The artistic value of Botticelli's work
  - II. The criteria by which art should be judged
  - III. The features that characterized fifteenth-century Florentine art
- (A) I only
  - (B) II only
  - (C) III only
  - (D) II and III only
  - (E) I, II and III
6. According to the passage, which of the following is an accurate statement about Botticelli's relation to classical art?
- (A) Botticelli more often made use of classical subject matter than classical style.
  - (B) Botticelli's interest in perspective led him to study classical art.
  - (C) Botticelli's style does not share any similarities with the style of classical art.
  - (D) Because he saw little classical art, Botticelli did not exhibit much interest in imitating such art.
  - (E) Although Botticelli sometimes borrowed his subject matter from classical art, he did not create large-scale paintings of these subjects.
7. According to the passage, Horne believed which of the following about the relation of the Sistine frescoes to the tradition of fifteenth-century Florentine art?
- (A) The frescoes do not exhibit characteristics of such art.
  - (B) The frescoes exhibit more characteristics of such art than do the paintings of Michelangelo.
  - (C) The frescoes exhibit some characteristics of such art, but these qualities are not the dominant features of the frescoes.
  - (D) Some of the frescoes exhibit characteristics of such art, but most do not.
  - (E) More of the frescoes exhibit skillful representation of anatomical proportions than skillful representation of the human figure in motion.
8. The passage suggests that, before Horne began to study Botticelli's work in 1908, there had been
- (A) little appreciation of Botticelli in the English speaking world
  - (B) an overemphasis on Botticelli's transformation, in the Sistine frescoes, of the principles of classical art
  - (C) no attempt to compare Botticelli's work to that of Michelangelo
  - (D) no thorough investigation of Botticelli's Sistine frescoes
  - (E) little agreement among connoisseurs and amateurs about the merits of Botticelli's work

**Passage 8**

One of the major traditions of film comedy is the American film of the 1930's and 1940's that generated its comedy through talk - the dialogue comedy. Like most American films of this period, the dialogue comedy used visual images primarily to support talk; what made the dialogue comedy so distinctive was the extremely high  
5 quality of the talk. Because the dialogue comedy was so dependent on verbal exchanges, it relied heavily on the scriptwriter who devised the talk (and also on compelling acting performances to make the talk come alive). In the shaping of some dialogue comedies, the writer played as great a role as did the director, and sometimes a clever script by a writer such as Robert Riskin or Charles Lederer even  
10 went so far as to overwhelm a weak director, exerting far more influence over the film than did the director's style. If these facts contradict the assumption held by many critics today that the director is a film's prime mover, it is equally true that, in the best of the dialogue comedies, the writer's insight fused perfectly with the style of the director, who expanded the sharp script into the full comic conception.

15 Underlying the best of the dialogue comedies was usually a subtle and sly rebellion against the rigid Hollywood studio system that produced them. These films often bit the hand that fed them, although the bite was coy and the teeth often capped with the same rhinestones that Hollywood so adored. The best comedies developed a unique aesthetic of undermining Hollywood assumptions and conventions by  
20 appearing to subscribe to them. Their primary targets were the familiar Hollywood movie definitions of love, success, and propriety. And, in shedding the clichés, these comedies frequently implied a more human and sensible system of emotional relationships and moral values. As in earlier American film comedies, the sting of sincerity exploded the balloon of pretentious gentility.

25 No director made better dialogue comedies than Preston Sturges, primarily because no one wrote better comic dialogue. Sturges was especially good at portraying corrupt, acquisitive Europeans by means of comic dialogue. Most of Sturges' contemporaries juxtaposed the pure American with the corrupt European, a juxtaposition reminiscent of Henry James's fiction written a half-century or so earlier.

30 Sturges, however, had his European characters attempt to imitate American ideals, and the shallowness of their imitation is revealed by their absurdly silly language. Sturges' emphasis on dialogue directly determined his photographic technique, which relied on the conventional American film two-shot to capture the faces of characters who talk, talk, talk. But it is such good talk, incredibly crackling and rapid (like  
35 director Howard Hawks, Sturges was a master of the lightning pace), that the typical Sturges dialogue comedy, *The Lady Eve*, say, or *The Palm Beach Story*, is bursting with life and energy.

1. According to the passage, which of the following was a characteristic of most American films of the 1930's and 1940's?
  - (A) The actors' performances were compelling
  - (B) Action and dialogue were primarily comic in nature
  - (C) Visual images were employed mainly to assist the dialogue
  - (D) The quality of the dialogue was extremely high
  - (E) The scriptwriter and the director were in constant rivalry
2. According to the passage, Robert Riskin was which of the following?
  - (A) A director of film comedies
  - (B) The co-author, with Charles Lederer, of film scripts
  - (C) A film scriptwriter who was financially successful
  - (D) A writer of dialogue for dialogue comedies
  - (E) A scriptwriter whose work was overshadowed by the work of Preston Sturges

3. It can be inferred from the passage that the critics mentioned in line 12 would most probably believe that a scriptwriter
- (A) is not usually the main influence on a film
  - (B) is usually most successful when he or she writes comedy
  - (C) often contributes more to a film than does the film's director
  - (D) tends to contribute less to a film's success than do the film's actors
  - (E) is not likely to be content with writing only for one particular film studio
4. According to the passage, Preston Sturges was which of the following?
- (A) The director responsible for the public success of dialogue comedies
  - (B) An advocate of the Hollywood studio system
  - (C) A writer and director of dialogue comedies
  - (D) A writer of novels as well as of film scripts
  - (E) An associate of Howard Hawks
5. In the second paragraph of the passage, the author is primarily concerned with
- (A) indicating some of the characteristics of the best dialogue comedies
  - (B) contrasting dialogue comedies with film comedies from an earlier era
  - (C) advocating a return to some of the comic traditions of the 1930's and 1940's
  - (D) attacking the rigid control exercised by the Hollywood studio system in the 1930's and 1940's
  - (E) describing the respective roles of the scriptwriter and the director in the making of the best dialogue comedies
6. The author's attitude toward the values mentioned in line 23 is best described as
- (A) sentimental
  - (B) approving
  - (C) disinterested
  - (D) skeptical
  - (E) dismissive
7. The passage suggests that the rebellion against the Hollywood studio system that can be observed in the best dialogue comedies was not
- (A) insightful or eloquent
  - (B) justified or necessary
  - (C) intended or successful
  - (D) impolite or repetitive
  - (E) glaring or clumsy
8. The passage suggests that, in some American film comedies that predate dialogue comedies, a viewer could observe
- (A) sentimental and melodramatic turns of plot
  - (B) stunts and action rather than talk
  - (C) the moral dimensions of emotional relationship
  - (D) the discrediting of affected social behavior
  - (E) the imitation of American ideals by European characters
9. Which of the following can be inferred from the passage about the two-shot that was used in Preston Sturges's films?
- (A) It was imitated by Howard Hawks.
  - (B) It was not original with Sturges.
  - (C) It was rarely used in noncomic Hollywood films
  - (D) It was not a factor in the success of Sturges' films
  - (E) It was more successful in capturing action sequence than in capturing talk.

**Passage 9**

What are the basic elements in the laughable? The first point to be made is that the comic does not exist beyond the pale of what is strictly human. A landscape may be charming and sublime, or insignificant and ugly; it will never be laughable. One may laugh at an animal, but only because one has detected  
5 in it some human attitude or expression.

Another element to note is the absence of feeling which usually accompanies laughter. Indifference is its usual environment, for laughter has no greater foe than emotion. The comic demands a momentary anesthesia of the heart: its appeal is to the intelligence, pure and simple. This intelligence,  
10 however, must always remain in touch with other intelligences. Laughter appears to need an echo. However spontaneous it seems, it always implies a kind of secret freemasonry, or even complicity, with other laughers, real or imaginary. To understand laughter, we must put it back in its natural environment, which is society.

1. The author is primarily concerned with
  - (A) criticizing those who laugh at certain people or situations
  - (B) discussing why laughter is an antisocial action
  - (C) identifying three different kinds of comedy
  - (D) pointing out some general characteristics of that which is comic
  - (E) distinguishing between emotional laughter and intelligent laughter
2. Which of the following statements about laughter is best supported by the passage?
  - (A) Someone who is ugly cannot at the same time be laughable
  - (B) Someone who pities a person cannot at the same time laugh at that person
  - (C) Laughter begets more laughter, since more than one intelligence is needed for comedy
  - (D) Because of the absence of feeling which laughter requires, the object of a joke is usually indifferent to it.
  - (E) Because comedy requires intelligence, it is difficult to be spontaneously funny
3. Which of the following examples could best be substituted for the author's example of the animal (lines 4-5)?
  - (A) A hat with a shape reflecting the human caprice that has molded it
  - (B) A wave that is about to knock over a woman standing on a beach
  - (C) A person spinning a ball with his feet, as a seal spins a ball on its nose
  - (D) A play on words by a comedian
  - (E) A painted smile on the face of a clown



**Passage 10**

Early in the careers of most novelists, the critics nag and carp; later, the cold eye of reassessment is cast over their life's work; at the peak of a writing career, which is where Doris Lessing now stands, the years of solid achievement command maximum respect.

A survey of critical responses to Lessing's books might reveal curious strata of social history; it is hard to remember now that she was once considered very daring and very militant (she insisted that relations between the sexes were difficult and unequal). She has been accused of being a feminist, and then accused by feminists of not being feminist enough. She has been a communist, but then moved on from a belief in simplistic political solutions to interest in deeper psychological change, touching on themes of madness and of mystical and extrasensory states of consciousness.

Lessing has written clearly into all her work the conviction that we are moving blindly and inevitably toward global catastrophe. Her message seems to be our complete moral and social bankruptcy, particularly in the relations between men and women. Hers is not an angry feminism, though her men are rather poor creatures compared to her bruised but gritty women. Anger may imply hope that things could be better if only some sense could be knocked into somebody's head, a hope for a time "after the revolution." One does not feel that Lessing sees any hope, only perpetual deadlock.

Certainly Lessing has earned the respect accorded to a writer of her stature and productivity. Doggedly she has been writing into her fiction signposts and warnings that we need desperately to be reminded of, and writing in a way that has been more persuasive and imaginative than if she had been a pure polemicist. But the critic has the problem of distinguishing between what an author says and the way she says it. The moralist in Lessing, struggling with the very skilled writer, at times has made her writing prolix, clogged, slow - though in her latest novels she has successfully introduced a leavening of fantasy. The fact is that there are writers who in an economical page or two can make us feel our dilemmas more piercingly than she does in a leisurely fictional experience. Missing from her work is that sense of time and space gathered up for a moment between the hands, that sudden shift from understanding to seeing directly that we expect at rare moments from our storytellers.

1. According to the passage, Lessing's feminism is characterized by which of the following?
  - I. A lack of concern for the well-being of males
  - II. A special emphasis upon the problems of women in professional life
  - III. A belief that antagonism between the sexes is inevitable

(A) I only  
(B) III only  
(C) I and II only  
(D) I and III only  
(E) II and III only
2. The aspect of Lessing's work most extensively discussed in the passage is its

(A) pungent humor  
(B) exaggerated idealism  
(C) disarming candidness  
(D) scrupulous scholarship  
(E) unrelenting moralism
3. According to the passage, which of the following can be attributed to Lessing's concern with warning society of its deterioration?

(A) Recurrence of the same situations in her various writings  
(B) A readership whose interest in her writing is more political than literary  
(C) Concentration of the critics on her craftsmanship rather than her "message"

- (D) A tendency for her prose to be labored and verbose
  - (E) Overemphasis on the relationship between men and women
4. The passage suggests that the author admires writers
- (A) whose fiction is less militant than Lessing's
  - (B) who express greater optimism and hope than Lessing does
  - (C) whose insights are succinctly and trenchantly developed
  - (D) whose writings have been characterized by stylistic innovation
  - (E) who treat conventional themes in a witty and inventive fashion
5. The passage implies that the author views communism as an ideology that
- (A) fails to accommodate the complexities of society
  - (B) is hostile to artistic creativity
  - (C) fosters an acute awareness of social injustice
  - (D) is congenial to feminist concerns
  - (E) denies the psychological dimension of human beings
6. The author's attitude toward Lessing can best be described as one of
- (A) serious reservation
  - (B) grudging respect
  - (C) enthusiastic endorsement
  - (D) qualified admiration
  - (E) unresolved ambivalence
7. The passage suggests that one reason why opinion regarding Lessing's feminism has changed is that
- (A) the focus of her literature has changed from social issues to psychological states
  - (B) she has gradually adopted a more conservative position on the roles and rights of women
  - (C) feminists today find her work irrelevant to their concerns
  - (D) her concern with the social and psychological freedom of women, while constant, has become less militant over the years
  - (E) her views no longer seem as revolutionary as they once did

**Passage 11**

An important development in twentieth-century literary criticism was the growth of the New Criticism. The New Critics assumed that the methods devised for reading long poems could be applied to novels. In practice this meant a new emphasis in the reading of fiction on scrupulous textual analysis as a prerequisite for biographical and ideological comment. A novelist's ideas were now significant mainly as components of his or her writing technique. Insisting on close attention to a text, the New Critics analyzed long passages of a novel and concentrated on discerning the development of symbolic patterns. By analyzing symbols in this way, the critic could show how the meaning of symbol accrued as it was repeated in different passages. This permitted a more complete understanding of the symbol to emerge than that which could be discovered through isolated symbol-hunting. One novelist who benefited from this new emphasis on text was D. H. Lawrence, whose work was rescued from hostile critics who had attacked it as mere ideology.

1. According to the passage, the New Critics considered the ideas found in a novelist's work to be
  - (A) equally conducive to treatment in poetry or fiction
  - (B) important primarily as aspects of the novelist's style
  - (C) ambiguous and therefore stumbling blocks to informed critical judgment
  - (D) most easily analyzed when embodied in a symbol
  - (E) open to biographical speculation on the part of a critic
2. The author alludes to D. H. Lawrence in order to give an example of a novelist who
  - (A) sacrificed literary technique to ideology
  - (B) wrote both novels and long poems
  - (C) subscribed to the principles of the New Criticism
  - (D) was influenced by New Critical judgments on his work
  - (E) was reassessed because of New Critical principles
3. It can be inferred from the passage that the New Critics disliked isolated symbol-hunting because it tended to
  - (A) encourage simplistic critical platitudes
  - (B) reduce the role of the critic to that of a literary detective
  - (C) enforce an unnecessary distinction between criticism and symbolism
  - (D) oversimplify the meaning of a symbol
  - (E) ignore conventions associated with long poems
4. The passage implies that the New Critics would be most likely to agree with which of the following statements regarding the importance of biographical information in literary criticism?
  - (A) Critical speculation on the connection between a novelist's childhood and his or her writing is irrelevant
  - (B) The most scrupulously complete literary criticism is that which emphasizes connections between a novelist's life and his or her writing
  - (C) A novelist's life experiences can contribute to an understanding of his or her novels, but treatment of these experiences must be preceded by textual analysis
  - (D) Information about a novelist's life can provide important critical insight into his or her novels, but such information should be subordinated to ideological investigation
  - (E) Biographical criticism that can reveal a developing pattern in a novelist's life is usually preferable to criticism that isolates only key events in that life

**Passage 12**

The making of classifications by literary historians can be a somewhat risky enterprise. When Black poets are discussed separately as a group, for instance, the extent to which their work reflects the development of poetry in general should not be forgotten, or a distortion of literary history may  
5 result. This caution is particularly relevant in an assessment of the differences between Black poets at the turn of the century (1900-1909) and those of the generation of the 1920's. These differences include the bolder and more forthright speech of the later generation and its technical inventiveness. It should be remembered, though, that comparable  
10 differences also existed for similar generations of White poets.

When poets of the 1910's and 1920's are considered together, however, the distinctions that literary historians might make between "conservative" and "experimental" would be of little significance in a discussion of Black poets, although these remain helpful classifications for White poets of these  
15 decades. Certainly differences can be noted between "conservative" Black poets such as Countee Cullen and Claude McKay and "experimental" ones such as Jean Toomer and Langston Hughes. But Black poets were not battling over old or new styles; rather, one accomplished Black poet was ready to welcome another, whatever his or her styles, for what mattered  
20 was racial pride.

However, in the 1920's, Black poets did debate whether they should deal with specifically racial subjects. They asked whether they should only write about Black experience for a Black audience or whether such demands were restrictive. It may be said, though, that virtually all these  
25 poets wrote their best poems when they spoke out of racial feeling, race being, as James Weldon Johnson rightly put it, "perforce the thing the Negro poet knows best".

At the turn of the century, by contrast, most Black poets generally wrote in the conventional manner of the age and expressed noble, if vague,  
30 emotions in their poetry. These poets were not unusually gifted, though Roscoe Jamison and G. M. McClellan may be mentioned as exceptions. They chose not to write in dialect, which as Sterling Brown has suggested, "meant a rejection of stereotypes of Negro life," and they refused to write only about racial subjects. This refusal had both a positive and a negative  
35 consequence. As Brown observes, "Valuably insisting that Negro poets should not be confined to issues of race, these poets committed {an} error .... They refused to look into their hearts and write". These are important insights, but one must stress that this refusal to look within was also typical of most White poets of the United States at the time. They, too, often  
40 turned from their own experience and consequently produced not very memorable poems about vague topics, such as the peace of nature.

1. According to the passage, most turn-of-the century Black poets generally did which of the following?  
(A) Wrote in ways that did not challenge accepted literary practice.  
(B) Described scenes from their own lives.  
(C) Aroused patriotic feelings by expressing devotion to the land.  
(D) Expressed complex feelings in the words of ordinary people.  
(E) Interpreted the frustrations of Blacks to an audience of Whites.
2. According to the passage, an issue facing Black poets in the 1920's was whether they should  
(A) seek a consensus on new techniques of poetry  
(B) write exclusively about and for Blacks  
(C) withdraw their support from a repressive society  
(D) turn away from social questions to recollect the tranquillity of nature  
(E) identify themselves with an international movement of Black writers.

3. It can be inferred from the passage that classifying a poet as either conservative or experimental would be of “little significance” (line 13) when discussing Black poets of the 1910’s and the 1920’s because
- (A) these poets wrote in very similar styles
  - (B) these poets all wrote about nature in the same way
  - (C) these poets were fundamentally united by a sense of racial achievement despite differences in poetic style
  - (D) such a method of classification would fail to take account of the influence of general poetic practice
  - (E) such a method of classification would be relevant only in a discussion of poets separated in time by more than three decades
4. The author quotes Sterling Brown in lines 35-37 in order to
- (A) present an interpretation of some Black assertion about their acceptance of various poetic styles
  - (B) introduce a distinction between Black poets who used dialect and White poets who did not
  - (C) disprove James Weldon Johnson’s claim that race is what “the Negro poet knows best”
  - (D) suggest what were the effects of some Black poets’ decision not to write only about racial subjects
  - (E) prove that Black poets at the turn of the century wrote less conventionally than did their White counterparts
5. It can be inferred from the passage that the author finds the work of the majority of the Black poets at the turn of the century to be
- (A) unexciting
  - (B) calming
  - (C) confusing
  - (D) delightful
  - (E) inspiring
6. The author would be most likely to agree that poets tend to produce better poems when they
- (A) express a love of nature
  - (B) declaim noble emotions
  - (C) avoid technical questions about style
  - (D) emulate the best work of their predecessors
  - (E) write from personal experience
7. Which of the following best describes the attitude of the author toward classification as a technique in literary history?
- (A) Enthusiastic
  - (B) Indifferent
  - (C) Wary
  - (D) Derisive
  - (E) Defensive

**Passage 13**

Notable as important nineteenth-century novels by women, Mary Shelley's *Frankenstein* and Emily Bronte's *Wuthering Heights* treat women very differently. Shelley produced a "masculine" text in which the fates of subordinate female characters seem entirely dependent on the  
5 actions of male heroes or anti-heroes.

Bronte produced a more realistic narrative portraying a world where men battle for the favors of apparently high-spirited, independent women. Nevertheless, these two novels are alike in several crucial ways. Many readers are convinced that the compelling mysteries of each plot  
10 conceal elaborate structures of allusion and fierce, though shadowy, moral ambitions that seem to indicate metaphysical intentions, though efforts by critics to articulate these intentions have generated much controversy. Both novelists use a storytelling method that emphasizes ironic disjunctions between different perspectives on the same events as  
15 well as ironic tensions that inhere in the relationship between surface drama and concealed authorial intention, a method I call an evidentiary narrative technique.

1. The primary purpose of the passage is to
  - (A) defend a controversial interpretation of two novels
  - (B) explain the source of widely recognized responses to two novels
  - (C) delineate broad differences between two novels
  - (D) compare and contrast two novels
  - (E) criticize and evaluate two novels
2. According to the passage, *Frankenstein* differs from *Wuthering Heights* in its
  - (A) use of multiple narrators
  - (B) method of disguising the author's real purposes
  - (C) portrayal of men as determiners of the novel's action
  - (D) creation of a realistic story
  - (E) controversial effect on readers
3. Which of the following narrative strategies best exemplifies the "evidentiary narrative technique" mentioned in line 17?
  - (A) Telling a story in such a way that the author's real intentions are discernible only through interpretations of allusions to a world outside that of the story
  - (B) Telling a story in such a way that the reader is aware, as events unfold, of the author's underlying purposes and the ways these purposes conflict with the drama of the plot
  - (C) Telling a story in a way that both directs attention to the incongruities among the points of view of several characters and hints that the plot has a significance other than that suggested by its mere events
  - (D) Telling a story as a mystery in which the reader must deduce, from the conflicting evidence presented by several narrators, the moral and philosophical significance of character and event
  - (E) Telling a story from the author's point of view in a way that implies both the author's and the reader's ironic distance from the dramatic unfolding of events
4. According to the passage, the plots of *Wuthering Heights* and *Frankenstein* are notable for their elements of
  - (A) drama and secrecy
  - (B) heroism and tension
  - (C) realism and ambition
  - (D) mystery and irony
  - (E) morality and metaphysics

**Passage 14**

Initially the Vinaver theory that Malory's eight romances, once thought to be fundamentally unified, were in fact eight independent works produced both a sense of relief and an unpleasant shock. Vinaver's theory comfortably explained away the apparent contradictions of chronology and made each romance independently satisfying. It was, however, disagreeable to find that what had been thought of as one book was now eight books. Part of this response was the natural reaction to the disturbance of set ideas. Nevertheless, even now, after lengthy consideration of the theory's refined but legitimate observations, one cannot avoid the conclusion that the eight romances are only one work. It is not quite a matter of disagreeing with the theory of independence, but of rejecting its implications: that the romances may be taken in any or no particular order, that they have no cumulative effect, and that they are as separate as the works of a modern novelist.

1. The primary purpose of the passage is to
  - (A) discuss the validity of a hypothesis
  - (B) summarize a system of general principles
  - (C) propose guidelines for future argument
  - (D) stipulate conditions for acceptance of an interpretation
  - (E) deny accusations about an apparent contradiction
2. It can be inferred from the passage that the author believes which of the following about Malory's works?
  - I. There are meaningful links between and among the romances.
  - II. The subtleties of the romances are obscured when they are taken as one work.
  - III. Any contradictions in chronology among the romances are less important than their overall unity.
  - (A) I only
  - (B) III only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II and III
3. The author of the passage concedes which of the following about the Vinaver theory?
  - (A) It gives a clearer understanding of the unity of Malory's romances.
  - (B) It demonstrates the irrationality of considering Malory's romances to be unified.
  - (C) It establishes acceptable links between Malory's romances and modern novels.
  - (D) It unifies earlier and later theories concerning the chronology of Malory's romances.
  - (E) It makes valid and subtle comments about Malory's romances.
4. It can be inferred from the passage that, in evaluating the Vinaver theory, some critics were
  - (A) frequently misled by the inconsistencies in Malory's work
  - (B) initially biased by previous interpretations of Malory's work
  - (C) conceptually displeased by the general interpretation that Vinaver rejected
  - (D) generally in agreement with Vinaver's comparisons between Malory and modern novelists
  - (E) originally skeptical about Vinaver's early conclusions with respect to modern novels

**Passage 15**

“Masterpieces are dumb”, wrote Flaubert. “They have a tranquil aspect like the very products of nature, like large animals and mountains.” He might have been thinking of *War and Peace*, that vast, silent work, unfathomable and simple, provoking endless questions through the majesty of its being.

5 Tolstoi’s simplicity is “overpowering,” says the critic Bayley, “disconcerting” because it comes from “his casual assumption that the world is as he sees it.” Like other nineteenth-century Russian writers he is “impressive” because he “means what he says,” but he stands apart from all others and from most Western writers in his identity with life, which is so complete as to make us

10 forget he is an artist. He is the center of his work, but his egocentricity is of a special kind. “Goethe, for example”, says Bayley, “cared for nothing but himself. Tolstoi was nothing but himself.”

For all his varied modes of writing and the multiplicity of characters in his fiction, Tolstoi and his work are of a piece. The famous “conversion” of his

15 middle years, movingly recounted in his *Confession*, was a culmination of his early spiritual life, not a departure from it. The apparently fundamental changes that led from epic narrative to dogmatic parable, from a joyous, buoyant attitude toward life to pessimism and cynicism, from *War and Peace* to *The Kreutzer Sonata*, came from the same restless, impressionable depths

20 of an independent spirit yearning to get at the truth of its experience.

“Truth is my hero,” wrote Tolstoi in his youth, reporting the fighting in Sebastopol. Truth remained his hero - his own, not others’ truth. Others were awed by Napoleon, believed that a single man could change the destinies of nations, adhered to meaningless rituals, and formed their tastes on

25 established canons of art. Tolstoi reversed all preconceptions; and in every reversal he overthrew the “systems,” the “machine”, the externally ordained belief, the conventional behavior in favor of unsystematic, impulsive life, of inward motivation and the solutions of independent thought.

In his work the artificial and the genuine are always exhibited in dramatic

30 opposition: the supposedly great Napoleon and the truly great, unregarded little Captain Tushin, or Nicholas Rostov’s actual experience in battle and his later account of it. The simple is always pitted against the elaborate, knowledge gained from observation against assertions of borrowed faiths.

Tolstoi’s magical simplicity is a product of these tensions; his work is a

35 record of the questions he put to himself and of the answers he found in his search. The greater characters of his fiction exemplify this search, and their happiness depends on the measure of their answers.

Tolstoi wanted happiness, but only hard-won happiness, that emotional fulfillment and intellectual clarity which could come only as the prize of all-

40 consuming effort. He scorned lesser satisfactions.

- Which of the following best characterizes the author’s attitude toward Tolstoi?
  - She deprecates the cynicism of his later works.
  - She finds his theatricality artificial.
  - She admires his wholehearted sincerity.
  - She thinks his inconsistency disturbing.
  - She respects his devotion to orthodoxy.
- Which of the following best paraphrases Flaubert’s statement quoted in lines 1- 2?
  - Masterpieces seem ordinary and unremarkable from the perspective of a later age.
  - Great works of art do not explain themselves to us any more than natural objects to.
  - Important works of art take their place in the pageant of history because of their uniqueness.
  - The most important aspects of good art are the orderliness and tranquillity it reflects.
  - Masterpieces which are of enduring value represent the forces of nature.



3. The author quotes from Bayley (lines 11-12) to show that
- (A) although Tolstoi observes and interprets life, he maintains no self-conscious distance from his experience
  - (B) the realism of Tolstoi's work gives the illusion that his novels are reports of actual events
  - (C) Unfortunately, Tolstoi is unaware of his own limitations, though he is sincere in his attempt to describe experience
  - (D) Although Tolstoi works casually and make unwarranted assumptions, his work has an inexplicable appearance of truth
  - (E) Tolstoi's personal perspective makes his work almost unintelligible to the majority of his readers.
4. The author states that Tolstoi's conversion represented
- (A) a radical renunciation of the world
  - (B) the rejection of avant-garde ideas
  - (C) the natural outcome of his earlier beliefs
  - (D) the acceptance of a religion he had earlier rejected
  - (E) a fundamental change in his writing style
5. According to the passage, Tolstoi's response to the accepted intellectual and artistic values of his time was to
- (A) select the most valid from among them
  - (B) combine opposing viewpoints into a new doctrine
  - (C) reject the claims of religion in order to serve his art
  - (D) subvert them in order to defend a new political viewpoint
  - (E) upset them in order to be faithful to his experience.
6. It can be inferred from the passage that which of the following is true of *War and Peace*?
- (A) It belongs to an early period of Tolstoi's work.
  - (B) It incorporates a polemic against the disorderliness of Russian life.
  - (C) It has a simple structural outline.
  - (D) It is a work that reflects an ironic view of life.
  - (E) It conforms to the standard of aesthetic temporaries.
7. According to the passage, the explanation of Tolstoi's 'magical simplicity' (line 34) lies partly in his
- (A) remarkable power of observation and his felicity for exact description
  - (B) persistent disregard for conventions and restraints together with his great energy
  - (C) unusual ability to reduce the description of complex situations to few words
  - (D) abiding hatred of religious doctrine and preference for the new scientism
  - (E) continuing attempt to represent the natural in opposition to the pretentious

**Passage 16**

"I want to criticize the social system, and to show it at work, at its most intense." Virginia Woolf's provocative statement about her intentions in writing *Mrs. Dalloway* has regularly been ignored by the critics, since it highlights an aspect of her literary interests very different from the traditional picture of the "poetic" novelist concerned with examining states of reverie and vision and with following the intricate pathways of individual consciousness. But Virginia Woolf was a realistic as well as poetic novelist, a satirist and social critic as well as a visionary: literary critics' cavalier dismissal of Woolf's social vision will not withstand scrutiny.

In her novels, Woolf is deeply engaged by the questions of how individuals are shaped (or deformed) by their social environments, how historical forces impinge on people's lives, how class, wealth, and gender help to determine people's fates. Most of her novels are rooted in a realistically rendered social setting and in a precise historical time.

Woolf's focus on society has not been generally recognized because of her intense antipathy to propaganda in art. The pictures of reformers in her novels are usually satiric or sharply critical. Even when Woolf is fundamentally sympathetic to their causes, she portrays people anxious to reform their society and possessed of a message or program as arrogant or dishonest, unaware of how their political ideas serve their own psychological needs. (Her *Writer's Diary* notes: "the only honest people are the artists", whereas "these social reformers and philanthropists... harbor... discreditable desires under the disguise of loving their kind ...") Woolf detested what she called "preaching" in fiction too, and criticized novelist D. H. Lawrence (among others) for working by this method.

Woolf's own social criticism is expressed in the language of observation rather than in direct commentary, since for her, fiction is a contemplative, not an active art. She describes phenomena and provides materials for a judgement about society and social issues; it is the reader's work to put the observations together and understand the coherent point of view behind them. As a moralist, Woolf works by indirection, subtly undermining officially accepted mores, mocking, suggesting, calling into question, rather than asserting, advocating, bearing witness: here is the satirist's art.

Woolf's literary models were acute social observers like Chekhov and Chaucer. As she put it in *The Common Reader*, "It is safe to say that not a single law has been framed or one stone set upon another because of anything Chaucer said or wrote, and yet, as we read him, we are absorbing morality at every pore". Like Chaucer, Woolf chose to understand as well as to judge, to know her society root and branch - a decision crucial in order to produce art rather than polemic.

1. Which of the following would be the most appropriate title for the passage?
  - (A) Poetry and Satire as Influences on the Novels of Virginia Woolf
  - (B) Virginia Woolf: Critic and Commentator on the Twentieth-Century Novel
  - (C) Trends in Contemporary Reform Movements as a Key to Understanding Virginia Woolf's Novels
  - (D) Society as Allegory for the Individual in the Novels of Virginia Woolf
  - (E) Virginia Woolf's Novels: Critical Reflections on the Individual and on Society

2. In the first paragraph of the passage, the author's attitude toward the literary critics mentioned can best be described as

- (A) disparaging
- (B) ironic
- (C) facetious
- (D) skeptical but resigned
- (E) disappointed but hopeful

3. It can be inferred from the passage that Woolf chose Chaucer as a literary model because she believed that
- (A) Chaucer was the first English author to focus on society as a whole as well as on individual characters
  - (B) Chaucer was an honest and forthright author, whereas novelists like D.H. Lawrence did not sincerely wish to change society
  - (C) Chaucer was more concerned with understanding his society than with calling its accepted mores into question
  - (D) Chaucer's writing was greatly, if subtly, effective in influencing the moral attitudes of his readers
  - (E) her own novels would be more widely read if, like Chaucer, she did not overtly and vehemently criticize contemporary society
4. It can be inferred from the passage that the most probable reason Woolf realistically described the social setting in the majority of her novels was that she
- (A) was aware that contemporary literary critics considered the novel to be the most realistic of literary genres
  - (B) was interested in the effect of a person's social milieu on his or her character and actions
  - (C) needed to be as attentive to detail as possible in her novels in order to support the arguments she advanced in them
  - (D) wanted to show that a painstaking fidelity in the representation of reality did not in any way hamper the artist
  - (E) wished to prevent critics from charging that her novels were written in an ambiguous and inexact style
5. Which of the following phrases best expresses the sense of the word "contemplative" as it is used in line 27?
- (A) Gradually elucidating the rational structures underlying accepted mores
  - (B) Reflecting on issues in society without prejudice or emotional commitment
  - (C) Avoiding the aggressive assertion of the author's perspective to the exclusion of the reader's judgement
  - (D) Conveying a broad view of society as a whole rather than focusing on an isolated individual consciousness
  - (E) Appreciating the world as the artist sees it rather than judging it in moral terms
6. The author implies that a major element of the satirist's art is the satirist's
- (A) consistent adherence to a position of lofty disdain when viewing the foibles of humanity
  - (B) insistence on the helplessness of individuals against the social forces that seek to determine an individual's fate
  - (C) cynical disbelief that visionaries can either enlighten or improve their societies
  - (D) fundamental assumption that some ambiguity must remain in a work of art in order for it to reflect society and social mores accurately
  - (E) refusal to indulge in polemic when presenting social mores to readers for their scrutiny
7. The passage supplies information for answering which of the following questions?
- (A) Have literary critics ignored the social criticism inherent in the works of Chekhov and Chaucer?
  - (B) Does the author believe that Woolf is solely an introspective and visionary novelist?
  - (C) What are the social causes with which Woolf shows herself to be sympathetic in her writings?
  - (D) Was D.H. Lawrence as concerned as Woolf was with creating realistic settings for his novels?
  - (E) Does Woolf attribute more power to social environment or to historical forces as shapers of a person's life?

**Passage 17**

Jean Wagner's most enduring contribution to the study of Afro-American poetry is his insistence that it be analyzed in a religious, as well as secular, frame of reference. The appropriateness of such an approach may seem self-evident for a tradition commencing with spirituals and owing its early forms, rhythms, vocabulary, and evangelical fervor to Wesleyan hymnals. But before Wagner a secular outlook that analyzed Black poetry solely within the context of political and social protest was dominant in the field.

It is Wagner who first demonstrated the essential fusion of racial and religious feeling in Afro-American poetry. The two, he argued, form a symbiotic union in which religious feelings are often applied to racial issues and racial problems are often projected onto a metaphysical plane. Wagner found this most eloquently illustrated in the Black spiritual, where the desire for freedom in this world and the hope for salvation in the next are inextricably intertwined.

1. The primary purpose of the passage is to
  - (A) contrast the theories of Jean Wagner with those of other contemporary critics
  - (B) document the influence of Jean Wagner on the development of Afro-American poetry
  - (C) explain the relevance of Jean Wagner's work to the study of Afro-American religion
  - (D) indicate the importance of Jean Wagner's analysis of Afro-American poetry
  - (E) present the contributions of Jean Wagner to the study of Black spirituals
2. All of the following aspects of Afro-American poetry are referred to in the passage as having been influenced by Wesleyan hymnals EXCEPT
  - (A) subject matter
  - (B) word choice
  - (C) rhythm
  - (D) structure
  - (E) tone
3. It can be inferred from the passage that, before Wagner, most students of Afro-American poetry did which of the following?
  - (A) Contributed appreciably to the transfer of political protest from Afro-American poetry to direct political action.
  - (B) Ignored at least some of the historical roots of Afro-American poetry.
  - (C) Analyzed fully the aspects of social protest to be found in such traditional forms of Afro-American poetry as the Black spiritual.
  - (D) Regarded as unimportant the development of fervent emotionalism in a portion of Afro-American poetry.
  - (E) Concentrated on the complex relations between the technical elements in Afro-American poetry and its political content.

**Passage 18**

Of Homer's two epic poems, the *Odyssey* has always been more popular than the *Iliad*, perhaps because it includes more features of mythology that are accessible to readers. Its subject (to use Maynard Mack's categories) is "life-as-spectacle," for readers, diverted by its various incidents, observe its hero  
5 *Odysseus* primarily from without. The tragic *Iliad*, however, presents "life-as-experience": readers are asked to identify with the mind of *Achilles*, whose motivations render him a not particularly likable hero. In addition, the *Iliad*, more than the *Odyssey*, suggests the complexity of the gods' involvement in human actions, and to the extent that modern readers find this complexity a  
10 needless complication, the *Iliad* is less satisfying than the *Odyssey*, with its simpler scheme of divine justice. Finally, since the *Iliad* presents a historically verifiable action - *Troy's* siege, the poem raises historical questions that are absent from the *Odyssey's* blithely imaginative world.

1. The author uses Mack's "categories" (line 3) most probably in order to
  - (A) argue that the *Iliad* should replace the *Odyssey* as the more popular poem
  - (B) indicate Mack's importance as a commentator on the *Iliad* and the *Odyssey*
  - (C) suggest one way in which the *Iliad* and the *Odyssey* can be distinguished
  - (D) point out some of the difficulties faced by readers of the *Iliad* and the *Odyssey*
  - (E) demonstrate that the *Iliad* and the *Odyssey* can best be distinguished by comparing their respective heroes
2. The author suggests that the variety of incidents in the *Odyssey* is likely to deter the reader from
  - (A) concentrating on the poem's mythological features
  - (B) concentrating on the psychological states of the poem's central character
  - (C) accepting the explanations that have been offered for the poem's popularity
  - (D) accepting the poem's scheme of divine justice
  - (E) accepting Maynard Mack's theory that the poem's subject is "life-as-spectacle"
3. The passage is primarily concerned with
  - (A) distinguishing arguments
  - (B) applying classifications
  - (C) initiating a debate
  - (D) resolving a dispute
  - (E) developing a contrast
4. It can be inferred from the passage that a reader of the *Iliad* is likely to have trouble identifying with the poem's hero for which of the following reasons?
  - (A) The hero is eventually revealed to be unheroic.
  - (B) The hero can be observed by the reader only from without.
  - (C) The hero's psychology is not historically verifiable.
  - (D) The hero's emotions often do not seem appealing to the reader.
  - (E) The hero's emotions are not sufficiently various to engage the reader's attention.

**Passage 19**

Roger Rosenblatt's book *Black Fiction*, in attempting to apply literary rather than sociopolitical criteria to its subject, successfully alters the approach taken by most previous studies. As Rosenblatt notes, criticism of Black writing has often served as a pretext for expounding on Black history. Addison Gayle's recent work, for example, judges the value of Black fiction by overtly political standards, rating each work according to the notions of Black identity which it propounds.

Although fiction assuredly springs from political circumstances, its authors react to those circumstances in ways other than ideological, and talking about novels and stories primarily as instruments of ideology circumvents much of the fictional enterprise. Rosenblatt's literary analysis discloses affinities and connections among works of Black fiction which solely political studies have overlooked or ignored.

Writing acceptable criticism of Black fiction, however, presupposes giving satisfactory answers to a number of questions. First of all, is there a sufficient reason, other than the racial identity of the authors, to group together works by Black authors? Second, how does Black fiction make itself distinct from other modern fiction with which it is largely contemporaneous? Rosenblatt shows that Black fiction constitutes a distinct body of writing that has an identifiable, coherent literary tradition. Looking at novels written by Blacks over the last eighty years, he discovers recurring concerns and designs independent of chronology. These structures are thematic, and they spring, not surprisingly, from the central fact that the Black characters in these novels exist in a predominantly White culture, whether they try to conform to that culture or rebel against it.

Black Fiction does leave some aesthetic questions open. Rosenblatt's thematic analysis permits considerable objectivity; he even explicitly states that it is not his intention to judge the merit of the various works - yet his reluctance seems misplaced, especially since an attempt to appraise might have led to interesting results. For instance, some of the novels appear to be structurally diffuse. Is this a defect, or are the authors working out of, or trying to forge, a different kind of aesthetic? In addition, the style of some Black novels, like Jean Toomer's *Cane*, verges on expressionism or surrealism; does this technique provide a counterpoint to the prevalent theme that portrays the fate against which Black heroes are pitted, a theme usually conveyed by more naturalistic modes of expression?

In spite of such omissions, what Rosenblatt does include in his discussion makes for an astute and worthwhile study. *Black Fiction* surveys a wide variety of novels, bringing to our attention in the process some fascinating and little-known works like James Weldon Johnson's *Autobiography of an Ex-Colored Man*. Its argument is tightly constructed, and its forthright, lucid style exemplifies levelheaded and penetrating criticism.

1. The author of the passage objects to criticism of Black fiction like that by Addison Gayle because it
  - (A) emphasizes purely literary aspects of such fiction
  - (B) misinterprets the ideological content of such fiction
  - (C) misunderstands the notions of Black identity contained in such fiction
  - (D) substitutes political for literary criteria in evaluating such fiction
  - (E) ignores the interplay between Black history and Black identity displayed in such fiction
2. The author of the passage is primarily concerned with
  - (A) evaluating the soundness of a work of criticism
  - (B) comparing various critical approaches to a subject
  - (C) discussing the limitations of a particular kind of criticism
  - (D) summarizing the major points made in a work of criticism
  - (E) explaining the theoretical background of a certain kind of criticism

3. The author of the passage believes that *Black Fiction* would have been improved had Rosenblatt
- (A) evaluated more carefully the ideological and historical aspects of Black fiction
  - (B) attempted to be more objective in his approach to novels and stories by Black authors
  - (C) explored in greater detail the recurrent thematic concerns of Black fiction throughout its history
  - (D) established a basis for placing Black fiction within its own unique literary tradition
  - (E) assessed the relative literary merit of the novels he analyzes thematically
4. The author's discussion of *Black Fiction* can be best described as
- (A) pedantic and contentious
  - (B) critical but admiring
  - (C) ironic and deprecating
  - (D) argumentative but unfocused
  - (E) stilted and insincere
5. It can be inferred that the author of the passage would be LEAST likely to approve of which of the following?
- (A) An analysis of the influence of political events on the personal ideology of Black writers
  - (B) A critical study that applies sociopolitical criteria to autobiographies by Black authors
  - (C) A literary study of Black poetry that appraises the merits of poems according to the political acceptability of their themes
  - (D) An examination of the growth of a distinct Black literary tradition within the context of Black history
  - (E) A literary study that attempts to isolate aesthetic qualities unique to Black fiction
6. The author of the passage uses all of the following in the discussion of Rosenblatt's book EXCEPT
- (A) rhetorical questions
  - (B) specific examples
  - (C) comparison and contrast
  - (D) definition of terms
  - (E) personal opinion
7. The author of the passage refers to James Weldon Johnson's *Autobiography of an Ex-Colored Man* most probably in order to
- (A) point out affinities between Rosenblatt's method of thematic analysis and earlier criticism
  - (B) clarify the point about expressionistic style made earlier in the passage
  - (C) qualify the assessment of Rosenblatt's book made in the first paragraph of the passage
  - (D) illustrate the affinities among Black novels disclosed by Rosenblatt's literary analysis
  - (E) give a specific example of one of the accomplishments of Rosenblatt's work

**Passage 20**

Whether the languages of the ancient American peoples were used for expressing abstract universal concepts can be clearly answered in the case of Nahuatl. Nahuatl, like Greek and German, is a language that allows the formation of extensive compounds. By the combination of radicals or semantic elements, single compound words can express complex conceptual relations, often of an abstract universal character.

The *tlamatinime* (“those who know”) were able to use this rich stock of abstract terms to express the nuances of their thought. They also availed themselves of other forms of expression with metaphorical meaning, some probably original, some derived from Toltec coinages. Of these forms the most characteristic in Nahuatl is the juxtaposition of two words that, because they are synonyms, associated terms, or even contraries, complement each other to evoke one single idea. Used as metaphor, the juxtaposed terms connote specific or essential traits of the being they refer to, introducing a mode of poetry as an almost habitual form of expression.

1. A main purpose of the passage is to
    - (A) delineate the function of the *tlamatinime* in Nahuatl society
    - (B) explain the abstract philosophy of the Nahuatl thinkers
    - (C) argue against a theory of poetic expression by citing evidence about the Nahuatl
    - (D) explore the rich metaphorical heritage the Nahuatl received from the Toltecs
    - (E) describe some conceptual and aesthetic resources of the Nahuatl language
  2. According to the passage, some abstract universal ideas can be expressed in Nahuatl by
    - (A) taking away from a word any reference to particular instances
    - (B) removing a word from its associations with other words
    - (C) giving a word a new and opposite meaning
    - (D) putting various meaningful elements together in one word
    - (E) turning each word of a phrase into a poetic metaphor
  3. It can be inferred solely from the information in the passage that
    - (A) there are many languages that, like Greek or German, allow extensive compounding
    - (B) all abstract universal ideas are ideas of complex relations
    - (C) some record or evidence of the thought of *tlamatinime* exists
    - (D) metaphors are always used in Nahuatl to express abstract conceptual relationships
    - (E) the abstract terms of the Nahuatl language are habitually used in poetry
-



Chapter 3

PASSAGES RELATING TO SOCIAL SCIENCES

Passage 1

A false analogy underlies the philosophy of classical liberalisers. According to this analogy, as the individual is to the nation-state, so the nation-state is to the international community. Woodrow Wilson articulated this idea when he said that nations must be “governed” in their conduct toward each other by the same  
5 principles that govern the individual citizens of all modern nations.” The analogy suggests that each nation has a unitary national will, expressed in the results of its elections. This leads to difficulties in the case of nondemocratic nations, but it leads to even more pervasive misunderstandings of democratic nations, those which have apparently representative electoral systems. The acceptance of these  
10 two specious assumptions leads to the seeming inexplicability of reversals in diplomatic negotiations, with the leadership of one nation failing to recognize that no single issue is of vital importance to another nation, but only to certain factions within that nation.

1. The author quotes Woodrow Wilson (lines 3-5) primarily in order to
  - (A) offer an example of the contradiction present in the analogy that compares the individual to the nation-state
  - (B) support the thesis that there is a disparity between the wants of the individual and the wants of the nation-state
  - (C) suggest that the comparison of the individual to the nation-state is part of a widely held political belief
  - (D) illustrate a new interpretation of the analogical relationship often assumed by those who believe in classical liberalism
  - (E) clarify the analogy that compares the behavior of individuals to the behavior of nation-states
2. It can be inferred from the passage that the author believes that those who accept the assumptions of the philosophy of classical liberalism are likely to do which of the following?
  - I. Assume that a nation can express an undivided will
  - II. Favor a dictatorial form of government
  - III. Fail to anticipate abrupt changes in nations’ policies
  - (A) I only
  - (B) I and II only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II and III
3. In the passage the author is primarily concerned with
  - (A) defending the liberal tradition
  - (B) rejecting the tenets of classical liberalism
  - (C) qualifying a premise of democratic political theory
  - (D) comparing electoral systems
  - (E) analyzing diplomatic negotiations between democratic nations

**Passage 2**

During the nineteenth century, women in the United States who engaged in scientific work remained on the periphery of the scientific community because of the social and intellectual climate of the times. Yet women scientists during this period made valuable contributions to professional science and helped advance  
5 the study of science among women.

Social disapproval of women considered too learned was only one factor that restricted women's participation in scientific studies. Lack of recognition as independent scientists and socialization as helpmates meant that many women were only permitted to assist male researchers, and these women rarely achieved  
10 recognition commensurate with their skills. Moreover, the scientific community itself, in its conscious effort to professionalize, to establish an international reputation, and to raise the status of science in the United States, formed national professional associations and established journals that usually refused to recognize anyone who was perceived to be an amateur.

15 The career of Margaretta Morris provides an example of the sort of situation in which women did not often find themselves during the early decades of the nineteenth century. She worked independently, concentrating her research efforts on entomology, raising insects for study, and charting the life cycles of several destructive species such as the locust and the so-called Hessian fly. Her work,  
20 however, received recognition from professional organizations. Her findings on the fly were presented to the American Philosophical Society in 1840, and her observations on the locust were read before the American Association for the Advancement of Science (AAAS) by one of its members.

Almira Hart Lincoln Phelps, a pioneer in the education of women in the  
25 sciences, believed that a lively intellect contributed to a full happy life. She fulfilled her role as an educator by writing science textbooks that presented science as compatible with the traditional responsibilities of women. Other mid-nineteenth-century women such as Orra White worked as scientific illustrators, contributing to the work of their professionally recognized husbands.

30 Although most women were taught that intellectual achievement for its own sake was not a virtue, women began to attend private scientific study groups and summer schools that stressed self-development. These educational sources proved insufficient as a career base but, during the post-Civil War years, the women's colleges, with women faculty members, provided significant support for  
35 women in science. By the 1880's, college-trained women gained nominal membership in such professional associations as the New York Museum and the Boston Society of Natural History.

The women scientists of the 1880's were a first generation of public achievers. Their success, however, was built on the efforts of women who had worked quietly  
40 in science throughout the century and provided the foundation that helped gain access to advanced training and scientific association for this generation.

1. In discussing the nineteenth century, the author is primarily concerned with
  - (A) discussing women's entrance into the field of scientific study
  - (B) analyzing social attitudes toward women in science
  - (C) describing women who were interested in science
  - (D) demonstrating that women then were involved with intellectual activities
  - (E) explaining women's role in the professionalization of science
2. According to the passage, compared to women in science during the early part of the nineteenth century, women in science in the 1880's were more likely to
  - (A) work as scientific educators
  - (B) have been socialized as helpmates
  - (C) make presentations before professional associations
  - (D) make autonomous scientific investigations
  - (E) have access to formal education

3. It can be inferred from the passage that the scientific community in the United States during the nineteenth century perceived itself to be
- (A) expanding at too rapid a pace
  - (B) too informal and too loosely structured
  - (C) threatened by the discoveries of women scientists
  - (D) composed almost entirely of amateurs
  - (E) unable to compete with scientists in other countries
4. The author refers to the professionalization of the scientific community in order to
- (A) explain why women scientists desired more formal education
  - (B) describe women's advancement within the scientific community
  - (C) show how the attitudes of scientists affected women
  - (D) define how professional guidelines were developed
  - (E) criticize opponents of women's participation in science
5. The passage supplies information for answering which of the following questions?
- (A) Why were women of the nineteenth century interested in scientific studies?
  - (B) Who among nineteenth-century women in scientific studies made the most significant contribution?
  - (C) How did nineteenth-century women in science define their changing role in society?
  - (D) In what fields did most nineteenth-century women scientists work?
  - (E) In what way did nineteenth-century women scientists assist in furthering women's participation in science?
6. The author mentions which of the following as most limiting to women's participation in the field of science in the nineteenth century?
- (A) Social attitudes toward education for women
  - (B) Resistance of male researchers to employing female assistants
  - (C) The small number of women's colleges
  - (D) The lack of specialized associations and established journals
  - (E) The limited activity of scientific researchers during the nineteenth century
7. The author implies that which of the following was a factor in restricting women's participation in scientific associations?
- (A) The small number of women scientists
  - (B) The limited number of professional groups
  - (C) College admission regulations barring women
  - (D) Women's lack of independent status as scientists
  - (E) Women's participation in private study groups

**Passage 3**

- Even as the number of females processed through juvenile courts climbs steadily, an implicit consensus remains among scholars in criminal justice that male adolescents define the delinquency problem in the United States. We suggest two reasons why this view persists. First, female adolescents are accused primarily of
- 5 victimless crimes, such as truancy, that do not involve clear-cut damage to persons or property. If committed by adults, these actions are not even considered prosecutable; if committed by juvenile males, they have traditionally been looked on leniently by the courts. Thus, ironically, the plight of female delinquents receives little scrutiny because they are accused of committing relatively minor offenses.
- 10 Second, the courts have long justified so-called preventive intervention into the lives of young females viewed as antisocial with the rationale that women are especially vulnerable. Traditional stereotypes of women as the weaker and more dependent sex have led to earlier intervention and longer periods of misdirected supervision for female delinquents than for males.

1. Which of the following statements best expresses the irony pointed out by the authors in lines 9-10 of the passage?
- (A) Female delinquents tend to commit victimless crimes more frequently than their male counterparts
  - (B) The predicament of male delinquents receives more attention than that of females because males are accused of more serious crimes
  - (C) Adults are frequently punished less severely than adolescents for committing more serious crimes
  - (D) The juvenile justice system cannot correct its biases because it does not even recognize them
  - (E) Although the number of female delinquents is steadily increasing, the crimes of which they are accused are not particularly serious.
2. It can be inferred from the passage that the authors believe traditional stereotypes of women to be
- (A) frequently challenged
  - (B) persistently inexplicable
  - (C) potentially harmful
  - (D) rapidly changing
  - (E) habitually disregarded
3. The passage suggests that scholars in criminal justice could be criticized for which of the following?
- (A) Underestimating the seriousness of juvenile crime
  - (B) Rationalizing the distinction made between juveniles and adults in the legal system
  - (C) Concerning themselves too little with the prevention of juvenile delinquency
  - (D) Focusing on those whose crimes have involved damage to persons or property
  - (E) Failing to point out injustices in the correctional system

**Passage 4**

Extended debate concerning the exact point of origin of individual folktales told by Afro-American slaves has unfortunately taken precedence over the analysis of the tales' meaning and function. Cultural continuities with Africa were not dependent on importation and  
5 perpetuation of specific folktales in their pristine form. It is in the place that tales occupied in the lives of the slaves and in the meaning slaves derived from them that the clearest resemblances to African tradition can be found. Afro-American slaves did not borrow tales indiscriminately from the Whites among whom they lived. Black people were most influenced by  
10 those Euro-American tales whose functional meaning and aesthetic appeal had the greatest similarity to the tales with deep roots in their ancestral homeland. Regardless of where slave tales came from, the essential point is that, with respect to language, delivery, details to characterization, and plot, slaves quickly made them their own.

1. The author claims that most studies of folktales told by Afro-American slaves are inadequate because the studies
  - (A) fail to recognize any possible Euro-American influence on the folktales
  - (B) do not pay enough attention to the features of a folktale that best reveal an African influence
  - (C) overestimate the number of folktales brought from Africa by the slaves
  - (D) do not consider the fact that a folktale can be changed as it is retold many times
  - (E) oversimplify the diverse and complex traditions of the slaves' ancestral homeland
2. The author's main purpose is to
  - (A) create a new field of study
  - (B) discredit an existing field of study
  - (C) change the focus of a field of study
  - (D) transplant scholarly techniques from one field of study to another
  - (E) restrict the scope of a burgeoning new field of study
3. The passage suggests that the author would regard which of the following areas of inquiry as most likely to reveal the slaves' cultural continuities with Africa?
  - (A) The means by which Blacks disseminated their folktales in nineteenth-century America
  - (B) Specific regional differences in the styles of delivery used by the slaves in telling folktales
  - (C) The functional meaning of Black folktales in the lives of White children raised by slaves
  - (D) The specific way the slaves used folktales to impart moral teachings to their children
  - (E) The complexities of plot that appear most frequently in the slaves' tales
4. Which of the following techniques is used by the author in developing the argument in the passage?
  - (A) Giving a cliché a new meaning
  - (B) Pointedly refusing to define key terms
  - (C) Alternately presenting generalities and concrete details
  - (D) Concluding the passage with a restatement of the first point made in the passage
  - (E) Juxtaposing statements of what is not the case and statements of what is the case

**Passage 5**

Four legal approaches may be followed in attempting to channel technological development in socially useful directions: specific directives, market incentive modifications, criminal prohibitions, and changes in decision-making structures. Specific directives involve the government's identifying one or more  
5 factors controlling research, development, or implementation of a given technology

Directives affecting such factors may vary from administrative regulation of private activity to government ownership of a technological operation. Market incentive modifications are deliberate alterations of the market within  
10 which private decisions regarding the development and implementation of technology are made. Such modifications may consist of imposing taxes to cover the costs to society of a given technology, granting subsidies to pay for social benefits of a technology, creating the right to sue to prevent certain development or easing procedural rules to enable the recovery of damages to  
15 compensate for harm caused by destructive technological activity.

Criminal prohibitions may modify technological activity in areas impinging on fundamental social values, or they may modify human behavior likely to result from technological applications - for example, the deactivation of automotive pollution control devices in order to improve vehicle performance.  
20 Alteration of decision-making structures includes all possible modifications in the authority, constitution, or responsibility of private and public entities deciding questions of technological development and implementation.

Such alterations include the addition of public-interest members to corporate boards, the imposition by statute of duties on governmental decision-makers, and the extension of warranties in response to consumer action.  
25

Effective use of these methods to control technology depends on whether or not the goal of regulation is the optimal allocation of resources. When the object is optimal resource allocation, that combination of legal methods should be used that most nearly yields the allocation that would exist if there were no  
30 external costs resulting from allocating resources through market activity. There are external costs when the price set by buyers and sellers of goods fails to include some costs to anyone that result from the production and use of the goods. Such costs are internalized when buyers pay them.

Air pollution from motor vehicles imposes external costs on all those  
35 exposed to it, in the form of soiling, materials damage, and disease; these externalities result from failure to place a price on air, thus making it a free good, common to all. Such externalities lead to nonoptimal resource allocation, because the private net product and the social net product of market activity are not often identical. If all externalities were internalized, transactions  
40 would occur until bargaining could no longer improve the situation, thus giving an optimal allocation of resources at a given time.

1. The passage is primarily concerned with describing
  - (A) objectives and legal methods for directing technological development
  - (B) technical approaches to the problem of controlling market activity
  - (C) economic procedures for facilitating transactions between buyers and sellers
  - (D) reasons for slowing technological development in the light of environmentalist objections
  - (E) technological innovations making it possible to achieve optimum allocation of resources
2. The author cites air pollution from motor vehicles in lines 34-35 in order to
  - (A) revise cost estimates calculated by including the costs of resources
  - (B) evaluate legal methods used to prevent technological developments
  - (C) give examples of costs not included in buyer-seller bargains
  - (D) refute hypotheses not made on the basis of monetary exchange values
  - (E) commend technological research undertaken for the common welfare

3. According to the passage, transactions between private buyers and sellers have effects on society that generally
- (A) are harmful when all factors are considered
  - (B) give rise to ever-increasing resource costs
  - (C) reflect an optimal allocation of natural resources
  - (D) encompass more than the effects on the buyers and sellers alone
  - (E) are guided by legal controls on the development of technology
4. It can be inferred from the passage that the author does NOT favor which of the following?
- (A) Protecting the environment for future use
  - (B) Changing the balance of power between opposing interests in business
  - (C) Intervening in the activity of the free market
  - (D) Making prices reflect costs to everyone in society
  - (E) Causing technological development to cease
5. A gasoline-conservation tax on the purchase of large automobiles, with the proceeds of the tax rebated to purchasers of small automobiles, is an example of
- (A) a specific directive
  - (B) a market incentive modification
  - (C) an optimal resource allocation
  - (D) an alteration of a decision-making structure
  - (E) an external cost
6. If there were no external costs, as they are described in the passage, which of the following would be true?
- (A) All technology-control methods would be effective
  - (B) Some resource allocations would be illegal
  - (C) Prices would include all costs to members of society
  - (D) Some decision-making structures would be altered
  - (E) The availability of common goods would increase
7. The author assumes that, in determining what would be an optimal allocation of resources, it would be possible to
- (A) assign monetary value to all damage resulting from the use of technology
  - (B) combine legal methods to yield the theoretical optimum
  - (C) convince buyers to bear the burden of damage from technological developments
  - (D) predict the costs of new technological developments
  - (E) derive an equation making costs depend on prices
8. On the basis of the passage, it can be inferred that the author would agree with which of the following statements concerning technological development?
- (A) The government should own technological operations
  - (B) The effects of technological development cannot be controlled
  - (C) Some technological developments are beneficial
  - (D) The current state of technological development results in a good allocation of resources
  - (E) Applications of technological developments are criminally destructive

**Passage 6**

*(This passage is from an article published in 1973)*

The recent change to all-volunteer armed forces in the United States will eventually produce a gradual increase in the proportion of women in the armed forces and in the variety of women's assignments, but probably not the dramatic gains for women that might have been expected. This is so even  
5 though the armed forces operate in an ethos of institutional change oriented toward occupational equality and under the federal sanction of equal pay for equal work. The difficulty is that women are unlikely to be trained for any direct combat operations.

10 A significant portion of the larger society remains uncomfortable as yet with extending equality in this direction. Therefore, for women in the military, the search for equality will still be based on functional equivalence, not identity or even similarity of task. Opportunities seem certain to arise. The growing emphasis on deterrence is bound to offer increasing scope for women to become involved in novel types of noncombat military assignments.

1. The primary purpose of the passage is to
  - (A) present an overview of the different types of assignments available to women in the new United States all-volunteer armed forces
  - (B) present a reasoned prognosis of the status of women in the new United States all-volunteer armed forces
  - (C) present the new United States all-volunteer armed forces as a model case of equal employment policies in action
  - (D) analyze reforms in the new United States all-volunteer armed forces necessitated by the increasing number of women in the military
  - (E) analyze the use of functional equivalence as a substitute for occupational equality in the new United States all-volunteer armed forces
2. According to the passage, despite the United States armed forces' commitment to occupational equality for women in the military, certain other factors preclude women's
  - (A) receiving equal pay for equal work
  - (B) having access to positions of responsibility at most levels
  - (C) drawing assignments from a wider range of assignments than before
  - (D) benefiting from opportunities arising from new noncombat functions
  - (E) being assigned all of the military tasks that are assigned to men
3. The passage implies that which of the following is a factor conducive to a more equitable representation of women in the United States armed forces than has existed in the past?
  - (A) The all-volunteer character of the present armed forces
  - (B) The past service records of women who had assignments functionally equivalent to men's assignments
  - (C) The level of awareness on the part of the larger society of military issues
  - (D) A decline in the proportion of deterrence-oriented noncombat assignments
  - (E) Restrictive past policies governing the military assignments open to women
4. The "dramatic gains for women" (line 4) and the attitude, as described in lines 9-10, of a "significant portion of the larger society" are logically related to each other inasmuch as the author puts forward the latter as
  - (A) a public response to achievement of the former
  - (B) the major reason for the absence of the former
  - (C) a precondition for any prospect of achieving the former
  - (D) a catalyst for a further extension of the former
  - (E) a reason for some of the former being lost again



**Passage 7**

Chimps and children, gulls and Greeks - the ethnologists go their merry way, comparing bits of human cultural behavior with bits of genetically programmed animal behavior. True, humans are animals; they share certain anatomical features with other animals, and some items of human behavior may seem analogous to the behavior of other animals.

But such analogies can seriously mislead if we fail to look at the context of a particular item of behavior. Thus one ethnologist compares the presentation of a twig by a cormorant with gift-giving in humans. Yet the cormorant's twig-presentation simply inhibits attack and is comparable to other appeasement rituals found in many species. Human gift-giving differs in form and purpose not only from culture to culture, but within the same culture in various social contexts.

Everything significant about it derives from its social context. Thus ethnologists can accomplish little beyond reminding us that we are animals - until they study humans as cultural beings.

1. The author is primarily concerned with
  - (A) demonstrating the usefulness of ethnology in discovering the behavioral limits within which humans operate
  - (B) objecting to the degradation of humanity implicit in the ethnologists' equation of humans and animals
  - (C) pointing out the dangers inherent in comparing highly dissimilar species, such as humans and cormorants, rather than similar ones, such as humans and apes
  - (D) refuting the idea that the appeasement rituals in human cultural behavior can be profitably subjected to ethnological analysis
  - (E) arguing that the ethnologists' assumption that human behavior can be straightforwardly compared with animal behavior is invalid
2. The author believes that gift-giving in humans
  - (A) is instinctive behavior
  - (B) is analogous to appeasement rituals in other animals
  - (C) is not an appropriate subject of study for ethnologists
  - (D) must be considered within its social context to be properly understood
  - (E) may be a cultural remnant of behavior originally designed to inhibit attack
3. The author's attitude toward contemporary ethnologists can best be described as
  - (A) puzzled
  - (B) conciliatory
  - (C) defensive
  - (D) amused
  - (E) disparaging
4. Which of the following statements from a report on a cross-cultural study of gift-giving would, if true, most strongly support the author's assertions concerning human gift-giving?
  - (A) In every culture studied, it was found that some forms of gift-giving are acts of aggression that place the receiver under obligation to the giver.
  - (B) Most governmental taxation systems differentiate between gifts of property given to children during a parent's lifetime, and a child's inheritance of the same property from a parent dying without a will.
  - (C) Some gift-giving customs have analogous forms in nearly every culture, as in the almost universal custom of welcoming strangers with gifts of food.
  - (D) In North America, generally speaking, money is an acceptable holiday gift to one's employer, friends, or relatives.
  - (E) Some gifts, being conciliatory in nature, indicate by their costliness the degree of hostility they must appease in the recipient.

**Passage 8**

The historian Frederick J. Turner wrote in the 1890's that the agrarian discontent that had been developing steadily in the United States since about 1870 had been precipitated by the closing of the internal frontier - that is, the depletion of available new land needed for further expansion of the American farming system. Not only was Turner's thesis influential at the time, it was later adopted and elaborated by other scholars, such as John D. Hicks in *The Populist Revolt* (1931). Actually, however, new lands were taken up for farming in the United States throughout and beyond the nineteenth century. In the 1890's, when agrarian discontent had become most acute 1,100,000 new farms were settled, which was 500,000 more than had been settled during the previous decade. After 1890, under the terms of the Homestead Act and its successors, more new land was taken up for farming than had been taken up for this purpose in the United States up until that time. It is true that a high proportion of the newly farmed land was suitable only for grazing and dry farming, but agricultural practices had become sufficiently advanced to make it possible to increase the profitability of farming by utilizing even these relatively barren lands.

The emphasis given by both scholars and statesmen to the presumed disappearance of the American frontier helped to obscure the great importance of changes in the conditions and consequences of international trade that occurred during the second half of the nineteenth century. In 1869 the Suez Canal was opened and the first transcontinental railroad in the United States was completed. An extensive network of telegraph and telephone communications was spun: Europe was connected by submarine cable with the United States in 1866 and with South America in 1874. By about 1870, improvements in agricultural technology made possible the full exploitation of areas that were most suitable for extensive farming on a mechanized basis. Huge tracts of land were being settled and farmed in Argentina, Australia, Canada, and in the American West, and these areas were joined with one another and with the countries of Europe into an interdependent market system.

As a consequence, agrarian depressions no longer were local or national in scope, and they struck several nations whose internal frontiers had not vanished or were not about to vanish. Between the early 1870's and the 1890's, the mounting agrarian discontent in America paralleled the almost uninterrupted decline in the prices of American agricultural products on foreign markets. Those staple-growing farmers in the United States who exhibited the greatest discontent were those who had become most dependent on foreign markets for the sale of their products. Insofar as Americans had been deterred from taking up new land for farming, it was because market conditions had made this period a perilous time in which to do so.

1. The author is primarily concerned with
  - (A) showing that a certain interpretation is better supported by the evidence than is an alternative explanation
  - (B) developing an alternative interpretation by using sources of evidence that formerly had been unavailable
  - (C) questioning the accuracy of the evidence that most scholars have used to counter the author's own interpretation
  - (D) reviewing the evidence that formerly had been thought to obscure a valid interpretation
  - (E) presenting evidence in support of a controversial version of an earlier interpretation
2. According to the author, changes in the conditions of international trade resulted in an
  - (A) underestimation of the amount of new land that was being farmed in the United States
  - (B) underutilization of relatively small but rich plots of land
  - (C) overexpansion of the world transportation network for shipping agricultural products

- (D) extension of agrarian depressions beyond national boundaries  
(E) emphasis on the importance of market forces in determining the prices of agricultural products
3. The author implies that the change in the state of the American farmer's morale during the latter part of the nineteenth century was traceable to the American farmer's increasing perception that
- (A) the costs of cultivating the land were prohibitive within the United States  
(B) the development of the first transcontinental railroad in the United States occurred at the expense of the American farmer  
(C) the American farming system was about to run out of the new farmland that was required for its expansion  
(D) the prices of American agricultural products were deteriorating especially rapidly on domestic markets  
(E) the proceeds from sales of American agricultural products on foreign markets were unsatisfactory
4. According to the passage, which of the following occurred prior to 1890?
- (A) Frederick J. Turner's thesis regarding the American frontier became influential  
(B) The Homestead Act led to an increase in the amount of newly farmed land in the United States  
(C) The manufacturers of technologically advanced agricultural machinery rapidly increased their marketing efforts  
(D) Direct lines of communication were constructed between the United States and South America  
(E) Technological advances made it fruitful to farm extensively on a mechanized basis
5. The author implies that, after certain territories and countries had been joined into an interdependent market system in the nineteenth century, agrarian depressions within that system
- (A) spread to several nations, excluding those in which the internal frontier remained open  
(B) manifested themselves in several nations, including those in which new land remained available for farming  
(C) slowed down the pace of new technological developments in international communications and transportation  
(D) affected the local and national prices of the nonagricultural products of several nations  
(E) encouraged several nations to sell more of their agricultural products on foreign markets
6. The author provides information concerning newly farmed lands in the United States (lines 7-17) as evidence in direct support of which of the following?
- (A) A proposal by Frederick J. Turner that was later disputed by John D. Hicks  
(B) An elaboration by John D. Hicks of a thesis that formerly had been questioned by Frederick J. Turner  
(C) The established view that was disputed by those scholars who adopted the thesis of Frederick J. Turner  
(D) The thesis that important changes occurred in the nature of international trade during the second half of the nineteenth century  
(E) The view that the American frontier did not become closed during the nineteenth century or soon thereafter
7. The author's argument implies that, compared to the yearly price changes that actually occurred on foreign agricultural markets during the 1880's, American farmers would have most preferred yearly price changes that were
- (A) much smaller and in the same direction  
(B) much smaller but in the opposite direction  
(C) slightly smaller and in the same direction  
(D) similar in size but in the opposite direction  
(E) slightly greater and in the same direction

**Passage 9**

In the early 1950's, historians who studied pre-industrial Europe (which we may define here as Europe in the period from roughly 1300 to 1800) began, for the first time in large numbers, to investigate more of the preindustrial European population than the 2 or 3 percent who comprised the political and social elite: the kings, generals, judges, nobles, bishops, and local magnates who had hitherto usually filled history books. One difficulty, however, was that few of the remaining 97 percent recorded their thoughts or had them chronicled by contemporaries. Faced with this situation, many historians based their investigations on the only records that seemed to exist: birth, marriage, and death records. As a result, much of the early work on the nonelite was aridly statistical in nature; reducing the vast majority of the population to a set of numbers was hardly more enlightening than ignoring them altogether. Historians still did not know what these people thought or felt.

One way out of this dilemma was to turn to the records of legal courts, for here the voices of the nonelite can most often be heard, as witnesses, plaintiffs, and defendants. These documents have acted as "a point of entry into the mental world of the poor". Historians such as Le Roy Ladurie have used the documents to extract case histories, which have illuminated the attitudes of different social groups (these attitudes include, but are not confined to, attitudes toward crime and the law) and have revealed how the authorities administered justice. It has been societies that have had a developed police system and practiced Roman law, with its written depositions, whose court records have yielded the most data to historians. In Anglo-Saxon countries hardly any of these benefits obtain, but it has still been possible to glean information from the study of legal documents.

The extraction of case histories is not, however, the only use to which court records may be put. Historians who study preindustrial Europe have used the records to establish a series of categories of crime and to quantify indictments that were issued over a given number of years. This use of the records does yield some information about the nonelite, but this information gives us little insight into the mental lives of the nonelite. We also know that the number of indictments in preindustrial Europe bears little relation to the number of actual criminal acts, and we strongly suspect that the relationship has varied widely over time. In addition, aggregate population estimates are very shaky, which makes it difficult for historians to compare rates of crime per thousand in one decade of the preindustrial period with rates in another decade. Given these inadequacies, it is clear why the case history use of court records is to be preferred.

1. The author suggests that, before the early 1950's, most historians who studied preindustrial Europe did which of the following?
  - (A) Failed to make distinctions among members of the preindustrial European political and social elite
  - (B) Used investigatory methods that were almost exclusively statistical in nature
  - (C) Inaccurately estimated the influence of the preindustrial European political and social elite
  - (D) Confined their work to a narrow range of the preindustrial European population
  - (E) Tended to rely heavily on birth, marriage, and death records
2. According to the passage, the case histories extracted by historians have
  - (A) scarcely illuminated the attitudes of the political and social elite
  - (B) indicated the manner in which those in power apportioned justice
  - (C) focused almost entirely on the thoughts and feelings of different groups toward crime and the law
  - (D) been considered the first kind of historical writing that utilized the records of legal courts
  - (E) been based for the most part on the trial testimony of police and other legal authorities
3. It can be inferred from the passage that much of the early work by historians on the European nonelite of the preindustrial period might have been more illuminating if these historians had
  - (A) used different methods of statistical analysis to investigate the nonelite

- (B) been more successful in identifying the attitudes of civil authorities, especially those who administered justice, toward the nonelite
  - (C) been able to draw on more accounts, written by contemporaries of the nonelite, that described what this nonelite thought
  - (D) relied more heavily on the personal records left by members of the European political and social elite who lived during the period in question birth, marriage, and death records of the nonelite
  - (E) been more willing to base their research on the birth, marriage, and death records of the nonelite.
4. The author mentions Le Roy Ladurie (line 26) in order to
- (A) give an example of a historian who has made one kind of use of court records
  - (B) cite a historian who has based case histories on the birth, marriage, and death records of the nonelite
  - (C) identify the author of the quotation cited in the previous sentence
  - (D) gain authoritative support for the view that the case history approach is the most fruitful approach to court records
  - (E) point out the first historian to realize the value of court records in illuminating the beliefs and values of the nonelite
5. According to the passage, which of the following is true of indictments for crime in Europe in the preindustrial period?
- (A) They have, in terms of their numbers, remained relatively constant over time
  - (B) They give the historian important information about the mental lives of those indicted
  - (C) They are not a particularly accurate indication of the extent of actual criminal activity
  - (D) Their importance to historians of the nonelite has been generally overestimated
  - (E) Their problematic relationship to actual crime has not been acknowledged by most historians
6. It can be inferred from the passage that a historian who wished to compare crime rates per thousand in a European city in one decade of the fifteenth century would probably be most aided by better information about which of the following?
- (A) The causes of unrest in the city during the two decades
  - (B) The aggregate number of indictments in the city nearest to the city under investigation during the two decades
  - (C) The number of people who lived in the city during each of the decades under investigation
  - (D) The mental attitudes of criminals in the city, including their feelings about authority, during each of the decades under investigation
  - (E) The possibilities for a member of the political nonelite to become a member of the political and social elite during the two decades
7. The passage would be most likely to appear as part of
- (A) a book review summarizing the achievements of historians of the European aristocracy
  - (B) an essay describing trends in the practice of writing history
  - (C) a textbook on the application of statistical methods in the social science
  - (D) a report to the historical profession on the work of early-twentieth-century historians
  - (E) an article urging the adoption of historical methods by the legal profession

**Passage 10**

Tocqueville, apparently, was wrong. Jacksonian America was not a fluid, egalitarian society where individual wealth and poverty were ephemeral conditions. At least so argues E. Pessen in his iconoclastic study of the very rich in the United States between 1825 and 1850.

Pessen does present a quantity of examples together with some refreshingly intelligible statistics, to establish the existence of an inordinately wealthy class. Though active in commerce or the professions, most of the wealthy were not self-made, but had inherited family fortunes. In no sense mercurial, these great fortunes survived the financial panics that destroyed lesser ones. Indeed, in several cities the wealthiest one percent constantly increased its share until, by 1850, it owned half of the community's wealth. Although these observations are true, Pessen overestimates their importance by concluding from them that the undoubted progress toward inequality in the late eighteenth century continued in the Jacksonian period and that the United States was a class-ridden, plutocratic society even before industrialization.

1. According to the passage, Pessen indicates that all of the following were true of the very wealthy in the United States between 1825 and 1850 EXCEPT:
  - (A) They formed a distinct upper class.
  - (B) Many of them were able to increase their holdings.
  - (C) Some of them worked as professionals or in business
  - (D) Most of them accumulated their own fortunes
  - (E) Many of them retained their wealth in spite of financial upheavals.
2. The author's attitude toward Pessen's presentation of statistics can be best described as
  - (A) disapproving
  - (B) shocked
  - (C) suspicious
  - (D) amused
  - (E) laudatory
3. Which of the following best states the author's main point?
  - (A) Pessen's study has overturned the previously established view of the social and economic structure of early nineteenth-century America.
  - (B) Tocqueville's analysis of the United States in the Jacksonian era remains the definitive account of this period.
  - (C) Pessen's study is valuable primarily because it shows the continuity of the social system in the United States throughout the nineteenth century.
  - (D) The social patterns and political power of the extremely wealthy in the United States between 1825 and 1850 are well documented.
  - (E) Pessen challenges a view of the social and economic system in the United States from 1825 to 1850, but he draws conclusions that are incorrect.

**Passage 11**

Throughout human history there have been many stringent taboos concerning watching other people eat or eating in the presence of others. There have been attempts to explain these taboos in terms of inappropriate social relationships either between those who are involved and those who are not simultaneously involved in the satisfaction of a bodily need, or between those already gorging. Undoubtedly such elements exist in the taboos, but there is an additional element with a much more fundamental importance in pre-historic times, when food was so precious and the on-lookers so hungry, not to offer half of the little food one had was unthinkable, since every glance was a plea for life. Further, during those times, people existed in nuclear or extended family groups, and the sharing of food was quite literally supporting one's family or, by extension, preserving one's self.

1. If the argument in the passage is valid, taboos against eating in the presence of others who are not also eating would be LEAST likely in a society that
  - (A) had always had a plentiful supply of food
  - (B) emphasized the need to share worldly goods
  - (C) had a nomadic rather than an agricultural way of life
  - (D) emphasized the value of privacy
  - (E) discouraged overindulgence
2. The author's hypothesis concerning the origin of taboos against watching other people eat emphasizes the
  - (A) general palatability of food
  - (B) religious significance of food
  - (C) limited availability of food
  - (D) various sources of food
  - (E) nutritional value of food
3. According to the passage, the author believes that past attempts to explain some taboos concerning eating are
  - (A) unimaginative
  - (B) implausible
  - (C) inelegant
  - (D) incomplete
  - (E) unclear
4. In developing the main idea of the passage, the author does which of the following?
  - (A) Downplays earlier attempts to explain the origins of a social prohibition.
  - (B) Adapts a scientific theory and applies it to a spiritual relationship.
  - (C) Simplifies a complex biological phenomenon by explaining it in terms of social needs.
  - (D) Reorganizes a system designed to guide personal behavior.
  - (E) Codifies earlier, unsystematized conjectures about family life.

**Passage 12**

- During adolescence, the development of political ideology becomes apparent in the individual; ideology here is defined as the presence of roughly consistent attitudes, more or less organized in reference to a more encompassing, though perhaps tacit, set of general principles. As such, political ideology is dim or absent at the beginning of adolescence. Its acquisition by the adolescent, in even the most modest sense, requires the acquisition of relatively sophisticated cognitive skills: the ability to manage abstractness, to synthesize and generalize, to imagine the future. These are accompanied by a steady advance in the ability to understand principles.
- The child's rapid acquisition of political knowledge also promotes the growth of political ideology during adolescence. By knowledge I mean more than the dreary "facts", such as the composition of county government that the child is exposed to in the conventional ninth-grade civics course. Nor do I mean only information on current political realities. These are facets of knowledge, but they are less critical than the adolescent's absorption, often unwitting, of a feeling for those many unspoken assumptions about the political system that comprise the common ground of understanding - for example, what the state can "appropriately" demand of its citizens and vice versa, or the "proper" relationship of government to subsidiary social institutions, such as the schools and churches. Thus, political knowledge is the awareness of social assumptions and relationships as well as of objective facts. Much of the naiveté that characterizes the younger adolescent's grasp of politics stems not from an ignorance of "facts" but from an incomplete comprehension of the common conventions of the system, of what is and is not customarily done, and of how and why it is or is not done.
- Yet I do not want to overemphasize the significance of increased political knowledge in forming adolescent ideology. Over the years I have become progressively disenchanted about the centrality of such knowledge and have come to believe that much current work in political socialization, by relying too heavily on its apparent acquisition, has been misled about the tempo of political understanding in adolescence.
- Just as young children can count numbers in series without grasping the principle of ordination, young adolescents may have in their heads many random bits of political information without a secure understanding of those concepts that would give order and meaning to the information.
- Like magpies, children's minds pick up bits and pieces of data. If you encourage them, they will drop these at your feet - Republicans and Democrats, the tripartite division of the federal system, perhaps even the capital of Massachusetts. But until the adolescent has grasped the integumental function that concepts and principles provide, the data remain fragmented, random, disordered.

1. The author's primary purpose in the passage is to
  - (A) clarify the kinds of understanding an adolescent must have in order to develop a political ideology
  - (B) dispute the theory that a political ideology can be acquired during adolescence
  - (C) explain why adolescents are generally uninterested in political arguments
  - (D) suggest various means of encouraging adolescents to develop personal political ideologies
  - (E) explain why an adolescent's political ideology usually looks more sophisticated than it actually is
2. According to the author, which of the following contributes to the development of political ideology during adolescence?
  - (A) Conscious recognition by the adolescent of his or her own naiveté
  - (B) Thorough comprehension of the concept of ordination
  - (C) Evaluation by the adolescent of the general principles encompassing his or her specific political ideas
  - (D) Intuitive understanding of relationships among various components of society
  - (E) Rejection of abstract reasoning in favor of involvement with pragmatic situations



3. The author uses the term “common ground of understanding” (line 17) to refer to
- (A) familiar legislation regarding political activity
  - (B) the experience that all adolescents share
  - (C) a society’s general sense of its own political activity
  - (D) a society’s willingness to resolve political tensions
  - (E) the assumption that the state controls social institutions
4. The passage suggests that, during early adolescence, a child would find which of the following most difficult to understand?
- (A) A book chronicling the ways in which the presidential inauguration ceremony has changed over the years
  - (B) An essay in which an incident in British history is used to explain the system of monarchic succession
  - (C) A summary of the respective responsibilities of the legislative, executive, and judicial branches of government
  - (D) A debate in which the participants argue, respectively, that the federal government should or should not support private schools
  - (E) An article detailing the specific religious groups that founded American colonies and the guiding principles of each one
5. It can be inferred from the passage that the author would be most likely to agree with which of the following statements about schools?
- (A) They should present political information according to carefully planned, schematic arrangements
  - (B) They themselves constitute part of a general sociopolitical system that adolescents are learning to understand
  - (C) If they were to introduce political subject matter in the primary grades, students would understand current political realities at an earlier age.
  - (D) They are ineffectual to the degree that they disregard adolescents’ political naiveté
  - (E) Because they are subsidiary to government, their contribution to the political understanding of adolescents must be limited
6. Which of the following best summarizes the author’s evaluation of the accumulation of political knowledge by adolescents?
- (A) It is unquestionably necessary, but its significance can easily be overestimated.
  - (B) It is important, but not as important as is the ability to appear knowledgeable.
  - (C) It delays the necessity of considering underlying principles.
  - (D) It is primarily relevant to an understanding of limited, local concerns, such as county politics.
  - (E) It is primarily dependent on information gleaned from high school courses such as civics.
7. Which of the following statements best describes the organization of the author’s discussion of the role of political knowledge in the formation of political ideology during adolescence?
- (A) He acknowledges its importance, but then modifies his initial assertion of that importance.
  - (B) He consistently resists the idea that it is important, using a series of examples to support his stand.
  - (C) He wavers in evaluating it and finally uses analogies to explain why he is indecisive.
  - (D) He begins by questioning conventional ideas about its importance, but finally concedes that they are correct.
  - (E) He carefully refrains from making an initial judgment about it, but later confirms its critical role.

**Passage 13**

In his 1976 study of slavery in the United States, Herbert Gutman, like Fogel, Engerman, and Genovese, has rightly stressed the slaves' achievements. But unlike these historians, Gutman gives plantation owners little credit for these achievements. Rather, Gutman argues that one must look to the Black family and the slaves' extended kinship system to understand how crucial achievements, such as the maintenance of a cultural heritage and the development of a communal consciousness, were possible. His findings compel attention.

Gutman recreates the family and extended kinship structure mainly through an ingenious use of what any historian should draw upon - quantifiable data, derived in this case mostly from plantation birth registers. He also uses accounts of ex-slaves to probe the human reality behind his statistics. These sources indicate that the two-parent household predominated in slave quarters just as it did among freed slaves after emancipation. Although Gutman admits that forced separation by sale was frequent, he shows that the slaves' preference, revealed most clearly on plantations where sale was infrequent, was very much for stable monogamy. In less conclusive fashion, Fogel, Engerman, and Genovese had already indicated the predominance of two-parent households; however, only Gutman emphasizes the preference for stable monogamy and points out what stable monogamy meant for the slaves' cultural heritage. Gutman argues convincingly that the stability of the Black family encouraged the transmission of - and so was crucial in sustaining - the Black heritage of folklore, music, and religious expression from one generation to another, a heritage that slaves were continually fashioning out of their African and American experience.

Gutman's examination of other facets of kinship also produces important findings. Gutman discovers that cousins rarely married, an exogamous tendency that contrasted sharply with the endogamy practiced by the plantation owners. This preference for exogamy, Gutman suggests, may have derived from West African rules governing marriage, which, though they differed from one tribal group to another, all involved some kind of prohibition against unions with close kin. This taboo against cousins' marrying is important, argues Gutman, because it is one of many indications of a strong awareness among slaves of an extended kinship network. The fact that distantly related kin would care for children separated from their families also suggests this awareness. When blood relationships were few, as in newly created plantations in the Southwest, "fictive" kinship arrangements took their place until a new pattern of consanguinity developed. Gutman presents convincing evidence that this extended kinship structure - which he believes developed by the mid-to-late eighteenth century - provided the foundations for the strong communal consciousness that existed among slaves.

In sum, Gutman's study is significant because it offers a closely reasoned and original explanation of some of the slaves' achievements, one that correctly emphasizes the resources that slaves themselves possessed.

1. According to the passage, Fogel Engerman, Genovese, and Gutman have all done which of the following?

- I. Discounted the influence of plantation owners on slaves' achievements.
- II. Emphasized the achievements of slaves.
- III. Pointed out the prevalence of the two-parent household among slaves.
- IV. Showed the connection between stable monogamy and slaves' cultural heritage.

- (A) I and II only
- (B) I and IV only
- (C) II and III only
- (D) I, III, and IV only
- (E) II, III, and IV only

2. With which of the following statements regarding the resources that historians ought to use would the author of the passage be most likely to agree?
- (A) Historians ought to make use of written rather than oral accounts.
  - (B) Historians should rely primarily on birth registers.
  - (C) Historians should rely exclusively on data that can be quantified.
  - (D) Historians ought to make use of data that can be quantified.
  - (E) Historians ought to draw on earlier historical research but they should do so in order to refute it.
3. Which of the following statements about the formation of the Black heritage of folklore, music, and religious expression is best supported by the information presented in the passage?
- (A) The heritage was formed primarily out of the experiences of those slaves who attempted to preserve the stability of their families.
  - (B) The heritage was not formed out of the experience of those slaves who married their cousins.
  - (C) The heritage was formed out of the African than out of the American experiences of slaves
  - (D) The heritage was not formed out of the experiences of only a single generation of slaves
  - (E) The heritage was formed primarily out of slaves' experiences of interdependence on newly created plantations in the Southwest.
4. According to the passage, all of the following are true of the West African rules governing marriage mentioned in lines 28-33 EXCEPT:
- (A) The rules were derived from rules governing fictive kinship arrangements.
  - (B) The rules forbade marriages between close kin.
  - (C) The rules are mentioned in Herbert Gutman's study.
  - (D) The rules were not uniform in all respects from one West African tribe to another.
  - (E) The rules have been considered to be a possible source of slaves' marriage preferences.
5. Which of the following statements concerning the marriage practices of plantation owners during the period of Black slavery in the United States can most logically be inferred from the information in the passage?
- (A) These practices began to alter sometime around the mid-eighteenth century.
  - (B) These practices varied markedly from one region of the country to another.
  - (C) Plantation owners usually based their choice of marriage partners on economic considerations.
  - (D) Plantation owners often married earlier than slaves.
  - (E) Plantation owners often married their cousins.
6. Which of the following best describes the organization of the passage?
- (A) The author compares and contrasts the work of several historians and then discusses areas for possible new research.
  - (B) The author presents his thesis, draws on the work of several historians for evidence to support his thesis, and concludes by reiterating his thesis.
  - (C) The author describes some features of a historical study and then uses those features to put forth his own argument.
  - (D) The author summarizes a historical study, examines two main arguments from the study, and then shows how the arguments are potentially in conflict with one another.
  - (E) The author presents the general argument of a historical study, describes the study in more detail, and concludes with a brief judgement of the study's value.
7. Which of the following is the most appropriate title for the passage, based on its content?
- (A) The Influence of Herbert Gutman on Historians of Slavery in the United States
  - (B) Gutman's Explanation of How Slaves Could Maintain a Cultural Consciousness
  - (C) Slavery in the United States: New Controversy About an Old Subject
  - (D) The Black Heritage of Folklore, Music, and Religious Expression: Its Growing Influence
  - (E) The Black Family and Extended Kinship Structure: How They Were Important for the Freed Slave

**Passage 14**

Islamic law is a particularly instructive example of "sacred law." Islamic law is a phenomenon so different from all other forms of law - notwithstanding, of course, a considerable and inevitable number of coincidences with one or the other of them as far as subject matter and positive enactments are concerned - that its study is indispensable in order to appreciate adequately the full range of possible legal phenomena.

Even the two other representatives of sacred law that are historically and geographically nearest to it, Jewish law and Roman Catholic canon law, are perceptibly different.

Both Jewish law and canon law are more uniform than Islamic law. Though historically there is a discernible break between Jewish law of the sovereign state of ancient Israel and of the Diaspora (the dispersion of Jewish people after the conquest of Israel), the spirit of the legal matter in later parts of the Old Testament is very close to that of the Talmud, one of the primary codifications of Jewish law in the Diaspora. Islam, on the other hand, represented a radical breakaway from the Arab paganism that preceded it; Islamic law is the result of an examination, from a religious angle, of legal subject matter that was far from uniform, comprising as it did the various components of the laws of pre-Islamic Arabia and numerous legal elements taken over from the non-Arab peoples of the conquered territories. All this was unified by being subjected to the same kind of religious scrutiny, the impact of which varied greatly, being almost nonexistent in some fields, and in others originating novel institutions. This central duality of legal subject matter and religious norm is additional to the variety of legal, ethical, and ritual rules that is typical of sacred law.

In its relation to the secular state, Islamic law differed from both Jewish and canon law. Jewish law was buttressed by the cohesion of the community, reinforced by pressure from outside; its rules are the direct expression of this feeling of cohesion, tending toward the accommodation of dissent. Canon and Islamic law, on the contrary, were dominated by the dualism of religion and state, where the state was not, in contrast with Judaism, an alien power but the political expression of the same religion. But the conflict between state and religion took different forms; in Christianity it appeared as the struggle for political power on the part of a tightly organized ecclesiastical hierarchy, and canon law was one of its political weapons. Islamic law, on the other hand, was never supported by an organized institution; consequently, there never developed an overt trial of strength. There merely existed discordance between application of the sacred law and many of the regulations framed by Islamic states; this antagonism varied according to place and time.

1. The author's purpose in comparing Islamic law to Jewish law and canon law is most probably to
  - (A) contend that traditional legal subject matter does not play a large role in Islamic law
  - (B) support his argument that Islamic law is a unique kind of legal phenomenon
  - (C) emphasize the variety of forms that can all be considered sacred law
  - (D) provide an example of how he believes comparative institutional study should be undertaken
  - (E) argue that geographical and historical proximity does not necessarily lead to parallel institutional development
2. The passage provides information to answer which of the following questions?
  - (A) Does Islamic law depend on sources other than Arab legal principles?
  - (B) What secular practices of Islamic states conflicted with Islamic law?
  - (C) Are Jewish law and canon law the most typical examples of sacred law?
  - (D) Is Jewish law more uniform than canon law?
  - (E) What characterized Arab law of the pre-Islamic era?

3. According to the passage, which of the following statements about sacred law is correct?
- (A) The various systems of sacred law originated in a limited geographical area.
  - (B) The various systems of sacred law have had marked influence on one another.
  - (C) Systems of sacred law usually rely on a wide variety of precedents.
  - (D) Systems of sacred law generally contain prescriptions governing diverse aspects of human activity.
  - (E) Systems of sacred law function most effectively in communities with relatively small populations.
4. It can be inferred from the passage that the application of Islamic law in Islamic states has
- (A) systematically been opposed by groups who believe it is contrary to their interests
  - (B) suffered irreparably from the lack of firm institutional backing
  - (C) frequently been at odds with the legal activity of government institutions
  - (D) remained unaffected by the political forces operating alongside it
  - (E) benefited from the fact that it never experienced a direct confrontation with the state
5. Which of the following most accurately describes the organization of the passage?
- (A) A universal principle is advanced and then discussed in relation to a particular historical phenomenon.
  - (B) A methodological innovation is suggested and then examples of its efficacy are provided.
  - (C) A traditional interpretation is questioned and then modified to include new data.
  - (D) A general opinion is expressed and then supportive illustrations are advanced.
  - (E) A controversial viewpoint is presented and then both supportive evidence and contradictory evidence are cited.
6. The passage implies that the relationship of Islamic, Jewish, and canon law is correctly described by which of the following statements?
- I. Because each constitutes an example of sacred law, they necessarily share some features.
  - II. They each developed in reaction to the interference of secular political institutions.
  - III. The differences among them result partly from their differing emphasis on purely ethical rules.
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
7. The passage suggests that canon law differs from Islamic law in that only canon law
- (A) contains prescriptions that nonsacred legal systems might regard as properly legal
  - (B) concerns itself with the duties of a person in regard to the community as a whole
  - (C) was affected by the tension of the conflict between religion and state
  - (D) developed in a political environment that did not challenge its fundamental existence
  - (E) played a role in the direct confrontation between institutions vying for power
8. All of the following statements about the development of Islamic law are implied in the passage EXCEPT:
- (A) Pre-Islamic legal principles were incorporated into Islamic law with widely differing degrees of change.
  - (B) Diverse legal elements were joined together through the application of a purely religious criterion.
  - (C) Although some of the sources of Islamic law were pagan, its integrity as a sacred law was not compromised by their incorporation.
  - (D) There was a fundamental shared characteristic in all pre-Islamic legal matter taken over by Islamic law.
  - (E) Although Islam emerged among the Arabs, Islamic law was influenced by ethnically diverse elements.

**Passage 15**

By the time the American colonists took up arms against Great Britain in order to secure their independence, the institution of Black slavery was deeply entrenched. But the contradiction inherent in this situation was, for many, a source of constant embarrassment. "It always appeared a most iniquitous scheme to me," Abigail Adams wrote to her husband in 1774, "to fight ourselves for what we are daily robbing and plundering from those who have as good a right to freedom as we have."

Many Americans besides Abigail Adams were struck by the inconsistency of their stand during the War of Independence, and they were not averse to making moves to emancipate the slaves. Quakers and other religious groups organized antislavery societies, while numerous individuals manumitted their slaves. In fact, within several years of the end of the War of Independence, most of the Eastern states had made provisions for the gradual emancipation of slaves.

1. Which of the following best states the central idea of the passage?
  - (A) The War of Independence produced among many Black Americans a heightened consciousness of the inequities in American society.
  - (B) The War of Independence strengthened the bonds of slavery of many Black Americans while intensifying their desire to be free.
  - (C) The War of Independence exposed to many Americans the contradiction of slavery in a country seeking its freedom and resulted in efforts to resolve that contradiction.
  - (D) The War of Independence provoked strong criticisms by many Americans of the institution of slavery, but produced little substantive action against it.
  - (E) The War of Independence renewed the efforts of many American groups toward achieving Black emancipation.
2. The passage contains information that would support which of the following statements about the colonies before the War of Independence?
  - (A) They contained organized antislavery societies.
  - (B) They allowed individuals to own slaves.
  - (C) They prohibited religious groups from political action.
  - (D) They were inconsistent in their legal definitions of slave status.
  - (E) They encouraged abolitionist societies to expand their influence.
3. According to the passage, the War of Independence was embarrassing to some Americans for which of the following reasons?
  - I. It involved a struggle for many of the same liberties that Americans were denying to others.
  - II. It involved a struggle for independence from the very nation that had founded the colonies.
  - III. It involved a struggle based on inconsistencies in the participants' conceptions of freedom.
  - (A) I only
  - (B) II only
  - (C) I and II only
  - (D) I and III only
  - (E) I, II and III
4. Which of the following statements regarding American society in the years immediately following the War of Independence is best supported by the passage?
  - (A) The unexpected successes of the antislavery societies led to their gradual demise in the Eastern states.
  - (B) Some of the newly independent American states had begun to make progress toward abolishing slavery.
  - (C) Americans like Abigail Adams became disillusioned with the slow progress of emancipation and gradually abandoned the cause.
  - (D) Emancipated slaves gradually were accepted in the Eastern states as equal members of American society.
  - (E) The abolition of slavery in many Eastern states was the result of close cooperation between religious groups and free Blacks.

**Passage 16**

A Marxist sociologist has argued that racism stems from the class struggle that is unique to the capitalist system - that racial prejudice is generated by capitalists as a means of controlling workers. His thesis works relatively well when applied to discrimination against Blacks in the United States, but his definition of racial prejudice as "racially-based negative prejudgments against a group generally accepted as a race in any given region of ethnic competition," can be interpreted as also including hostility toward such ethnic groups as the Chinese in California and the Jews in medieval Europe. However, since prejudice against these latter peoples was not inspired by capitalists, he has to reason that such antagonisms were not really based on race. He disposes thusly (albeit unconvincingly) of both the intolerance faced by Jews before the rise to capitalism and the early twentieth-century discrimination against Oriental people in California, which, inconveniently, was instigated by workers.

1. The passage supplies information that would answer which of the following questions?
  - (A) What accounts for the prejudice against the Jews in medieval Europe?
  - (B) What conditions caused the discrimination against Oriental people in California in the early twentieth century?
  - (C) Which groups are not in ethnic competition with each other in the United States?
  - (D) What explanation did the Marxist sociologist give for the existence of racial prejudice?
  - (E) What evidence did the Marxist sociologist provide to support his thesis?
2. The author considers the Marxist sociologist's thesis about the origins of racial prejudice to be
  - (A) unoriginal
  - (B) unpersuasive
  - (C) offensive
  - (D) obscure
  - (E) speculative
3. It can be inferred from the passage that the Marxist sociologist would argue that in a noncapitalist society racial prejudice would be
  - (A) pervasive
  - (B) tolerated
  - (C) ignored
  - (D) forbidden
  - (E) nonexistent
4. According to the passage, the Marxist sociologist's chain of reasoning required him to assert that prejudice toward Oriental people in California was
  - (A) directed primarily against the Chinese
  - (B) similar in origin to prejudice against the Jews
  - (C) understood by Oriental people as ethnic competition
  - (D) provoked by workers
  - (E) nonracial in character

**Passage 17**

In large part as a consequence of the feminist movement, historians have focused a great deal of attention in recent years on determining more accurately the status of women in various periods. Although much has been accomplished for the modern period, premodern cultures have proved more difficult: sources are restricted in number, fragmentary, difficult to interpret, and often contradictory. Thus it is not particularly surprising that some earlier scholarship concerning such cultures has so far gone unchallenged. An example is Johann Bachofen's 1861 treatise on Amazons, women-ruled societies of questionable existence contemporary with ancient Greece.

Starting from the premise that mythology and legend preserve at least a nucleus of historical fact, Bachofen argued that women were dominant in many ancient societies. His work was based on a comprehensive survey of references in the ancient sources to Amazonian and other societies with matrilineal customs - societies in which descent and property rights are traced through the female line. Some support for his theory can be found in evidence such as that drawn from Herodotus, the Greek "historian" of the fifth century B.C, who speaks of an Amazonian society, the Sauromatae, where the women hunted and fought in wars. A woman in this society was not allowed to marry until she had killed a person in battle.

Nonetheless, this assumption that the first recorders of ancient myths have preserved facts in problematic. If one begins by examining why ancients refer to Amazons, it becomes clear that ancient Greek descriptions of such societies were meant not so much to represent observed historical fact - real Amazonian societies - but rather to offer "moral lessons" on the supposed outcome of women's rule in their own society. The Amazons were often characterized, for example, as the equivalents of giants and centaurs, enemies to be slain by Greek heroes. Their customs were presented not as those of a respectable society, but as the very antitheses of ordinary Greek practices.

Thus, I would argue, the purpose of accounts of the Amazons for the male Greek recorders was didactic, to teach both male and female Greeks that all-female groups, formed by withdrawal from traditional society, are destructive and dangerous. Myths about the Amazons were used as arguments for the male-dominated status quo, in which groups composed exclusively of either sex were not permitted to segregate themselves permanently from society. Bachofen was thus misled in his reliance on myths for information about the status of women. The sources that will probably tell contemporary historians most about women in the ancient world are such social documents as grave stones, wills, and marriage contracts. Studies of such documents have already begun to show how mistaken we are when we try to derive our picture of the ancient world exclusively from literary sources, especially myths.

1. The primary purpose of the passage is to
  - (A) compare competing new approaches to understanding the role of women in ancient societies
  - (B) investigate the ramifications of Bachofen's theory about the dominance of women in ancient societies
  - (C) explain the burgeoning interest among historians in determining the actual status of women in various societies
  - (D) analyze the nature of Amazonian society and uncover similarities between it and the Greek world
  - (E) Criticize the value of ancient myths in determining the status of women in ancient societies
2. All of the following are stated by the author as problems connected with the sources for knowledge of premodern cultures EXCEPT
  - (A) partial completeness
  - (B) restricted accessibility
  - (C) difficulty of interpretation
  - (D) limited quantity
  - (E) tendency toward contradiction



3. Which of the following can be inferred from the passage about the myths recorded by the ancient Greeks?
- I. They sometimes included portrayals of women holding positions of power.
  - II. They sometimes contained elaborate explanations of inheritance customs.
  - III. They comprise almost all of the material available to historians about ancient Greece.
- (A) I only  
(B) III only  
(C) I and III only  
(D) II and III only  
(E) I, II and III
4. Which of the following is presented in the passage as evidence supporting the author's view of the ancient Greeks' descriptions of the Amazons?
- (A) The requirement that Sauromatae women kill in battle before marrying  
(B) The failure of historians to verify that women were ever governors of ancient societies  
(C) The classing of Amazons with giants and centaurs  
(D) The well-established unreliability of Herodotus as a source of information about ancient societies  
(E) The recent discovery of ancient societies with matrilineal customs
5. It can be inferred from the passage that the probable reactions of many males in ancient Greece to the idea of a society ruled by women could best be characterized as
- (A) confused and dismayed  
(B) wary and hostile  
(C) cynical and disinterested  
(D) curious but fearful  
(E) excited but anxious
6. The author suggests that the main reason for the persisting influence of Bachofen's work is that
- (A) feminists have shown little interest in ancient societies  
(B) Bachofen's knowledge of Amazonian culture is unparalleled  
(C) reliable information about the ancient world is difficult to acquire  
(D) ancient societies show the best evidence of women in positions of power  
(E) historians have been primarily interested in the modern period
7. The author's attitude toward Bachofen's treatise is best described as one of
- (A) qualified approval  
(B) profound ambivalence  
(C) studied neutrality  
(D) pointed disagreement  
(E) unmitigated hostility

**Passage 18**

In eighteenth-century France and England, reformers rallied around egalitarian ideals, but few reformers advocated higher education for women. Although the public decried women's lack of education, it did not encourage learning for its own sake for women. In spite of the general prejudice against learned women, there was one place where women could exhibit their erudition: the literary salon. Many writers have defined the woman's role in the salon as that of an intelligent hostess, but the salon had more than a social function for women. It was an informal university, too, where women exchanged ideas with educated persons, read their own works and heard those of others, and received and gave criticism.

In the 1750's, when salons were firmly established in France, some English women, who called themselves "Bluestockings," followed the example of the *salonnières* (French salon hostesses) and formed their own salons. Most Bluestockings did not wish to mirror the *salonnières*; they simply desired to adapt a proven formula to their own purpose - the elevation of women's status through moral and intellectual training. Differences in social orientation and background can account perhaps for differences in the nature of French and English salons. The French salon incorporated aristocratic attitudes that exalted courtly pleasure and emphasized artistic accomplishments. The English Bluestockings, originating from a more modest background, emphasized learning and work over pleasure. Accustomed to the regimented life of court circles, *salonnières* tended toward formality in their salons. The English women, though somewhat puritanical, were more casual in their approach.

At first, the Bluestockings did imitate the *salonnières* by including men in their circles. However, as they gained cohesion, the Bluestockings came to regard themselves as a women's group and to possess a sense of female solidarity lacking in the *salonnières*, who remained isolated from one another by the primacy each held in her own salon. In an atmosphere of mutual support, the Bluestockings went beyond the salon experience. They traveled, studied, worked, wrote for publication, and by their activities challenged the stereotype of the passive woman. Although the *salonnières* were aware of sexual inequality, the narrow boundaries of their world kept their intellectual pursuits within conventional limits. Many *salonnières*, in fact, camouflaged their nontraditional activities behind the role of hostesses and deferred to men in public.

Though the Bluestockings were trailblazers when compared with the *salonnières*, they were not feminists. They were too traditional, too hemmed in by their generation to demand social and political rights. Nonetheless, in their desire for education, their willingness to go beyond the confines of the salon in pursuing their interests, and their championing of unity among women, the Bluestockings began the process of questioning women's role in society.

1. Which of the following best states the central idea of the passage?
- (A) The establishment of literary salons was a response to reformers' demands for social rights for women.
  - (B) Literary salons were originally intended to be a meeting ground for intellectuals of both sexes, but eventually became social gatherings with little educational value.
  - (C) In England, as in France, the general prejudice against higher education for women limited women's function in literary salons to a primarily social one.
  - (D) The literary salons provided a sounding board for French and English women who called for access to all the educational institutions in their societies on an equal basis with men.
  - (E) For women, who did not have access to higher education as men did, literary salons provided an alternative route to learning and a challenge to some of society's basic assumptions about women.

2. According to the passage, a significant distinction between *salonnières* and Bluestockings was in the way each group regarded which of the following?
- (A) The value of acquiring knowledge
  - (B) The role of pleasure in the activities of the literary salon
  - (C) The desirability of a complete break with societal traditions
  - (D) The inclusion of women of different backgrounds in the salons
  - (E) The attainment of full social and political equality with men
3. The author refers to differences in social background between *salonnières* and Bluestockings in order to do which of the following?
- (A) Criticize the view that their choices of activities were significantly influenced by male salon members
  - (B) Discuss the reasons why literary salons in France were established before those in England
  - (C) Question the importance of the Bluestockings in shaping public attitudes toward educated women
  - (D) Refute the argument that the French salons had little influence over the direction the English salons took
  - (E) Explain the differences in atmosphere and style in their salons
4. Which of the following statements is most compatible with the principles of the *salonnières* as described in the passage?
- (A) Women should aspire to be not only educated but independent as well.
  - (B) The duty of the educated woman is to provide an active political model for less educated women.
  - (C) Devotion to pleasure and art is justified in itself.
  - (D) Substance, rather than form, is the most important consideration in holding a literary salon.
  - (E) Men should be excluded from groups of women's rights supporters.
5. The passage suggests that the Bluestockings might have had a more significant impact on society if it had not been for which of the following?
- (A) Competitiveness among their salons
  - (B) Their emphasis on individualism
  - (C) The limited scope of their activities
  - (D) Their acceptance of the French salon as a model for their own salons
  - (E) Their unwillingness to defy aggressively the conventions of their age
6. Which of the following could best be considered a twentieth-century counterpart of an eighteenth century literary salon as it is described in the passage?
- (A) A social sorority
  - (B) A community center
  - (C) A lecture course on art
  - (D) A humanities study group
  - (E) An association of moral reformers
7. To an assertion that Bluestockings were feminists, the author would most probably respond with which of the following?
- (A) Admitted uncertainty
  - (B) Qualified disagreement
  - (C) Unquestioning approval
  - (D) Complete indifference
  - (E) Strong disparagement
8. Which of the following titles best describes the content of the passage?
- (A) Eighteenth-Century Egalitarianism
  - (B) Feminists of the Eighteenth Century
  - (C) Eighteenth-Century Precursors of Feminism
  - (D) Intellectual Life in the Eighteenth Century
  - (E) Female Education Reform in the Eighteenth Century

**Passage 19**

When the same parameters and quantitative theory are used to analyze both termite colonies and troops of rhesus macaques, we will have a unified science of sociobiology. Can this ever really happen? As my own studies have advanced, I have been increasingly impressed with the functional similarities between insect and vertebrate societies and less so with the structural differences that seem, at first glance, to constitute such an immense gulf between them. Consider for a moment termites and macaques. Both form cooperative groups that occupy territories. In both kinds of society there is a well-marked division of labor. Members of both groups communicate to each other hunger, alarm, hostility, caste status or rank, and reproductive status. From the specialist's point of view, this comparison may at first seem facile - or worse. But it is out of such deliberate oversimplification that the beginnings of a general theory are made.

1. Which of the following best summarizes the author's main point?
  - (A) Oversimplified comparison of animal societies could diminish the likelihood of developing a unified science of sociobiology.
  - (B) Understanding the ways in which animals as different as termites and rhesus macaques resemble each other requires training in both biology and sociology.
  - (C) Most animals organize themselves into societies that exhibit patterns of group behavior similar to those of human societies.
  - (D) Animals as different as termites and rhesus macaques follow certain similar and predictable patterns of behavior.
  - (E) A study of the similarities between insect and vertebrate societies could provide the basis for a unified science of sociobiology.
2. The author's attitude toward the possibility of a unified theory in sociobiology is best described as which of the following?
  - (A) Guarded optimism
  - (B) Unqualified enthusiasm
  - (C) Objective indifference
  - (D) Resignation
  - (E) Dissatisfaction
3. In discussing insect and vertebrate societies, the author suggests which of the following?
  - (A) A distinguishing characteristic of most insect and vertebrate societies is a well-marked division of labor.
  - (B) The caste structure of insect societies is similar to that of vertebrate societies.
  - (C) Most insect and vertebrate societies form cooperative groups in order to occupy territory.
  - (D) The means of communication among members of insect societies is similar to that among members of vertebrate societies.
  - (E) There are significant structural differences between insect and vertebrate societies.

**Passage 20**

Some modern anthropologists hold that biological evolution has shaped not only human morphology but also human behavior. The role those anthropologists ascribe to evolution is not of dictating the details of human behavior but one of imposing constraints - ways of feeling, thinking, and acting that “come naturally” in archetypal situations in any culture. Our “frailties” - emotions and motives such as rage, fear, greed, gluttony, joy, lust, love - may be a very mixed assortment, but they share at least one immediate quality: we are, as we say, “in the grip” of them. And thus they give us our sense of constraints.

Unhappily, some of those frailties - our need for ever-increasing security among them - are presently maladaptive. Yet beneath the overlay of cultural detail, they, too, are said to be biological in direction, and therefore as natural to us as are our appendixes. We would need to comprehend thoroughly their adaptive origins in order to understand how badly they guide us now. And we might then begin to resist their pressure.

1. The primary purpose of the passage is to present
  - (A) a position on the foundations of human behavior and on what those foundations imply
  - (B) a theory outlining the parallel development of human morphology and of human behavior
  - (C) a diagnostic test for separating biologically determined behavior patterns from culture-specific detail
  - (D) a practical method for resisting the pressures of biologically determined drives
  - (E) an overview of those human emotions and motives that impose constraints on human behavior
2. The author implies that control to any extent over the “frailties” that constrain our behavior is thought to presuppose
  - (A) that those frailties are recognized as currently beneficial and adaptive
  - (B) that there is little or no overlay of cultural detail that masks their true nature
  - (C) that there are cultures in which those frailties do not “come naturally” and from which such control can be learned
  - (D) a full understanding of why those frailties evolved and of how they function now
  - (E) a thorough grasp of the principle that cultural detail in human behavior can differ arbitrarily from society to society
3. Which of the following most probably provides an appropriate analogy from human morphology for the “details” versus “constraints” distinction made in the passage in relation to human behavior?
  - (A) The ability of most people to see all the colors of the visible spectrum as against most people’s inability to name any but the primary colors
  - (B) The ability of even the least fortunate people to show compassion as against people’s inability to mask their feelings completely
  - (C) The ability of some people to dive to great depths as against most people’s inability to swim long distances
  - (D) The psychological profile of those people who are able to delay gratification as against people’s inability to control their lives completely
  - (E) The greater lung capacity of mountain peoples that helps them live in oxygen-poor air as against people’s inability to fly without special apparatus
4. It can be inferred that in his discussion of maladaptive frailties the author assumes that
  - (A) evolution does not favor the emergence of adaptive characteristics over the emergence of maladaptive ones
  - (B) any structure or behavior not positively adaptive is regarded as transitory in evolutionary theory
  - (C) maladaptive characteristics, once fixed, make the emergence of other maladaptive characteristics more likely
  - (D) the designation of a characteristic as being maladaptive must always remain highly tentative
  - (E) changes in the total human environment can outpace evolutionary change

**Passage 21**

For years scholars have contrasted slavery in the United States and in Brazil, stimulated by the fact that racial patterns assumed such different aspects in the two countries after emancipation.

Brazil never developed a system of rigid segregation of the sort that replaced slavery in the United States, and its racial system was fluid because its definition of race was based as much on characteristics such as economic status as on skin color. Until recently, the most persuasive explanation for these differences was that the Portuguese institutions, especially the Roman Catholic church and Roman civil law, promoted recognition of the slave's humanity. The English colonists, on the other hand, constructed their system of slavery out of whole cloth. There were simply no precedents in English common law, and separation of church and state barred Protestant clergy from the role that priests assumed in Brazil.

But the assumption that institutions alone could so powerfully affect the history of two raw and malleable frontier countries seems, on reexamination, untenable. Recent studies focus instead on a particular set of contrasting economic circumstances and demographic profiles at significant periods in the histories of the two countries. Persons of mixed race quickly appeared in both countries. In the United States they were considered to be Black, a social definition that was feasible because they were in the minority. In Brazil, it was not feasible. Though intermarriage was illegal in both countries, the laws were unenforceable in Brazil since Whites formed a small minority in an overwhelmingly Black population. Manumission for persons of mixed race was also easier in Brazil, particularly in the nineteenth century while, in the United States, it was hedged about with difficulties. Furthermore, a shortage of skilled workers in Brazil provided persons of mixed race with the opportunity to learn crafts and trades, even before general emancipation, whereas in the United States entry into these occupation was blocked by Whites sufficiently numerous to fill the posts. The consequence was the development in Brazil of a large class of persons of mixed race, proficient in skilled trades and crafts, who stood waiting as a community for freed slaves to join.

There should be no illusion that Brazilian society after emancipation was color-blind. Rather, the large population of persons of mixed race produced a racial system that included a third status, a bridge between the Black caste and the White which could be traversed by means of economic or intellectual achievement, marriage, or racial heritage. The strict and sharp line between the races so characteristic of the United States in the years immediately after emancipation was simply absent. With the possible exception of New Orleans, no special 'place' developed in the United States for persons of mixed race. Sad to say, every pressure of society worked to prevent their attaining anything approximating the economic and social position available to their counterparts in Brazil.

1. In the passage, the author is primarily concerned with
  - (A) contrasting the systems of slavery that were established in Brazil and in the United States
  - (B) criticizing the arguments of those scholars who considered religion and law to be the determinants of the systems of slavery in Brazil and in the United States
  - (C) describing the factor currently thought to be responsible for the differences in the racial patterns that evolved in Brazil and in the United States
  - (D) advocating a further study of the differences between the racial systems that developed in Brazil and in the United States
  - (E) pointing out the factors that made the status of Blacks in the United States lower than that of Blacks in Brazil

2. According to the passage, early scholars explained the differences between the racial systems that developed in the United States and in Brazil as the result of which of the following factors?
- (A) Institutional
  - (B) Demographic
  - (C) Economic
  - (D) Geographical
  - (E) Historical
3. In the context in which it is found, the phrase ‘constructed their system of slavery out of whole cloth’ (line 11) implies that the system of slavery established by the English settlers was
- (A) based on fabrications and lies
  - (B) tailored to the settlers’ particular circumstances
  - (C) intended to serve the needs of a frontier economy
  - (D) developed without direct influence from the settlers’ religion or legal system
  - (E) evolved without giving recognition to the slave’s humanity
4. The author implies that the explanation proposed by early scholars for the differences between the systems of slavery in the United States and in Brazil is
- (A) stimulating to historians and legal scholars
  - (B) more powerful than more recent explanations
  - (C) persuasive in spite of minor deficiencies
  - (D) excessively legalistic in its approach
  - (E) questionable in the light of current scholarly work
5. The author mentions intermarriage, manumission, and the shortage of skilled workers in Brazil primarily in order to establish which of the following?
- (A) The environment in which Brazil’s racial system developed
  - (B) The influence of different legal and economic conditions in Brazil and the United States on the life-style of persons of mixed race
  - (C) The origins of Brazil’s large class of free skilled persons of mixed race
  - (D) The differences between treatment of slaves in Brazil and in the United States
  - (E) The difficulties faced by persons of mixed race in the United States, as compared to those in Brazil
6. According to the passage, Brazilian laws prohibiting intermarriage were ineffective because Brazil had a
- (A) Portuguese Catholic heritage
  - (B) small minority of Whites
  - (C) liberal set of laws concerning manumission
  - (D) large number of freed slaves
  - (E) shortage of people in the skilled crafts and trades
7. The use of quotation marks around the word “place” (line 39) suggests that the author intended to convey which of the following?
- (A) An ambivalent attitude toward the city of New Orleans
  - (B) A negative attitude toward the role of race in determining status in the United States
  - (C) A critical comment about the maltreatment of persons of mixed race in the United States
  - (D) A double meaning, indicating both a social status and a physical location
  - (E) An ambiguity, referring to either the role persons of mixed race actually played, or the role they were assigned by the society

**Passage 22**

In the eighteenth century, Japan's feudal overlords, from the shogun to the humblest samurai, found themselves under financial stress. In part, this stress can be attributed to the overlords' failure to adjust to a rapidly expanding economy, but the stress was also due to factors beyond the  
5 overlord's control. Concentration of the samurai in castle-towns had acted as a stimulus to trade. Commercial efficiency, in turn, had put temptations in the way of buyers. Since most samurai had been reduced to idleness by years of peace, encouraged to engage in scholarship and martial exercises or to perform administrative tasks that took little time, it is not surprising  
10 that their tastes and habits grew expensive. Overlords' income, despite the increase in rice production among their tenant farmers, failed to keep pace with their expenses. Although shortfalls in overlords' income resulted almost as much from laxity among their tax collectors (the nearly inevitable outcome of hereditary office holding) as from their higher standards of  
15 living, a misfortune like a fire or flood, bringing an increase in expenses or a drop in revenue, could put a domain in debt to the city rice-brokers who handled its finances. Once in debt, neither the individual samurai nor the shogun himself found it easy to recover.

It was difficult for individual samurai overlords to increase their  
20 income because the amount of rice that farmers could be made to pay in taxes was not unlimited, and since the income of Japan's central government consisted in part of taxes, collected by the shogun from his huge domain, the government too was constrained. Therefore, the Tokugawa shoguns began to look to other sources for revenue. Cash profits from  
25 government-owned mines were already on the decline because the most easily worked deposits of silver and gold had been exhausted, although debasement of the coinage had compensated for the loss. Opening up new farmland was a possibility, but most of what was suitable had already been exploited and further reclamation was technically unfeasible. Direct  
30 taxation of the samurai themselves would be politically dangerous. This left the shoguns only commerce as a potential source of government income.

Most of the country's wealth, or so it seemed, was finding its way into the hands of city merchants. It appeared reasonable that they should contribute part of that revenue to ease the Shogun's burden of financing the  
35 state. A means of obtaining such revenue was soon found by levying forced loans, known as *goyo-kin*; although these were not taxes in the strict sense, since they were irregular in timing and arbitrary in amount, they were high in yield. Unfortunately, they pushed up prices. Thus, regrettably, the Tokugawa shoguns' search for solvency for the government made it  
40 increasingly difficult for individual Japanese who lived on fixed stipends to make ends meet.

1. The passage is most probably an excerpt from
  - (A) an economic history of Japan
  - (B) the memoirs of a samurai warrior
  - (C) a modern novel about eighteenth-century Japan
  - (D) an essay contrasting Japanese feudalism with its Western counterpart
  - (E) an introduction to a collection of Japanese folktales
2. Which of the following financial situations is most analogous to the financial situation in which Japan's Tokugawa shoguns found themselves in the eighteenth century?
  - (A) A small business borrows heavily to invest in new equipment, but is able to pay off its debt early when it is awarded a lucrative government contract.
  - (B) Fire destroys a small business, but insurance covers the cost of rebuilding.
  - (C) A small business is turned down for a loan at a local bank because the owners have no credit history.



- (D) A small business has to struggle to meet operating expenses when its profit decrease.  
(E) A small business is able to cut back sharply on spending through greater commercial efficiency and thereby compensate for a loss of revenue.
3. Which of the following best describes the attitude of the author toward the samurai discussed in lines 7-10?
- (A) Warmly approving
  - (B) Mildly sympathetic
  - (C) Bitterly disappointed
  - (D) Harshly disdainful
  - (E) Profoundly shocked
4. According to the passage, the major reason for the financial problems experienced by Japan's feudal overlords in the eighteenth century was that
- (A) spending had outdistanced income
  - (B) trade had fallen off
  - (C) profits from mining had declined
  - (D) the coinage had been sharply debased
  - (E) the samurai had concentrated in castle-towns
5. The passage implies that individual samurai did not find it easy to recover from debt for which of the following reasons?
- (A) Agricultural production had increased.
  - (B) Taxes were irregular in timing and arbitrary in amount.
  - (C) The Japanese government had failed to adjust to the needs of a changing economy
  - (D) The domains of samurai overlords were becoming smaller and poorer as government revenues increased.
  - (E) There was a limit to the amount in taxes that farmers could be made to pay.
6. The passage suggests that, in eighteenth-century Japan, the office of tax collector
- (A) was a source of personal-profit to the officeholder.
  - (B) was regarded with derision by many Japanese
  - (C) remained within families
  - (D) existed only in castle-towns
  - (E) took up most of the officeholder's time
7. Which of the following could best be substituted for the word "This" in line 30 without changing the meaning of the passage?
- (A) The search of Japan's Tokugawa shoguns for solvency
  - (B) The importance of commerce in feudal Japan
  - (C) The unfairness of the tax structure in eighteenth-century Japan
  - (D) The difficulty of increasing government income by other means
  - (E) The difficulty experienced by both individual samurai and the shogun himself in extricating themselves from debt.
8. The passage implies that which of the following was the primary reason why the Tokugawa shoguns turned to city merchants for help in financing the state?
- (A) A series of costly wars had depleted the national treasury.
  - (B) Most of the country's wealth appeared to be in city merchants' hands
  - (C) Japan had suffered a series of economic reversals due to natural disasters such as floods.
  - (D) The merchants were already heavily indebted to the shoguns
  - (E) Further reclamation of land would not be economically advantageous.

**Passage 23**

Agricultural progress provided the stimulus necessary to set off economic expansion in medieval France. As long as those who worked the land were barely able to ensure their own subsistence and that of their landlords, all other activities had to be minimal, but when food surpluses  
5 increased, it became possible to release more people for government, commercial, religious, and cultural pursuits.

However, not all the funds from the agricultural surplus were actually available for commercial investment. Much of the surplus, in the form of food increases, probably went to raise the subsistence level; an additional  
10 amount, in the form of currency gained from the sale of food, went into the royal treasury to be used in waging war. Although Louis VII of France levied a less crushing tax burden on his subjects than did England's Henry II, Louis VII did spend great sums on an unsuccessful crusade, and his vassals - both lay and ecclesiastic - took over spending where their sovereign  
15 stopped. Surplus funds were claimed both by the Church and by feudal landholders, whereupon cathedrals and castles mushroomed throughout France.

The simultaneous progress of cathedral building and for instance, vineyard expansion in Bordeaux, illustrates the very real competition for  
20 available capital between the Church and commercial interests; the former produced inestimable moral and artistic riches, but the latter had a stronger immediate impact upon gross national product. Moreover, though all wars by definition are defensive, the frequent crossings of armies that lived off the land and impartially burned all the huts and barns on their path  
25 consumed considerable resources.

Since demands on the agricultural surplus would have varied from year to year, we cannot precisely calculate their impact on the commercial growth of medieval France. But we must bear the impact in mind when estimating the assets that were likely to have been available for investment. No doubt  
30 castle and cathedral building was not totally barren of profit (for the builders, that is), and it produced intangible dividends of material and moral satisfaction for the community. Even wars handed back a fragment of what they took, at least to a few. Still, we cannot place on the same plane a primarily destructive activity and a constructive one, nor expect the same  
35 results from a new bell tower as from a new water mill. Above all, medieval France had little room for investment over and above the preservation of life. Granted that war cost much less than it does today, that the Church rendered all sorts of educational and recreational services that were unobtainable elsewhere, and that government was far less demanding than  
40 is the modern state - nevertheless, for medieval men and women, supporting commercial development required considerable economic sacrifice.

1. According to the passage, agricultural revenues in excess of the amount needed for subsistence were used by medieval kings to
  - (A) patronize the arts
  - (B) sponsor public recreation
  - (C) wage war
  - (D) build cathedrals
  - (E) fund public education
2. According to the passage, which of these was an important source of revenue in medieval France?
  - (A) Cheese
  - (B) Wine
  - (C) Wool
  - (D) Olive Oil
  - (E) Veal

3. The passage suggests that which of the following would have reduced the assets immediately available for commercial investment in medieval France?
- I. Renovation of a large cathedral
  - II. A sharp increase in the birth rate
  - III. An invasion of France by Henry II
- (A) III only  
(B) I and II only  
(C) I and III only  
(D) II and III only  
(E) I, II and III
4. It can be inferred from the passage that more people could enter government and the Church in medieval France because
- (A) the number of individual landholdings in heavily agricultural areas was beginning to increase  
(B) an increase in the volume of international trade had brought an increase in the population of cities  
(C) a decrease in warfare had allowed the king to decrease the size of the army  
(D) food producers could grow more food than they and their families needed to survive  
(E) landlords were prospering and thus were demanding a smaller percentage of tenants' annual yields
5. The author implies that the reason we cannot expect the same results from a new bell tower as from a new water mill is that
- (A) bell towers yield an intangible dividend  
(B) bell towers provide material satisfaction  
(C) water mills cost more to build than bell towers  
(D) water mills divert funds from commerce  
(E) water mills might well be destroyed by war
6. The author of the passage most probably bases his central argument on which of the following theoretical assumptions often made by economists?
- (A) Different people should be taxed in proportion to the benefit they can expect to receive from public activity.  
(B) Perfect competition exists only in the case where no farmer, merchant, or laborer controls a large enough share of the total market to influence market price  
(C) A population wealthy enough to cut back its rate of consumption can funnel the resulting savings into the creation of capital.  
(D) A full-employment economy must always to produce one good, give up producing another good.  
(E) There is an universal tendency for population, unless checked by food supply, to increase in a geometric progression.
7. The author suggests that commercial expansion in medieval France "required considerable economic sacrifice" (line 41) primarily for which of the following reasons?
- (A) Cathedrals cost more to build and rebuild than did castles.  
(B) The numerous wars fought during the period left the royal treasury bankrupt  
(C) Louis VII levied a more crushing tax burden on his subjects than did Henry II.  
(D) Although much of the available surplus had been diverted into vineyard expansion, the vineyards had not yet begun to produce.  
(E) Although more food was being produced, the subsistence level was not very far above the minimum required to sustain life.

**Passage 24**

Three historiographical considerations played an important role in my decision to write a history of Black women in the United States. First, I was persuaded that Black people and White people in the United States clearly represent two different cultures, with different traditions and oftentimes  
 5 diametrically opposed past experiences. The same may hold true for the two sexes, whose roles, history, and contributions seem on close examination to be almost different enough to constitute different cultures. Of course, all groups share in the common history. I do not believe that recognizing the existence of large cultural subdivisions means succumbing to separatism,  
 10 cultural nationalism, and a narrow particularistic vision. There is a place for universalistic interpretations of that which is common to all humanity, and there is a place for that which is particular to one special entity. We accept that there are both a world history and a history of France or of India - histories that are not the same, but that fit into similar categories. Our  
 15 historical perceptions can only be enriched by accepting the fact that, since sex and race are frequently used (however unfairly) to assign certain roles and statuses to people, these people have had different historical experiences from those of the dominant group.

Second, I became convinced that standard histories of the United  
 20 States have tended to overlook the contributions and viewpoints of Black Americans and women. I hope and expect that the present generation of United States historians will rectify this mistake, recognizing that women and Blacks *were there* and that their special contributions to the building and shaping of American society were different from those of White men. In  
 25 the meantime, a separate history of Black women is needed.

Finally, I had to consider the role that a White historian can legitimately play in the writing of Black history. Certainly, historians who are members of the culture about which they write will bring a special quality to their material. Their understandings are apt to be different from  
 30 those of an outsider. But scholars from outside a culture have frequently had a view that contrasts with the view of those closely involved in and bound by their own culture. These angles of vision are complementary in arriving at an accurate picture of the past. The interpretation of the Black past made by Blacks will probably be somewhat different from that made by  
 35 Whites. This does not mean that Black history can or should be interpreted only by Blacks. It should be interpreted by both groups, so that, in the juxtaposition of different interpretations, in debate, and in the clash of opinions, a richer and fuller and more solidly based history will emerge.

1. A primary purpose of the passage is to
  - (A) resolve a historiographical dispute
  - (B) discuss a controversial historiographical perspective
  - (C) compare and contrast three alternative historiographical approaches
  - (D) set forth the author's positions on three historiographical issues
  - (E) question the validity of three historiographical methods used by other historians
2. The author suggests in lines 8-10 that she does not consider the historiographical perspective described in lines 3-5 to be overly
  - (A) traditional
  - (B) particularistic
  - (C) universalistic
  - (D) individualistic
  - (E) patriotic

3. The passage most likely appeared as
- (A) part of the preface to a scholarly book
  - (B) a rebuttal to a previously published scholarly article
  - (C) part of a book review in a scholarly journal
  - (D) a condensed version of an article in a scholarly journal
  - (E) a complete entry in an encyclopedia of the social sciences
4. The author implies that which of the following, if they existed, would be most likely to make a separate history of Black women in the United States unnecessary?
- (A) Standard histories of the United States that include information about American women in their appendices
  - (B) Comprehensive histories of the United States that include the contributions and viewpoints of women and Blacks
  - (C) Universalistic histories of the United States that emphasize the common experiences of men and women, Whites and minorities
  - (D) Collections of articles written by Blacks and Whites that contain similar interpretations of Black history in the United States
  - (E) Collections of articles written by Black women that present their interpretations of their own history in the United States
5. The author mentions “a history of France or of India” (line 21) most probably in order to
- (A) provide examples of countries in which women have historically played very different roles from those played by men
  - (B) point out the contrast between such a history and a history of Black women in the United States
  - (C) draw an analogy between such a history and a history of Black women in the United States
  - (D) suggest that particularistic historiographical orientation can be broad enough to include countries other than the United States
  - (E) suggest that histories written about countries other than the United States have tended to overlook the contribution of women and Blacks
6. In discussing the likelihood that “the present generation of United States historians will rectify this mistake” (lines 21-22), the author’s tone is
- (A) arrogant
  - (B) sentimental
  - (C) optimistic
  - (D) ironic
  - (E) apologetic
7. Which of the following description of the author and her interests can best be inferred from the passage?
- (A) The author is a Black historian primarily interested in the history of Black women in the United States.
  - (B) The author is a White historian primarily interested in the history of Black women in the United States.
  - (C) The author is a White historian primarily interested in the history of male and female members of minority groups in the United States.
  - (D) The author is a Black historian primarily interested in the history of female members of minority groups in the United States, France, and India.
  - (E) The author is a White historian primarily interested in the history of female members of minority groups in the United States, France, and India.

**Passage 25**

The years that saw the founding of Cornell and Stanford Universities were also the years when many small private colleges were established in the Southern U.S to serve the educational needs of the newly freed slaves. While great 19th century industrial entrepreneurs like Ezra Cornell and  
5 Leland Stanford gave amounts ranging from half a million to tens of millions of dollars to found great private teaching and research universities where none had previously existed, and while many others, less famous, gave impressive sums to expand and refurbish modest college  
10 establishments that had already taken root, there were no comparable benefactions for private Black higher educational institutions. Only in the 20th century, and then mostly through the donations of a handful of individuals and bodies like the General Education Board of the Rockefeller Foundation and the Julius Rosenwald Fund, did the struggling private  
15 Black Institutions begin to receive support in single-give amounts larger than a few thousand dollars.

A similar disparity existed between Black and White state-supported institutions. The Morrill Act of 1862 is considered by some to be the most important piece of federal legislation affecting state-supported higher education in the 19th century. It created the basis on which states  
20 established land-grant institutions throughout the country, most successfully perhaps in the midwestern States. Less has been written about the Morrill Act of 1890, which made possible the establishment of separate Black land-grant institutions in the southern and border states, where the majority of Black people lived before the 1st World War. Though  
25 it is called the “2nd Morrill Act”, no one would seriously contend that it achieved monetarily for Black land-grant institutions anything comparable to what the 1862 legislation accomplished for other land-grant institutions. The “separate but equal” principle, even if it had been faithfully adhered to, could never have created Black land-grant institutions in the southern and  
30 border states as financially secure as the land-grant institutions that developed with the help of the 1862 act: these states simply were not generous in their appropriations for state-supported education.

So long as college education was uncommon (which it was until well into the 20th century) and so long as even high school education was not an  
35 occupational requirement (note that only about 15% of the age group 14 to 17 was enrolled in high school even as late as 1910), it was possible to ignore the very substantial differences that existed between the opportunities available to White people and those available to Black people. After the 2nd World War, high school and college education became  
40 common among White youth, while the overwhelming majority of Black youth were still excluded from the college option. It was then that the full extent of the financial discrimination against Black higher educational institutions became apparent.

1. The author connects the timing of the establishment of many small private Black colleges in the South to which of the following events?
  - (A) The emancipation of the slaves
  - (B) The passage of the Morrill Act in 1862
  - (C) The passage of the Morrill Act in 1890
  - (D) The increase in the number of Black students attending high school
  - (E) The establishment of charitable foundations like the Rockefeller Foundation and the Julius Rosenwald Fund

2. The passage suggests that if a high school education had been an occupational requirement in 1910, which of the following would have been true?
- (A) The low number of students who received vocational education in high school would have become a parent.
  - (B) The differences among states in their appropriations for high school would have become apparent.
  - (C) The proportion of teen-agers between fourteen and seventeen years old enrolled in high school would have been greater than fifteen percent.
  - (D) The financial discrimination against Black high schools and Black land-grant institutions in the southern and border states would have been even greater.
  - (E) The state appropriations for White and Black high schools in the midwestern, border, and southern states would have been more equitable.
3. Which of the situations described in the following statements is most analogous to the situation described in the sentence in lines 33-38 of the passage?
- (A) Until recently, so few students obtained experience with computers in high school and so few jobs required even minimal computer experience that inequity of access to computers in different high schools went unnoticed.
  - (B) As long as few people completed high school and pursued college degrees, extensive programs of financial aid for college students were unnecessary.
  - (C) So long as most people believe that equality of opportunity has been achieved for members of minority groups, women, and people who have disabilities, and so long as equality of results is not a goal in this country, little progress will be made toward a truly just society.
  - (D) Colleges provide such different amounts of financial support for their athletic teams, and the importance of sports activities in obtaining jobs is so variable, that it is hard for a college applicant to assess the significance of a college's athletics program.
  - (E) Since a doctoral degree is not usually required for teaching high school and since many high school systems do not even require that their faculty have masters' degrees, it is easy for education students to ignore the benefits of pursuing graduate studies.
4. It can be inferred from the passage that, in the nineteenth century, gifts to private Black institutions were typically given
- (A) by nineteenth-century industrial entrepreneurs such as Leyland Stanford
  - (B) by bodies like the General Education Board of the Rockefeller Foundation
  - (C) to establish institutions that were to be named after the donors
  - (D) in an attempt to make private Black institutions competitive with Black land-grant institutions
  - (E) by benefactors in amounts of no more than a few thousand dollars
5. The author refers to the Julius Rosenwald Fund primarily in order to
- (A) clarify an ambiguity
  - (B) provide an example
  - (C) emphasize a problem
  - (D) defend an assertion
  - (E) introduce an argument
6. According to the passage, large private donations to higher education in the nineteenth century were given for which of the following purposes?
- I. To promote more egalitarian ideals
  - II. To assist certain established colleges
  - III. To found major teaching and research universities.
- (A) II only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II and III

## Chapter 4

### PASSAGES RELATING TO SCIENCE

#### *Passage 1*

Our knowledge of the evolution of primate brains comes from two sources: the fossil record and comparisons between the brains of the various kinds of living primates. The fossil record of primate brains consists of casts of the insides of fossil braincases, called endocranial casts, or endocasts. These casts reproduce details of the surface of the brain, including the patterns of cerebral convolutions. Thus, fossil endocasts provide direct evidence of brain evolution, but the information they provide is only external. Comparative studies of the brains of living primates, on the other hand, while they can provide an enormous amount of information, can only be considered indirect evidence of brain evolution. Although it is tempting to arrange living species in a series of presumed primitive to advanced stages, a series of this sort may be misleading if they are taken to represent evolutionary lineages, because each species is specialized for its own ecological niche, and most species combine primitive and advanced features.

1. The primary purpose of the passage is to
  - (A) clarify methods used in the study of primate brain fossils
  - (B) disqualify a theory of primate evolution
  - (C) criticize techniques unproductive for the study of primate brain evolution
  - (D) describe the progress of studies in primate evolution
  - (E) evaluate sources of evidence for primate brain evolution
2. According to the passage, endocasts are of limited value in the study of evolution because they are
  - (A) representative of only surface characteristics
  - (B) available for only a limited number of primates
  - (C) too crude to allow accurate comparisons
  - (D) too varied to reflect actual evolutionary sequences
  - (E) too indistinct to support meaningful conclusions
3. According to the passage, the evolutionary biologist studying the brains of living primates must avoid
  - (A) misinterpreting the patterns of cerebral convolutions
  - (B) making unwarranted inferences about evolutionary sequences
  - (C) underestimating the importance of precise cranial measurements
  - (D) oversimplifying the fossil record of related animals
  - (E) using broad generalizations to define specific ecological phenomena
4. Deriving information about a brain from an endocast is most like deriving information about a
  - (A) tree from a picture of its shadow
  - (B) star from a photograph of its light waves
  - (C) tooth from its wear pattern
  - (D) foot from a mold of its footprint
  - (E) muscle from its tendons



**Passage 2**

Certain natural crystalline minerals, called 'resistates', can withstand all combinations of pressure, temperature, and abrasion encountered in the outer two kilometers of the Earth without dissolving, breaking down chemically, or releasing their ions. The mineral monazite ( $\text{CePO}_4$ ), for example, is so insoluble under all conditions near the Earth's surface that samples 1.8 billion years old have survived two complete-cycles of weathering. The original rocks were physically broken down by wind and water transport and ended up as beach sands. These sands were buried in turn and subjected to pressures and temperatures well above those of any conceivable waste-burial conditions. The new rock thus formed was again weathered all the way down to beach sand. All this occurred without dissolution or perceptible radiation damage. We now have the ability to synthesize nuclear waste into stable crystalline forms just as resistant as monazite. And these artificial minerals can accommodate many of the longest-lived radioactive elements of such waste.

1. Which of the following would be the most appropriate title for the passage?
  - (A) Geological Implications of the Nuclear Waste Problem
  - (B) Artificial Resistates: A Solid Solution to the Nuclear Waste Problem
  - (C) Recent Discoveries and the Case for Nuclear Power
  - (D) Monazite: The Fuel of the Future
  - (E) Through the Weathering Cycle: The Creation of a Beach
2. The author most probably discusses those conditions encountered only in the outer two kilometers of the Earth because
  - (A) conditions at greater depths are unknown
  - (B) monazite is never found at greater depths
  - (C) any material found at greater depths is older than 1.8 billion years
  - (D) it is within this range that nuclear waste is buried
  - (E) no nuclear waste would retain its radioactivity at greater depths
3. The author's argument that artificial minerals with monazite's properties can safely be used to store nuclear waste would be most weakened by the discovery of which of the following?
  - (A) Additional monazite samples one billion years old that exhibit substantial radiation damage
  - (B) A means by which artificial resistates could be made to accommodate all radioactive elements in nuclear waste
  - (C) Previously unknown resistates less durable than monazite
  - (D) Additional monazite rock samples exhibiting a tendency to shatter
  - (E) An alternative, equally safe method of storing nuclear waste
4. The author regards the monazite samples' survival of two weathering cycles as
  - (A) suspect
  - (B) impressive
  - (C) abnormal
  - (D) miraculous
  - (E) ironic

**Passage 3**

“Karst” is the term given to the sum of the phenomena characterizing regions where carbonate rocks, chiefly limestone, are exposed. Karst features develop where water containing carbon dioxide has been able to move on and through carbonate rocks and to remove some of the rock in solution. The development of karst features, particularly caverns and other large openings, depends on the presence of soluble rocks, carbonic acid, ample precipitation, and openings in the rocks.

The geologic history and structure of an area is also important for the development of karst features. Carbonate rocks must be uplifted from below sea level to the landscape environment where fresh water can permeate and move through them. Such structural processes as folding and faulting may cause the rock to lie below or within the local water circulation system, and topographic relief (the unevenness of the surface) gives impetus to circulation of water.

Karst topography is uneven. The unevenness ranges from subdued topographic relief in some sinkhole areas to precipitous sinks and conical hills. Differential erosion is common where soluble carbonate rocks are adjacent to nonsoluble rocks. In the warm, humid Appalachian region of the Eastern United States, the carbonate rocks tend to occupy elongated valleys, but in the arid Southwest, the carbonate rocks make prominent ridges.

As the permeability of the carbonate rock system increases, the water table progressively lowers itself below the land surface, giving rise to such practical problems as scarcity and poor predictability of groundwater supplies, scarcity of surface streams, and instability of the cavernous ground. Another problem is unreliability for the disposal of waste. If the permeability is low, the rocks do not accept waste at sufficient rates, and if it is high, they permit the waste to move downward quickly and to be transported rapidly to some point of discharge without time for the waste to be degraded. The poor capabilities of karst regions for waste disposal are worsened by the thinness of the soil. While undergoing karstification, many carbonate rocks leave insoluble residue, and their soils are regenerated more slowly than those of nonsoluble rocks. Thick but moderately permeable soils tend to adsorb many pollutants and to slow the movement of polluted water so that oxidation or some decay mechanism can allow the pollutant to be weakened.

It is often assumed that there was a fair degree of ecological balance in all regions of the world before people significantly changed the landscape. Yet in karst regions ecological conditions were already skewed and the flora and fauna were developed in special and sometimes erratic ways. People have added to the already skewed situation by deforesting hilly karst, which in turn has accelerated the erosion of the scanty soil, and by polluting the groundwater in many places. The question is whether people will continue to compound the problems of the karst environment or will adjust to and improve it.

1. The passage is primarily concerned with
  - (A) explaining the origin of the term ‘karst’
  - (B) explaining the difficulties involved in cultivating karst terrain
  - (C) explaining the geologic causes of the karstification process
  - (D) describing characteristics of karst terrain
  - (E) describing the suitability of karst terrain for human habitation
2. According to the passage, which of the following combinations is essential for the development of karst features?
  - (A) Fresh water and nonsoluble rocks
  - (B) Salt water and openings in rocks
  - (C) Differential erosion and cavernous ground
  - (D) Uneven topography and a low water table
  - (E) Precipitation and soluble rocks

3. According to the information in the passage, which of the following is the most accurate statement regarding the role of people in changing the conditions in karst regions?
- (A) Even though people have not caused the problems of the scarcity of groundwater supply and the instability of the ground, they have added to them by polluting the water and killing the flora and fauna.
  - (B) Even though people have not been primarily responsible for the skewing of the ecological conditions, they have contributed to the problems by remaining uncommitted on the question of what to do about them.
  - (C) Even though people have not caused the ecological imbalance, they have made matters worse by hastening the pollution of available water and by denuding the land
  - (D) Even though people have not been a primary factor in creating the ecological problems, especially of climate and topography, they have compounded them because of their erratic ways of dealing with the land
  - (E) Even though people have not caused the climatic, topographic, and geologic problems, they have intensified them by polluting the soil, using up the groundwater and planting unsuitable crops
4. According to the passage, which of the following statements about the soils in karst regions is true?
- (A) Once removed, such soils are not rapidly replaced
  - (B) Their solubility depends primarily on the amount of precipitation
  - (C) Generally they are plentiful, but carbonic acid makes them sterile
  - (D) They are generally able to support life, but to do so they need to be cultivated
  - (E) Because they tend to adsorb many pollutants, they do not support much growth
5. Which of the following can be inferred about water movement in karst regions?
- I. If water moves too quickly, pollutants can be carried unchanged into the groundwater
  - II. A lowered water table can lead to scarcity of water
  - III. Folding and faulting can result in fresh water moving through the rocks
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) II and II only
  - (E) I, II and III
6. The author refers to the geologic formation in the Southwestern United States primarily as an example of
- (A) an area that has conical hills
  - (B) a region that lies below sea level
  - (C) precipitous sinks
  - (D) differential erosion
  - (E) subdued topography
7. Which of the following can be inferred about carbonate rock regions?
- (A) Some are developing into marshland
  - (B) Some are capable of supporting the growth of trees
  - (C) They are accessible to people than are other types of regions
  - (D) They generally support larger human populations than do other types of regions
  - (E) They are generally more subject to violent earth movement than are other types of regions
8. According to the passage, all of the following may contribute to the poor capability of carbonate rock terrains to dispose of waste EXCEPT
- (A) thick soil
  - (B) low permeability of the rocks
  - (C) high permeability of the rocks
  - (D) slow formation of overlying soil
  - (E) insufficient time for the decomposition of pollutants

**Passage 4**

The most obvious index of an infant's attentiveness to visual events is the infant's length of orientation to an object - called fixation time. It has multiple determinants; the relative power of each seems to change as an infant grows. The earliest determinant of length of orientation to a visual event derives from the basic nature of the central nervous system. An infant is predisposed to attend to events that possess a high rate of change in their physical characteristics. A two-days-old infant is more attentive to a moving or intermittent light than to a continuous light source, to a design with a high degree of black-white contrast than to one of homogeneous hue. In general, the newborn's visual search behavior seems to be guided by the following rules: (1) if the infant is alert and the light is not too bright, the eyes open; (2) seeing no light, the eyes search; (3) seeing light but no edges, they keep searching; (4) finding contour edges, the eyes focus on them and then cross the edges.

The attraction to loci of maximal contrast and movement is in accord with available knowledge about ganglion potentials in the retinas of vertebrates. Some ganglion cells respond to a light's going on; others to its going off; still others to both. Since an object moving across a visual field stimulates a set of cells for a short period, it creates onset and offset patterns similar to those of an intermittent light.

Figures that contain dark lines on light backgrounds serve better as onset stimuli than do solid patterns because the change in stimulation created by the border of dark on light elicits more frequent firing of nerve cells, and this phenomenon may facilitate sustained attention.

The preference for attending to objects with high contrast is dependent, however, on the size of the figure; there seems to be an optimal area that maintains fixation at a maximum. Four-month-old infants shown designs of varying areas are most attentive to the moderately large designs. Similarly there is a nonlinear relation between the total amount of black-white edge in a figure and attention. Consider a series of black-and-white checkerboards of the same size but with different numbers of squares. The total number of inches at which black borders white increases as the number of squares increases. Studies conducted with young infants suggest that the longest fixations are devoted to figures with a moderate amount of edge.

Although indices of attention to auditory events are more ambiguous than are those to visual ones, intermittent tones, which have a high rate of change, elicit more sustained interest, as evidenced by motor quieting, than do continuous tones. Nature has apparently awarded the newborn an initial bias in the processing of experience. The newborn does not have to learn what to examine. The preferential orientation to change is clearly adaptive, for the source of change is likely to contain the most information about the presence of the parent or of danger.

1. According to the passage, the studies using checkerboards as visual stimuli indicate that
  - (A) as the size of the checkerboard increases, so does the amount of time infants pay attention to it
  - (B) as the number of squares on a checkerboard increases, so does the amount of time infants pay attention to the board
  - (C) checkerboards attract infants' attention because they are black and white
  - (D) infants are most attentive to moderately large designs
  - (E) infants pay attention longest to figures with a moderate amount of black-white edge
2. The author discusses ganglion cells primarily in order to
  - (A) explain why infants are more attentive to stimuli with the greatest movement and contrast
  - (B) introduce a discussion of the size of the figure that best maintains fixation
  - (C) conclude the discussion of the rules that seem to guide "the newborn's visual search behavior" (line 10)

- ((D) clarify “ganglion potentials in the retinas of vertebrates” (lines 16-17)  
(E) illustrate what happens when an infant sees dark lines on a light background
3. It can be inferred from the passage that an infant’s response to auditory stimuli is  
(A) indicative that the infant has an ambiguous relationship with the environment  
(B) dependent on the presence of the infant’s parent  
(C) consonant with the infant’s response to visual stimuli  
(D) more varied than the infant’s response to visual stimuli  
(E) more sensitive to continuous than to intermittent tones
4. According to the passage, which of the following statements is true of the ‘firing’ of ganglion cells (lines 23-24)?  
(A) Its frequency varies with the intensity of the light  
(B) Its frequency varies with the length of the attention span  
(C) Its frequency varies with the age of the infant  
(D) It can be caused by objects moving across a visual field  
(E) It can create visual stimuli
5. The phrase “preferential orientation to change” (line 41) refers primarily to the  
(A) “ganglion potentials in the retinas of vertebrates” (line 16)  
(B) newborn’s attention span  
(C) newborn’s response to light  
(D) newborn’s relationship to the parent or to danger  
(E) way in which the newborn responds to visual and auditory stimuli
6. According to the passage, which of the following is (are) true of an infant’s response to visual events?  
I. As an infant watches a dog walk past the crib, onset and offset patterns are created in the infant’s retinal ganglion cells  
II. Fixation time is one of the causes of infant attentiveness to a visual stimulus  
III. An infant does not need to be taught what to pay attention to but must be taught how to respond to a stimulus.  
(A) I only  
(B) II only  
(C) I and III only  
(D) II and III only  
(E) I, II, and III
7. The theory of infant attention presented in the passage would be most seriously undermined if infants, presented with the following stimuli, paid most attention to the  
(A) movement of a mobile  
(B) lines on a road map  
(C) flickering of a candle flame  
(D) whiteness of a bed sheet  
(E) tinkling of a group of small bells

**Passage 5**

The question of whether or not the universe will continue to expand forever may never be resolved because of the numerous uncertainties in the data and the many assumptions that have to be made in drawing conclusions from them. Two scientists have calculated significantly different values for a crucial parameter of the argument, the ratio of the universe's actual density to the known critical density required for closure. If the universe is dense enough, the mutual gravitational attraction of its parts will bring the expansion to a stop. If the ratio (called omega) of actual density to critical density is one or greater, there is closure; if the ratio is much less than one, the universe is open.

Both scientists used the motions of galaxies to deduce gravitational effects and therefore actual density. One calculated an omega of 0.2, the other 1.0. The first figure suggests an open universe, the latter a closed one.

1. The main purpose of the passage is to
  - (A) provide an answer to questions about the life expectancy of the universe
  - (B) define the concept of omega and explain its uses
  - (C) explain the difference between an open and a closed universe
  - (D) resolve a controversy between scientists over estimated values of omega
  - (E) provide evidence to document the uncertainty of the ultimate fate of the universe
2. The author suggests that hypotheses concerning the fate of the universe may be questionable primarily because
  - (A) scientists disagree about the significance of the ratio of the universe's actual density to a critical density
  - (B) observations of the motions of galaxies should not be used to deduce gravitational effects
  - (C) gravitational attraction is an imprecise measure of density
  - (D) scientists can come to different conclusions using essentially the same data
  - (E) scientists cannot agree on one definition of omega
3. The passage provides an answer to which of the following questions?
  - (A) What would be the ultimate end of a closed universe?
  - (B) Why did the two scientists arrive at different values for omega?
  - (C) From what did the two scientists infer the density of the universe?
  - (D) How can the discrepancy between the calculations of the two scientists be resolved?
  - (E) Will the expansion of the universe stop?
4. It can be inferred that the two scientists mentioned in the passage differ in their calculations of omega primarily because of a
  - (A) failure to agree on the significance of various omega values
  - (B) disagreement in their definitions of critical density
  - (C) disagreement about the importance of omega as a parameter in their arguments
  - (D) discrepancy in the mathematical values they derived from the motions of galaxies
  - (E) computer error arising from malfunctions in the circuitry of the computer they used

**Passage 6**

Although scientists observe that an organism's behavior falls into rhythmic patterns, they disagree about how these patterns are affected when the organism is transported to a new environment. One experimenter, Brown, brought oysters from Connecticut waters to  
 5 Illinois waters. She noted that the oysters initially opened their shells widest when it was high tide in Connecticut, but that after fourteen days their rhythms had adapted to the tide schedule in Illinois. Although she could not posit an unequivocal causal relationship between behavior and environmental change, Brown  
 10 concluded that a change in tide schedule is one of several possible exogenous influences (those outside the organism) on the oysters' rhythms. Another experimenter, Hamner, however, discovered that hamsters from California maintain their original rhythms even at the South Pole. He concluded that endogenous influences (those inside  
 15 the organism) seem to affect an organism's rhythmic behavior.

1. All of the following could be considered examples of exogenous influences on an organism EXCEPT the influence of the
  - (A) level of a hormone on a field mouse's readiness of mating
  - (B) temperature of a region on a bear's hibernation
  - (C) salt level of a river on a fish's migration
  - (D) humidity of an area on a cat's shedding of its fur
  - (E) proximity of an owl on a lizard's searching for food
2. Which of the following statements best describes the conclusion drawn by Brown (lines 14-17)?
  - (A) A change in tide schedule is the primary influence on an oyster's rhythms
  - (B) A change in tide schedule may be an important exogenous influence on an oyster's rhythms
  - (C) Exogenous influences, such as a change in tide schedule, seldom affect an oyster's rhythms
  - (D) Endogenous influences have no effect on an oyster's rhythms
  - (E) Endogenous influences are the only influences on an oyster's rhythms
3. The passage suggests that Brown's study was similar to Hammer's in which of the following ways?
  - I. Both experimenters discovered that a new environment had a significant effect on an organism's behavioral rhythms
  - II. Both experimenters observed an organism's behavioral rhythms after the organism had been transported to a new environment
  - III. Both experimenters knew an organism's rhythmic patterns in its original environment
  - (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
4. Which of the following, if true, would most weaken Brown's conclusion?
  - (A) The oysters gradually closed their shells after high tide in Illinois had passed
  - (B) The oysters' behavioral rhythms maintained their adaptation to the tide schedule in Illinois throughout thirty days of observation
  - (C) Sixteen days after they were moved to Illinois, the oysters opened their shells widest when it was high tide in Connecticut
  - (D) A scientist who brought Maryland oysters to Maine found that the oysters opened their shells widest when it was high tide in Maine
  - (E) In an experiment similar to Brown's, a scientist was able to establish a clear causal relationship between environmental change and behavioral rhythm

**Passage 7**

Many plants synthesize chemical compounds that apparently serve no purpose in the plants' metabolism. Some of these compounds are quite complex, and even if they were simple it would still be puzzling that plants should make them; the synthesis of the compounds calls for a considerable expenditure of energy. Why, then, do some plants manufacture these substances? One reasonable explanation is that they promote the survival of a plant either by repressing the growth of competing plants and parasitic microorganisms or by repelling insects or other animals that would otherwise feed on them.

A striking instance of the effectiveness of these substances in repelling animals is provided by the milkweed *Asclepias curassavica*, found in Puerto Rico. Large herds of cattle completely avoid the plant even though it may grow abundantly in the grass. The cattle do so with good reason: this plant and others belonging to the family *Asclepiadaceae* often cause sickness and occasionally death in livestock.

The poisons found in the asclepiad milkweeds have attracted much attention among pharmacologists and organic chemists because they are chemically similar to the drug *digitalis*. These drugs, called cardiac glycosides, cause a weak and rapidly fluttering vertebrate heart beat more strongly and more slowly. Like most other drugs, cardiac glycosides produce side effects. One of profound importance is the activation of the nerve center in the brain that controls vomiting. Pharmacologists working with cats and pigeons have found that the dosage necessary to cause emesis is just about half the amount required to cause death. Hence an animal that eats a food containing cardiac glycosides will, provided that it is capable of vomiting, rid itself of the poisons before a lethal amount can be absorbed.

Some other animals, however, eat milkweeds containing cardiac glycosides with no apparent adverse effects. For example, the larvae of an entire group of tropical butterflies, the Danaidae, eat only milkweed. It has been observed that birds avoid eating these butterflies. A widely accepted hypothesis has been that the predators avoid the butterflies because the larvae have assimilated the poisonous substances from the milkweeds. If this hypothesis is correct, the Danaidae butterflies not only must have developed the ability to feed on the poisonous milkweeds but also the ability to use the poisonous substances against their predators.

In many instances, insects that do not feed on plants poisonous to vertebrates mimic the appearance or flavor of an insect that does and are thus avoided by predators. It has been demonstrated experimentally that to a naive bird predator, flavor conveys no particular information: the bird will eat any insect it finds. After a bird has been made ill from eating an insect, it associates the flavor of that kind of insect with the illness and thereafter can reject an insect of the same species by tasting it.

1. According to the passage, plants containing cardiac glycosides rarely cause death among animals because
  - (A) a lethal dose involves eating more plants than are usually found in any one locality
  - (B) few animals are affected by the poison
  - (C) the substance is lethal only when it has been purified in the laboratory
  - (D) animals who eat plants containing the poison quickly become immune to them
  - (E) half the lethal dose causes an animal to vomit
2. The author's style and tone in regard to his subject suggest that he is a person whose primary interest is the field of
  - (A) biology
  - (B) psychology
  - (C) agriculture
  - (D) bacteriology
  - (E) public health



3. The hypothesis about the relationship between Danaidae butterflies and bird predators would be most seriously undermined if
- (A) many butterflies had an appearance similar to that of the Danaidae
  - (B) bird predators were not affected by cardiac glycosides
  - (C) not all of the Danaidae butterflies ingested cardiac glycosides
  - (D) bird predators were unable to distinguish among various kinds of plants
  - (E) bird predators frequently made nests on or near poisonous milkweed plants
4. According to the information in the passage, which of the following birds would be LEAST likely to eat a Danaidae butterfly?
- (A) One that likes the taste of the Danaidae butterfly
  - (B) One that had been sickened by eating seeds of the milkweed plant
  - (C) One that had never eaten a Danaidae
  - (D) One that had recently eaten a Danaidae
  - (E) One that had never seen a Danaidae before
5. The author's main purpose in writing this passage is to show that some substances produced by a plant are
- (A) part of a complex chain of events that affect various forms of life
  - (B) harmful to insects but can be beneficial to birds
  - (C) used as a substitute for DDT
  - (D) used in the metabolism of the plant that produces them
  - (E) detrimental to ecological relationships
6. It can be inferred that insects that seem immune to the effects of poisonous milkweeds
- (A) frequently utilize the poison to prey on other animals
  - (B) are sometimes similar in appearance to insects of other species
  - (C) acquire their immunity by eating small quantities of the plant over a period of time
  - (D) belong exclusively to the group of tropical butterflies called the Danaidae
  - (E) sometimes cause sickness or death in cattle
7. According to the passage, substances found in the asclepiad milkweeds have for sometime been of interest to pharmacologists principally because they
- (A) cause sickness or death in cattle
  - (B) are complex chemicals rarely found in other plants
  - (C) are produced by a plant which is usually harmless
  - (D) cause vomiting in humans
  - (E) have a stabilizing effect on vertebrate hearts
8. Which of the following statements about milkweed is (are) made in the passage?
- I. They repel insects that would feed on them
  - II. They are the exclusive diet of some insects
  - III. They produce substances which repress the growth of other plant life
- (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E), I, II, and III

**Passage 8**

Scattered around the globe are more than one hundred regions of volcanic activity known as hot spots. Unlike most volcanoes, hot spots are rarely found along the boundaries of the continental and oceanic plates that comprise the Earth's crust; most hot spots lie deep in the interior of plates and are anchored deep in the layers of the Earth's surface. Hot spots are also distinguished from other volcanoes by their lavas, which contain greater amounts of alkali metals than do those from volcanoes at plate margins.

In some cases, plates moving past hot spots have left trails of extinct volcanoes in much the same way that wind passing over a chimney carries off puffs of smoke. It appears that the Hawaiian Islands were created in such a manner by a single source of lava welling up from a hot spot, over which the Pacific Ocean plate passed on a course roughly from the east toward the northwest, carrying off a line of volcanoes of increasing age. Two other Pacific island chains - the Austral Ridge and the Tuamotu Ridge - parallel the configuration of the Hawaiian chain; they are also aligned from the east toward the northwest, with the most recent volcanic activity near their eastern terminuses.

That the Pacific plate and the other plates are moving is now beyond dispute; the relative motion of the plates has been reconstructed in detail. However, the relative motion of the plates with respect to the Earth's interior cannot be determined easily. Hot spots provide the measuring instruments for resolving the question of whether two continental plates are moving in opposite directions or whether one is stationary and the other is drifting away from it. The most compelling evidence that a continental plate is stationary is that, at some hot spots, lavas of several ages are superposed instead of being spread out in chronological sequence. Of course, reconstruction of plate motion from the tracks of hot-spot volcanoes assumes that hot spots are immobile, or nearly so. Several studies support such an assumption, including one that has shown that prominent hot spots throughout the world seem not to have moved during the past ten million years.

Beyond acting as frames of reference, hot spots apparently influence the geophysical processes that propel the plates across the globe. When a continental plate comes to rest over a hot spot, material welling up from deeper layers forms a broad dome that, as it grows, develops deep fissures. In some instances the continental plate may rupture entirely along some of the fissures so that the hot spot initiates the formation of a new ocean. Thus, just as earlier theories have explained the mobility of the continental plates, so hot-spot activity may suggest a theory to explain their mutability.

1. The primary purpose of the passage is to
  - (A) describe the way in which hot spots influence the extinction of volcanoes
  - (B) describe and explain the formation of the oceans and continents
  - (C) explain how to estimate the age of lava flows from extinct volcanoes
  - (D) describe hot spots and explain how they appear to influence and record the motion of plates
  - (E) describe the formation and orientation of island chains in the Pacific Ocean
2. According to the passage, hot spots differ from most volcanoes in that hot spots
  - (A) can only be found near islands
  - (B) are active whereas all other volcanoes are extinct
  - (C) are situated closer to the earth's surface
  - (D) can be found along the edges of the plates
  - (E) have greater amounts of alkali metals in their lavas

3. It can be inferred from the passage that evidence for the apparent course of the Pacific plate has been provided by the
- (A) contours of the continents
  - (B) dimensions of ocean hot spots
  - (C) concurrent movement of two hot spots
  - (D) pattern of fissures in the ocean floor
  - (E) configurations of several mid-ocean island chains
4. It can be inferred from the passage that the spreading out of lavas of different ages at hot spots indicates that a
- (A) hot spot is active
  - (B) continental plate has moved
  - (C) continental rupture is imminent
  - (D) hot spot had been moving very rapidly
  - (E) volcano contains large concentrations of alkali metals
5. The passage suggests which of the following about the Hawaiian Islands, the Austral Ridge, and the Tuamotu Ridge?
- (A) The three chains of islands are moving eastward
  - (B) All the islands in the three chains have stopped moving
  - (C) The three island chains are a result of the same plate movement
  - (D) The Hawaiian Islands are receding from the other two island chains at a relatively rapid rate
  - (E) The Austral Ridge and the Tuamotu Ridge chains have moved closer together whereas the Hawaiian Islands have remained stationary
6. Which of the following, if true, would best support the author's statement that hot-spot activity may explain the mutability of continental plates?
- (A) Hot spots move more rapidly than the continental and oceanic plates
  - (B) Hot spots are reliable indicators of the age of continental plates
  - (C) Hot spots are regions of volcanic activity found only in the interiors of the continental plates
  - (D) The alignment of hot spots in the Pacific Ocean parallels the alignment of Pacific Ocean islands
  - (E) The coastlines of Africa and South America suggest that they may once have constituted a single continent that ruptured along a line of hot spots
7. The author's argument that hot spots can be used to reconstruct the movement of continental plates is weakened by the fact that
- (A) hot spots are never found at the boundaries of plates
  - (B) only extinct volcanoes remain after a plate moves over a hot spot
  - (C) lava flow patterns for all hot spots have not been shown to be the same
  - (D) the immobility or near immobility of hot spots has not been conclusively proven
  - (E) the changing configurations of islands make pinpointing the locations of hot spots difficult
8. The author's style can best be described as
- (A) dramatic
  - (B) archaic
  - (C) esoteric
  - (D) objective
  - (E) humanistic

**Passage 9**

The whole biosphere, like the individual organisms that live inside it, exists in a chemically dynamic state. In this homeostatic system, a great number of organic compounds are synthesized, transformed, and decomposed continuously; together, these processes constitute the major parts of the carbon cycle. For the smooth operation of this cycle, degradation is just as important as synthesis: the green plants produce great quantities of polymers, such as cellulose, and innumerable other compounds like alkaloids, terpenes, and flavonoids that green plants cannot use as sources of energy during respiration. The release of the carbon in these compounds for recycling depends almost entirely on the action of both aerobic and anaerobic bacteria and certain types of fungi. Some bacteria and fungi possess the unique and extremely important biochemical asset of being able to catalyze the oxidation of numerous inert products, thereby initiating reaction sequences that produce carbon dioxide and so return much carbon to a form that actively enters into life cycles once again.

1. The passage contains information that would answer which of the following questions about the carbon cycle?
  - I. What are some of the compounds that are broken down in the carbon cycle?
  - II. Why are some compounds that are involved in the carbon cycle less reactive than others?
  - III. What role do bacteria and fungi play in the carbon cycle?
  - (A) I only
  - (B) II only
  - (C) III only
  - (D) I and II only
  - (E) I and III only
2. The author implies that which of the following is the primary reason that degradation is as important as synthesis to the smooth operation of the carbon cycle?
  - (A) Most of the polymers and organic compounds found in the plant kingdom are chemically unstable
  - (B) The synthesis of some organic material deprives life processes of an energy source
  - (C) Decomposition permits the recycling of carbon that would otherwise be fixed in certain substances
  - (D) Many organisms cannot use plants as a source of food, but can feed on bacteria and fungi
  - (E) Bacteria and fungi could not survive if some carbon compounds were not degraded
3. The author's contention about the importance of bacteria and fungi in the production of energy for life processes would be most clearly strengthened if which of the following were found to be true?
  - (A) Both aerobes and anaerobes provide sources of energy through the decomposition of organic material
  - (B) Most compounds containing carbon are unavailable as energy sources except to some bacteria and fungi
  - (C) Bacteria and fungi break down inert material in ways that do not involve oxidation
  - (D) Many compounds remain inert, even in the presence of bacteria and fungi
  - (E) Bacteria and fungi assist in the synthesis of many organic compounds

**Passage 10**

Hydrogeology is a science dealing with the properties, distribution, and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere. The hydrologic cycle, a major topic in this science, is the complete cycle of phenomena through which

- 5 water passes, beginning as atmospheric water vapor, passing into liquid and solid forms as precipitation, thence along and into the ground surface, and finally again returning to the form of atmospheric water vapor by means of evaporation and transpiration.

- 10 The term “geohydrology” is sometimes erroneously used as a synonym for “hydrogeology”. Geohydrology is concerned with underground water. There are many formations that contain water but are not part of the hydrologic cycle because of geologic changes that have isolated them underground. These systems are properly termed geohydrologic but not hydrogeologic. Only when a system possesses natural or artificial
- 15 boundaries that associate the water within it with the hydrologic cycle may the entire system properly be termed hydrogeologic.

1. The author’s primary purpose is most probably to
  - (A) present a hypothesis
  - (B) refute an argument
  - (C) correct a misconception
  - (D) predict an occurrence
  - (E) describe an enigma
2. It can be inferred that which of the following is most likely to be the subject of study by a geohydrologist?
  - (A) Soft, porous rock being worn away by a waterfall
  - (B) Water depositing minerals on the banks of a gorge through which the water runs
  - (C) The trapping of water in a sealed underground rock cavern through the action of an earthquake
  - (D) Water becoming unfit to drink through the release of pollutants into it from a manufacturing plant
  - (E) The changing course of a river channel as the action of the water wears away the rocks past which the river flows
3. The author refers to “many formations” (line 11) primarily in order to
  - (A) clarify a distinction
  - (B) introduce a subject
  - (C) draw an analogy
  - (D) emphasize a similarity
  - (E) resolve a conflict

**Passage 11**

Many theories have been formulated to explain the role of grazers such as zooplankton in controlling the amount of planktonic algae (phytoplankton) in lakes. The first theories of such grazer control were merely based on observations of negative correlations between algal and zooplankton numbers. A low number of algal cells in the presence of a high number of grazers suggested, but did not prove, that the grazers had removed most of the algae. The converse observation, of the absence of grazers in areas of high phytoplankton concentration, led Hardy to propose his principle of animal exclusion, which hypothesized that phytoplankton produced a repellent that excluded grazers from regions of high phytoplankton concentration. This was the first suggestion of algal defenses against grazing.

Perhaps the fact that many of these first studies considered only algae of a size that could be collected in a net (net phytoplankton), a practice that overlooked the smaller phytoplankton (nannoplankton) that we now know grazers are most likely to feed on, led to a de-emphasis of the role of grazers in subsequent research. Increasingly, as in the individual studies of Lund, Round, and Reynolds, researchers began to stress the importance of environmental factors such as temperature, light, and water movements in controlling algal numbers. These environmental factors were amenable to field monitoring and to simulation in the laboratory. Grazing was believed to have some effect on algal numbers, especially after phytoplankton growth rates declined at the end of bloom periods, but grazing was considered a minor component of models that predicted algal population dynamics.

The potential magnitude of grazing pressure on freshwater phytoplankton has only recently been determined empirically. Studies by Hargrave and Green estimated natural community grazing rates by measuring feeding rates of individual zooplankton species in the laboratory and then computing community grazing rates for field conditions using the known population density of grazers. The high estimates of grazing pressure postulated by these researchers were not fully accepted, however, until the grazing rates of zooplankton were determined directly in the field, by means of new experimental techniques. Using a specially prepared feeding chamber, Haney was able to record zooplankton grazing rates in natural field conditions. In the periods of peak zooplankton abundance, that is, in the late spring and in the summer, Haney recorded maximum daily community grazing rates, for nutrient-poor lakes and bog lakes, respectively, of 6.6 percent and 114 percent of daily phytoplankton production. Cladocerans had higher grazing rates than copepods, usually accounting for 80 percent of the community grazing rate. These rates varied seasonally, reaching the lowest point in the winter and early spring. Haney's thorough research provides convincing field evidence that grazers can exert significant pressure on phytoplankton population.

1. The author most likely mentions Hardy's principle of animal exclusion in order to
  - (A) give an example of one theory about the interaction of grazers and phytoplankton
  - (B) defend the first theory of algal defenses against grazing
  - (C) support the contention that phytoplankton numbers are controlled primarily by environmental factors
  - (D) demonstrate the superiority of laboratory studies of zooplankton feeding rates to other kinds of studies of such rates
  - (E) refute researchers who believed that low numbers of phytoplankton indicated the grazing effect of low numbers of zooplankton
2. It can be inferred from the passage the "first theories" of grazer control mentioned in line 3 would have been more convincing if researchers had been able to
  - (A) observe high phytoplankton numbers under natural lake conditions
  - (B) discover negative correlations between algae and zooplankton numbers from their field research
  - (C) understand the central importance of environmental factors in controlling the growth rates of phytoplankton

- (D) make verifiable correlations of cause and effect between zooplankton and phytoplankton numbers
  - (E) invent laboratory techniques that would have allowed them to bypass their field research concerning grazer control
3. Which of the following, if true, would call into question Hardy's principle of animal exclusion?
- (A) Zooplankton are not the only organisms that are affected by phytoplankton
  - (B) Zooplankton exclusion is unrelated to phytoplankton population density
  - (C) Zooplankton population density is higher during some parts of the year than during others
  - (D) Net phytoplankton are more likely to exclude zooplankton than are nannoplankton
  - (E) Phytoplankton numbers can be strongly affected by environmental factors
4. The author would be likely to agree with which of the following statements regarding the pressure of grazers on phytoplankton numbers?
- I. Grazing pressure can vary according to the individual type of zooplankton
  - II. Grazing pressure can be lower in nutrient-poor lakes than in bog lakes
  - III. Grazing tends to exert about the same pressure as does temperature.
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
5. The passage supplies information to indicate that Hargrave and Green's conclusion regarding the grazing pressure exerted by zooplankton on phytoplankton numbers was most similar to the conclusion regarding grazing pressure reached by which of the following researchers?
- (A) Hardy
  - (B) Lund
  - (C) Round
  - (D) Reynolds
  - (E) Haney
6. It can be inferred from the passage that one way in which many of the early researchers on grazer control could have improved their data would have been to
- (A) emphasize the effects of temperature, rather than of light, on phytoplankton
  - (B) disregard nannoplankton in their analysis of phytoplankton numbers
  - (C) collect phytoplankton of all sizes before analyzing the extent of phytoplankton concentration
  - (D) recognize that phytoplankton other than net phytoplankton could be collected in a net
  - (E) understand the crucial significance of net phytoplankton in the diet of zooplankton
7. According to the passage, Hargrave and Green did which of the following in their experiments?
- (A) They compared the grazing rates of individual zooplankton species in the laboratory with the natural grazing rates of these species
  - (B) They hypothesized about the population density of grazers in natural habitats by using data concerning the population density of grazers in the laboratory
  - (C) They estimated the community grazing rates of zooplankton in the laboratory by using data concerning the natural community grazing rates of zooplankton
  - (D) They estimated the natural community grazing rates of zooplankton by using data concerning the known population density of phytoplankton
  - (E) They estimated the natural community grazing rates of zooplankton by using laboratory data concerning the grazing rates of individual zooplankton species

**Passage 12**

The use of heat pumps has been held back largely by skepticism about advertisers' claims that heat pumps can provide as many as two units of thermal energy of each unit for electrical energy used, thus apparently contradicting the principle of energy conservation.

5 Heat pumps circulate a refrigerant that cycles alternatively from its liquid phase to its vapor phase in a closed loop. The refrigerant, starting as a low-temperature, low-pressure vapor, enters a compressor driven by an electric motor.

10 The refrigerant leaves the compressor as a hot, dense vapor and flows through a heat exchanger called the condenser, which transfers heat from the refrigerant to a body of air. Now the refrigerant, as a high-pressure, cooled liquid, confronts a flow restriction which causes the pressure to drop. As the pressure falls, the refrigerant expands and partially vaporizes, becoming chilled. It then passes through a second heat exchanger, the evaporator, which  
15 transfers heat from the air to the refrigerant, reducing the temperature of this second body of air. Of the two heat exchangers, one is located inside, and the other one outside the house, so each is in contact with a different body of air: room air and outside air, respectively.

20 The flow direction of refrigerant through a heat pump is controlled by valves. When the refrigerant flow is reversed, the heat exchangers switch function. This flow-reversal capability allows heat pumps either to heat or cool room air.

Now, if under certain conditions a heat pump puts out more thermal energy than it consumes in electrical energy, has the law of energy  
25 conservation been challenged? No, not even remotely: the additional input of thermal energy into the circulating refrigerant via the evaporator accounts for the difference in the energy equation.

Unfortunately, there is one real problem. The heating capacity of a heat pump decreases as the outdoor temperature falls. The drop in capacity is  
30 caused by the lessening amount of refrigerant mass moved through the compressor at one time. The heating capacity is proportional to this mass flow rate: the less the mass of refrigerant being compressed, the less the thermal load it can transfer through the heat-pump cycle. The volume flow rate of refrigerant vapor through the single-speed rotary compressor used in heat  
35 pumps is approximately constant. But cold refrigerant vapor entering a compressor is at lower pressure than warmer vapor. Therefore, the mass of cold refrigerant - and thus the thermal energy it carries - is less than if the refrigerant vapor were warmer before compression.

40 Here, then, lies a genuine drawback of heat pumps: in extremely cold climates - where the most heat is needed - heat pumps are least able to supply enough heat.

1. The primary purpose of the passage is to
  - (A) explain the differences in the working of a heat pump when the outdoor temperature changes
  - (B) contrast the heating and the cooling modes of heat pumps
  - (C) describe heat pumps, their use, and factors affecting their use
  - (D) advocate the more widespread use of heat pumps
  - (E) expose extravagant claims about heat pumps as false
2. The author resolves the questions of whether heat pumps run counter to the principle of energy conservation by
  - (A) carefully qualifying the meaning of that principle
  - (B) pointing out a factual error in the statement that gives rise to this question
  - (C) supplying additional relevant facts
  - (D) denying the relevance of that principle to heat pumps
  - (E) explaining that heat pumps can cool, as well as heat, room air



3. It can be inferred from the passage that, in the course of a heating season, the heating capacity of a heat pump is greatest when
- (A) heating is least essential
  - (B) electricity rates are lowest
  - (C) its compressor runs the fastest
  - (D) outdoor temperatures hold steady
  - (E) the heating demand surges
4. If the author's assessment of the use of the heat pumps (lines 1-4) is correct, which of the following best expresses the lesson that advertisers should learn from this case?
- (A) Do not make exaggerated claims about the products you are trying to promote
  - (B) Focus your advertising campaign on vague analogies and veiled implications instead of on facts
  - (C) Do not use facts in your advertising that will strain the prospective client's ability to believe
  - (D) Do not assume in your advertising that the prospective clients know even the most elementary scientific principles
  - (E) Concentrate your advertising firmly on financially relevant issues such as price discounts and efficiency of operation
5. The passage suggests that heat pumps would be used more widely if
- (A) they could also be used as air conditioners
  - (B) they could be moved around to supply heat where it is most needed
  - (C) their heat output could be thermostatically controlled
  - (D) models with truly superior cooling capacity were advertised more effectively
  - (E) people appreciated the role of the evaporator in the energy equation
6. According to the passage, the role of the flow restriction (line 12-13) in a heat pump is to
- (A) measure accurately the flow rate of the refrigerant mass at that point
  - (B) compress and heat the refrigerant vapor
  - (C) bring about the evaporation and cooling of the refrigerant
  - (D) exchange heat between the refrigerant and the air at that point
  - (E) reverse the direction of refrigerant flow when needed
7. The author regards the notion that heat pumps have a genuine drawback as a
- (A) cause for regret
  - (B) sign of premature defeatism
  - (C) welcome challenge
  - (D) case of sloppy thinking
  - (E) focus for an educational campaign

**Passage 13**

Mycorrhizal fungi infect more plants than do any other fungi and are necessary for many plants to thrive, but they have escaped widespread investigation until recently for two reasons. First, the symbiotic association is so well balanced that the roots of host plants show no damage even when densely infected. Second, the fungi cannot as yet be cultivated in the absence of a living root. Despite these difficulties, there has been important new work that suggests that this symbiotic association can be harnessed to achieve more economical use of costly superphosphate fertilizer and to permit better exploitation of cheaper, less soluble rock phosphate. Mycorrhizal benefits are not limited to improved phosphate uptake in host plants. In legumes, mycorrhizal inoculation has increased nitrogen fixation beyond levels achieved by adding phosphate fertilizer alone. Certain symbiotic associations also increase the host plant's resistance to harmful root fungi. Whether this resistance results from exclusion of harmful fungi through competition for sites, from metabolic change involving antibiotic production, or from increased vigor is undetermined.

1. Which of the following most accurately describes the passage?
  - (A) A description of a replicable experiment
  - (B) A summary report of new findings
  - (C) A recommendation for abandoning a difficult area of research
  - (D) A refutation of an earlier hypothesis
  - (E) A confirmation of earlier research
2. The level of information in the passage above is suited to the needs of all of the following people EXCEPT
  - (A) a researcher whose job is to identify potentially profitable areas for research and product development
  - (B) a state official whose position requires her to alert farmers about possible innovations in farming
  - (C) an official of a research foundation who identifies research projects for potential funding
  - (D) a biologist attempting to keep up with scientific developments in an area outside of his immediate area of specialization
  - (E) a botanist conducting experiments to determine the relationship between the degree of mycorrhizal infection and expected uptake of phosphate
3. It can be inferred from the passage that which of the following has been a factor influencing the extent to which research on mycorrhizal fungi has progressed?
  - (A) Lack of funding for such research
  - (B) Lack of immediate application of such research
  - (C) Lack of a method for identifying mycorrhizal fungi
  - (D) Difficulties surrounding laboratory production of specimens for study
  - (E) Difficulties ensuing from the high cost and scarcity of superphosphate fertilizers
4. The passage suggests which of the following about the increased resistance to harmful root fungi that some plants infected with mycorrhizal fungi seem to exhibit?
  - (A) There are at least three hypotheses that might account for the increase
  - (B) An explanation lies in the fact that mycorrhizal fungi increase more rapidly in number than harmful root fungi do
  - (C) The plants that show increased resistance also exhibit improved nitrogen fixation
  - (D) Such increases may be independent of mycorrhizal infection
  - (E) It is unlikely that a satisfactory explanation can be found to account for the increase

**Passage 14**

The transplantation of organs from one individual to another normally involves two major problems: (1) organ rejection is likely unless the transplantation antigens of both individuals are nearly identical, and (2) the introduction of any unmatched transplantation antigens induces the development by the recipient of donor-specific lymphocytes that will produce violent rejection of further transplantations from that donor. However, we have found that among many strains of rats these “normal” rules of transplantation are not obeyed by liver transplants. Not only are liver transplants never rejected, but they even induce a state of donor-specific unresponsiveness in which subsequent transplants of other organs, such as skin, from that donor are accepted permanently. Our hypothesis is that (1) many strains of rats simply cannot mount a sufficiently vigorous destructive immune-response (using lymphocytes) to outstrip the liver’s relatively great capacity to protect itself from immune-response damage and that (2) the systematic unresponsiveness observed is due to concentration of the recipient’s donor-specific lymphocytes at the site of the liver transplant.

1. The primary purpose of the passage is to treat the accepted generalizations about organ transplanatation in which of the following ways?
  - (A) Explicate their main feature
  - (B) Suggest an alternative to them
  - (C) Examine their virtues and limitations
  - (D) Criticize the major evidence used to support them
  - (E) Present findings that qualify them
2. It can be inferred from the passage that the author believes that an important difference among strains of rats is the
  - (A) size of their livers
  - (B) constitution of their skin
  - (C) strength of their immune-response reactions
  - (D) sensitivity of their antigens
  - (E) adaptability of their lymphocytes
3. According to the hypothesis of the author, after a successful liver transplant, the reason that rats do not reject further transplants of other organs from the same donor is that the
  - (A) transplantation antigens of the donor and the recipient become matched
  - (B) lymphocytes of the recipient are weakened by the activity of the transplanted liver
  - (C) subsequently transplanted organ is able to repair the damage caused by the recipient’s immune-response reaction
  - (D) transplanted liver continues to be the primary locus for the recipient’s immune-response reaction
  - (E) recipient is unable to manufacture the lymphocytes necessary for the immune-response reaction
4. Which of the following new findings about strains of rats that do not normally reject liver transplants, if true, would support the authors’ hypothesis?
  - I. Stomach transplants are accepted by the recipients in all cases
  - II. Increasing the strength of the recipient’s immune-response reaction can induce liver-transplant rejection
  - III. Organs from any other donor can be transplanted without rejection after liver transplantation
  - IV. Prevailing lymphocytes from being concentrated at the liver transplant produces acceptance of skin transplants
  - (A) II only
  - (B) I and III only
  - (C) II and IV only
  - (D) I, II, and III only
  - (E) I, II, and IV only

**Passage 15**

Of the thousands of specimens of meteorites found on Earth and known to science, only about 100 are igneous; that is, they have undergone melting by volcanic action at some time since the planets were first formed. These igneous meteorites are known as achondrites because they lack chondrules - small stony spherules found in the thousands of meteorites (called "chondrites") composed primarily of unaltered minerals that condensed from dust and gas at the origin of the solar system. Achondrites are the only known samples of volcanic rocks originating outside the Earth-Moon system. Most are thought to have been dislodged by interbody impact from asteroids, with diameters of 10 to 500 kilometers, in solar orbit between Mars and Jupiter.

Shergottites, the name given to three anomalous achondrites so far discovered on Earth, present scientists with a genuine enigma. Shergottites crystallized from molten rock less than 1.1 billion years ago (some 3.5 billion years later than typical achondrites) and were presumably ejected into space when an object impacted on a body similar in chemical composition to Earth.

While most meteorites appear to derive from comparatively small bodies, shergottites exhibit properties that indicate that their source was a large planet, conceivably Mars. In order to account for such an unlikely source, some unusual factor must be invoked, because the impact needed to accelerate a fragment of rock to escape the gravitational field of a body even as small as the Moon is so great that no meteorites of lunar origin have been discovered.

While some scientists speculate that shergottites derive from Io (a volcanically active moon of Jupiter), recent measurements suggest that since Io's surface is rich in sulfur and sodium, the chemical composition of its volcanic products would probably be unlike that of the shergottites. Moreover, any fragments dislodged from Io by interbody impact would be unlikely to escape the gravitational pull of Jupiter.

The only other logical source of shergottites is Mars. Space-probe photographs indicate the existence of giant volcanoes on the Martian surface. From the small number of impact craters that appear on Martian lava flows, one can estimate that the planet was volcanically active as recently as a half-billion years ago, and may be active today. The great objection to the Martian origin of shergottites is the absence of lunar meteorites on Earth. An impact capable of ejecting a fragment of the Martian surface into an Earth-intersecting orbit is even less probable than such an event on the Moon, in view of the Moon's smaller size and closer proximity to Earth. A recent study suggests, however, that permafrost ices below the surface of Mars may have altered the effects of impact on it. If the ices had been rapidly vaporized by an impacting object, the expanding gases might have helped the ejected fragments reach escape velocity.

Finally, analyses performed by space probes show a remarkable chemical similarity between Martian soil and the shergottites.

1. The passage implies which of the following about shergottites?

I. They are products of volcanic activity

II. They derive from a planet larger than Earth

III. They come from a planetary body with a chemical composition similar to that of Io

(A) I only

(B) II only

(C) I and II only

(D) II and III only

(E) I, II and III

2. According to the passage, a meteorite discovered on Earth is unlikely to have come from a large planet for which of the following reasons?
- (A) There are fewer large planets in the solar system than there are asteroids
  - (B) Most large planets have been volcanically inactive for more than a billion years
  - (C) The gravitational pull of a large planet would probably prohibit fragments from escaping its orbit
  - (D) There are no chondrites occurring naturally on Earth and probably none on other large planets
  - (E) Interbody impact is much rarer on large planets than on small planets because of the density of the atmosphere on large planets
3. The passage suggests that the age of shergottites is probably
- (A) still entirely undermined
  - (B) less than that of most other achondrites
  - (C) about 3.5 billion years
  - (D) the same as that of typical achondrites
  - (E) greater than that of the Earth
4. According to the passage, the presence of chondrules in a meteorite indicates that the meteorite
- (A) has probably come from Mars
  - (B) is older than the solar system itself
  - (C) has not been melted since the solar system formed
  - (D) is certainly less than 4 billion years old
  - (E) is a small fragment of an asteroid
5. The passage provides information to answer which of the following questions?
- (A) What is the precise age of the solar system?
  - (B) How did shergottites get their name?
  - (C) What are the chemical properties shared by shergottites and Martian soils?
  - (D) How volcanically active is the planet Jupiter?
  - (E) What is a major feature of the Martian surface?
6. It can be inferred from the passage that each of the following is a consideration in determining whether a particular planet is a possible source of shergottites that have been discovered on Earth EXCEPT the
- (A) planet's size
  - (B) planet's distance from Earth
  - (C) strength of the planet's field of gravity
  - (D) proximity of the planet to its moons
  - (E) chemical composition of the planet's surface
7. It can be inferred from the passage that most meteorites found on Earth contain which of the following?
- (A) Crystals
  - (B) Chondrules
  - (C) Metals
  - (D) Sodium
  - (E) Sulfur

**Passage 16**

The primary method previously used by paleontologists to estimate climatic changes that occurred during Pleistocene glacial cycles was the determination of  $O_{18}/O_{16}$  ratios in calcareous fossils. However, because this ratio is influenced by a number of factors, the absolute magnitude of the temperature difference between Pleistocene glacial and interglacial cycles could not be unequivocally ascertained. For example, both temperature fluctuations and isotopic changes in sea water affect the  $O_{18}/O_{16}$  ratio. And, since both factors influence the ratio in the same direction, the contribution of each to the  $O_{18}/O_{16}$  ratio cannot be determined.

Fortunately, recent studies indicate that the racemization reaction of amino acids can be used to determine more accurately temperatures that occurred during Pleistocene glacial cycles. Only L-amino acids are usually found in the proteins of living organisms, but over long periods of geological time these acids undergo racemization, producing D-amino acids, which are not found in proteins. This reaction depends on both time and temperature; thus, if one variable is known, the reaction can be used to calculate the other.

1. It can be inferred from the passage that determination of the temperatures mentioned in line 12 through  $O_{18}/O_{16}$  ratios and determination through racemization reactions both require which of the following?
  - (A) Calcium deposits known to be from Pleistocene seas
  - (B) Proteins containing both L-amino acids and D-amino acids
  - (C) Glacial debris from both before and after the Pleistocene period
  - (D) Fossil material from organisms living during the Pleistocene period
  - (E) Proteins containing both amino acids and O
2. The passage suggests that  $O_{18}/O_{16}$  ratio could be used more successfully as a means of measurement if scientists were able to
  - (A) determine the  $O_{18}/O_{16}$  ratio in living animals as well as in fossil remains
  - (B) locate a greater number of calcareous fossils from the Pleistocene glacial and interglacial cycles
  - (C) locate the factors other than temperature fluctuations and isotopic changes in sea water that affect the  $O_{18}/O_{16}$  ratio
  - (D) arrive at more exact determinations of which amino acids are found in the proteins of living organisms
  - (E) isolate the relative effects of temperature fluctuations and isotopic changes in sea water on  $O_{18}/O_{16}$  ratios
3. The information in the passage can be used to answer which of the following questions?
  - I. Do temperature variations and isotopic changes in sea water cause the  $O_{18}/O_{16}$  ratio to shift in the same direction?
  - II. What are the methods used to determine the  $O_{18}/O_{16}$  ratio
  - III. Is the study of racemization reactions useful in estimating climatic changes that occurred during Pleistocene glacial cycle if only one of the two important variables is known?
  - (A) I only
  - (B) I and II only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II, and III

**Passage 17**

The Food and Drug Administration has recently proposed severe restrictions on the use of antibiotics to promote the health and growth of meat animals. Medications added to feed not only kill many microorganisms but also encourage the appearance of bacterial strains that are resistant to anti-infective drugs. Already, for example, penicillin and the tetracyclines are not as effective therapeutically as they once were. The drug resistance is chiefly conferred by tiny circlets of genes, called plasmids, that can be exchanged between different strains and even different species of bacteria.

Plasmids are also one of the two kinds of vehicles (the other being viruses) that molecular biologists depend on when performing gene transplant experiments. Even present guidelines forbid the laboratory use of plasmids bearing genes having resistance to antibiotics. Yet, while congressional debate rages over whether or not to toughen these restrictions on scientists in their laboratories, little congressional attention has been focused on an ill-advised agricultural practice that produced known deleterious effects.

1. In the passage, the author is primarily concerned with
  - (A) discovering methods of eliminating harmful micro-organisms without subsequently generating drug-resistant bacteria
  - (B) explaining reasons for congressional inaction on the regulation of gene transplant experiments
  - (C) describing a problematic agricultural practice and its serious genetic consequences
  - (D) verifying the therapeutic ineffectiveness of anti-infective drugs
  - (E) evaluating recently proposed restrictions intended to promote the growth of meat animals
2. According to the passage, the exchange of plasmids between different bacteria can result in which of the following?
  - (A) Microorganisms resistant to drugs
  - (B) Therapeutically useful circlets of genes
  - (C) Anti-infective drugs like penicillin
  - (D) Viruses for use by molecular biologists
  - (E) Vehicles for performing gene transplant experiments
3. It can be inferred from the passage that the author believes that those in favor of stiffening the restrictions on gene transplant research should logically also
  - (A) encourage experiments with any plasmids except those bearing genes for antibiotic resistance
  - (B) question the addition of anti-infective drugs to livestock feeds
  - (C) resist the use of penicillin and tetracyclines to kill microorganisms
  - (D) agree to the development of meatier livestock through the use of antibiotics
  - (E) favor congressional debate and discussion of all science and health issues
4. The author's attitude toward the development of bacterial strains that render antibiotic drugs ineffective can best be described as
  - (A) indifferent
  - (B) perplexed
  - (C) pretentious
  - (D) insincere
  - (E) apprehensive

**Passage 18**

Few areas of neurobehavioral research seemed more promising in the early sixties than that investigating the relationship between protein synthesis and learning. The conceptual framework for this research was derived directly from molecular biology, which had shown that genetic  
 5 information is stored in nucleic acids and expressed in proteins. Why not acquired information as well?

The first step toward establishing a connection between protein synthesis and learning seemed to be to block memory (cause amnesia) by interrupting the production of proteins. We were fortunate in finding a  
 10 nonlethal dosage of puromycin that could, it first appeared, thoroughly inhibit brain protein synthesis as well as reliably produce amnesia.

Before the actual connection between protein synthesis and learning could be established, however, we began to have doubts about whether inhibition of protein synthesis was in fact the method by which  
 15 puromycin produced amnesia. First, other drugs - glutarimides, themselves potent protein-synthesis inhibitors - either failed to cause amnesia in some situations where it could easily be induced by puromycin or produced an amnesia with a different time course from that of puromycin. Second, puromycin was found to inhibit protein  
 20 synthesis by breaking certain amino-acid chains, and the resulting fragments were suspected of being the actual cause of amnesia in some cases. Third, puromycin was reported to cause abnormalities in the brain, including seizures. Thus, not only were decreased protein synthesis and amnesia dissociated, but alternative mechanisms for the  
 25 amnestic action of puromycin were readily suggested.

So, puromycin turned out to be a disappointment. It came to be regarded as a poor agent for amnesia studies, although, of course it was poor only in the context of our original paradigm of protein-synthesis inhibition. In our frustration, our initial response was simply to change  
 30 drugs rather than our conceptual orientation. After many such disappointments, however, it now appears unlikely that we will make a firm connection between protein synthesis and learning merely by pursuing the approaches of the past. Our experience with drugs has shown that all the amnestic agents often interfere with memory in ways  
 35 that seem unrelated to their inhibition of protein synthesis.

More importantly, the notion that the interruption or intensification of protein production in the brain can be related in cause-and-effect fashion to learning now seems simplistic and unproductive. Remove the battery from a car and the car will not go. Drive the car a long distance  
 40 at high speed and the battery will become more highly charged. Neither of these facts proves that the battery powers the car, only a knowledge of the overall automotive system will reveal its mechanism of locomotion and the role of the battery within that system.

1. This passage was most likely excerpted from
  - (A) a diary kept by a practicing neuro-behavioral researcher
  - (B) a newspaper article on recent advances in the biochemistry of learning
  - (C) a technical article on experimental techniques in the field of molecular biology
  - (D) an article summarizing a series of scientific investigations in neurobehavioral research
  - (E) a book review in a leading journal devoted to genetic research
2. The primary purpose of the passage is to show that extensive experimentation has
  - (A) demonstrated the importance of amino- acid fragmentation in the induction of amnesia
  - (B) cast doubt on the value of puromycin in the neurobehavioral investigation of learning
  - (C) revealed the importance of amnesia in the neurobehavioral study of learning
  - (D) not yet demonstrated the applicability of molecular biology to neurobehavioral research
  - (E) not supported the hypothesis that learning is directly dependent on protein synthesis



3. According to the passage, neurobehaviorists initially based their belief that protein synthesis was related to learning on which of the following?
- (A) Traditional theories about learning
  - (B) New techniques in protein synthesis
  - (C) Previous discoveries in molecular biology
  - (D) Specific research into learning and amnesia
  - (E) Historic experiments on the effects of puromycin
4. The passage mentions all of the following as effects of puromycin EXCEPT:
- (A) brain seizures
  - (B) memory loss
  - (C) inhibition of protein synthesis
  - (D) destruction of genetic information
  - (E) fragmentation of amino-acid chains
5. It can be inferred from the passage that, after puromycin was perceived to be a disappointment, researchers did which of the following?
- (A) They ceased to experiment with puromycin, and shifted to other promising protein-synthesis inhibitors.
  - (B) They ceased to experiment with puromycin and reexamined through experiments the relationship between genetic information and acquired information.
  - (C) They continued to experiment with puromycin, but applied their results to other facets of memory research.
  - (D) They continued to experiment with puromycin, but also tried other protein-synthesis inhibitors.
  - (E) They continued to experiment with puromycin until a new neuroanatomical framework was developed.
6. In the example of the car (lines 39-43 ), the battery is meant to represent which of the following elements in the neurobehavioral research program?
- (A) Puromycin
  - (B) Amnesia
  - (C) Glutarimides
  - (D) Protein synthesis
  - (E) Acquired information
7. Which of the following statements would be most likely to come after the last sentence of the passage?
- (A) The failures of the past, however, must not impede further research into the amnestic action of protein-synthesis inhibitors.
  - (B) It is a legacy of this research, therefore, that molecular biology's genetic models have led to disagreements among neuro-behaviorists.
  - (C) The ambivalent status of current research, however, should not deter neurobehaviorists from exploring the deeper connections between protein production and learning.
  - (D) It is important in the future, therefore, for behavioral biochemists to emphasize more strongly the place of their specific findings within the overall protein-synthesis model of learning.
  - (E) It is important in the future, therefore, for behavioral biochemists to focus on the several components of the total learning system.

**Passage 19**

Climatic conditions are delicately adjusted to the composition of Earth's atmosphere. If there were a change in the atmosphere - for example, in the relative proportions of atmospheric gases - the climate would probably change also. A slight increase in water vapor, for instance, would increase the heat-retaining capacity of the atmosphere and would lead to a rise in global temperatures. In contrast, a large increase in water vapor would increase the thickness and extent of the cloud layer, reducing the amount of energy reaching the Earth's surface.

The level of carbon dioxide, CO<sub>2</sub>, in the atmosphere has an important effect on climatic change. Most of the Earth's incoming energy is shortwavelength radiation, which tends to pass through atmospheric CO<sub>2</sub> easily. The Earth, however, reradiates much of the received energy as long-wavelength radiation, which CO<sub>2</sub> absorbs and then retransmits toward the Earth. This phenomenon, known as the 'greenhouse effect', can result in an increase in the surface temperature of a planet. An extreme example of the effect is shown by Venus, a planet covered by heavy clouds composed mostly of CO<sub>2</sub>, whose surface temperatures have been measured at 430°C. If the CO<sub>2</sub> content of the atmosphere is reduced, the temperature falls. According to one respectable theory, if the atmospheric CO<sub>2</sub> concentration were halved, the Earth would become completely covered with ice. Another equally respectable theory, however, states that a halving of the CO<sub>2</sub> concentration would lead only to a reduction in global temperatures of 3°C.

If, because of an increase in forest fires or volcanic activity, the CO<sub>2</sub> content of the atmosphere increased, a warmer climate would be produced. Plant growth, which relies on both the warmth and the availability of CO<sub>2</sub>, would probably increase. As a consequence, plants would use more and more CO<sub>2</sub>. Eventually CO<sub>2</sub> levels would diminish and the climate, in turn, would become cooler. With reduced temperatures many plants would die; CO<sub>2</sub> would thereby be returned to the atmosphere and gradually the temperature would rise again. Thus, if this process occurred, there might be a long-term oscillation in the amount of CO<sub>2</sub> present in the atmosphere, with regular temperature increases and decreases of a set magnitude.

Some climatologists argue that the burning of fossil fuels has raised the level of CO<sub>2</sub> in the atmosphere and caused a global temperature increase of at least 1°C. But a supposed global temperature rise of 1°C may in reality be only several regional temperature increases, restricted to areas where there are many meteorological stations and caused simply by shifts in the pattern of atmospheric circulation. Other areas, for example the Southern Hemisphere oceanic zone, may be experiencing an equivalent temperature decrease that is unrecognized because of the shortage of meteorological recording stations.

1. The passage supplies information for answering which of the following questions?
  - (A) Why are projections of the effects of changes in water vapor levels on climate so inaccurate?
  - (B) What are the steps in the process that take place as CO<sub>2</sub> absorbs long-wavelength radiation?
  - (C) How might our understanding of the greenhouse effect be improved if the burning of fossil fuels were decreased?
  - (D) What might cause a series of regular increases and decreases in the amount of CO<sub>2</sub> in the atmosphere?
  - (E) Why are there fewer meteorological recording stations in the Southern Hemisphere oceanic zone than elsewhere?
2. The author is primarily concerned with
  - (A) explaining the effects that the burning of fossil fuels might have on climate
  - (B) illustrating the effects of CO<sub>2</sub> on atmospheric radiation
  - (C) discussing effects that changes in the CO<sub>2</sub> level in the atmosphere might have on climate
  - (D) challenging hypotheses about the effects of water vapor and CO<sub>2</sub> on climate
  - (E) refuting hypotheses by climatologists about the causes of global temperature fluctuations

3. The passage suggests that a large decrease in the amount of CO<sub>2</sub> in the atmosphere would result in
- (A) at least a slight decrease in global temperatures
  - (B) at the most a slight increase in shortwavelength radiation reaching the Earth
  - (C) a slight long-term increase in global temperatures
  - (D) a large long-term increase in the amount of volcanic activity
  - (E) a slight short-term increase in atmospheric water vapor content
4. The author refers to Venus primarily in order to
- (A) show the inherent weakness of the greenhouse effect theory
  - (B) show that the greenhouse effect works on other planets but not on Earth
  - (C) show the extent to which Earth's atmosphere differs from that of Venus
  - (D) Support the contention that as water vapor increases, the amount of CO<sub>2</sub> increases
  - (E) support the argument that the CO<sub>2</sub> level in the atmosphere has a significant effect on climate
5. The passage suggests that if there were a slight global warming at the present time, it would be
- (A) easy to measure the exact increase in temperature because of the abundance of temperature recording stations
  - (B) difficult to measure the increase of CO<sub>2</sub> in the atmosphere because of local variations in amounts
  - (C) easy to demonstrate the effects of the warming on the water vapor in the atmosphere
  - (D) difficult to prove that the warming was caused by the burning of fossil fuels
  - (E) easy to prove that the warming was caused by an increase of cloud cover
6. The discussion of climate in the passage suggests which of the following conclusions?
- I. Climate is not perfectly stable, and slight regional temperature variations can be considered a normal feature of the environment
  - II. We are unable at present to measure global temperature changes precisely
  - III. The most important cause of regional climatic fluctuations is the change in CO<sub>2</sub> levels in the atmosphere
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
7. All of the following can be found in the author's discussion of climate EXCEPT:
- (A) a statement about the effects of increased volcanic activity on the Earth's temperatures
  - (B) an indication of the effect of an increase in water vapor in the atmosphere
  - (C) a contrast between two theories about the effects of a lowering of CO<sub>2</sub> levels in the atmosphere
  - (D) a generalization about the efficiency of meteorological recording stations
  - (E) a hypothesis about the relationship between atmospheric gases and changes in climate

**Passage 20**

Although pathogenic organisms constantly alight on the skin, they find it a very unfavorable environment and, in the absence of injury, have great difficulty colonizing it. This “self-sterilizing” capacity of the skin results from the tendency of all well-developed ecosystems toward homeostasis, or  
5 the maintenance of the status quo.

Species that typically live in soil, water, and elsewhere rarely multiply on the skin. Undamaged skin is also unfavorable to most human pathogens. The skin is too acid and too arid for some species. The constant shedding of the surface skin layers further hinders the establishment of invaders. The  
10 most interesting defense mechanism, however, results from the metabolic activities of the resident flora. Unsaturated fatty acids, an important component of the lipids in sebum collected from the skin surface, inhibit the growth of several bacterial and fungal cutaneous pathogens. These acids are a metabolic product of certain gram-positive members of the cutaneous  
15 community, which break down the more complex lipids in freshly secreted sebum.

1. The primary purpose of the passage is to
  - (A) offer an analysis of metabolic processes
  - (B) detail the ways in which bacteria and fungi can be inhibited
  - (C) describe mechanisms by which the skin protects itself against pathogens
  - (D) analyze the methods whereby biological systems maintain the status quo
  - (E) provide a specific example of the skin’s basic defense against pathogens
2. The “resident flora” mentioned in line 11 refer to
  - (A) “Unsaturated fatty acids” (line 11)
  - (B) “sebum collected from the skin surface” (line 12)
  - (C) “bacterial and fungal cutaneous pathogens” (line 13)
  - (D) “certain gram-positive members of the cutaneous community” (lines 14-15)
  - (E) “more complex lipids” (line 15)
3. Among the natural defenses of the skin against pathogenic organisms are all of the following EXCEPT the
  - (A) dryness of the skin
  - (B) acidity of the skin
  - (C) tendency of the pathogens toward homeostasis
  - (D) shedding of surface layers of the skin
  - (E) metabolic breakdown of lipids
4. The author presents her material in which of the following ways?
  - (A) Stating a problem and supplying a solution
  - (B) Presenting a phenomenon and then analyzing reasons for it
  - (C) Providing information and then drawing a conclusion from it
  - (D) Making a general statement and then arguing by analogy
  - (E) Making an inference and then developing it by illustration

**Passage 21**

It is a popular misconception that nuclear fusion power is free of radioactivity; in fact, the deuterium-tritium reaction that nuclear scientists are currently exploring with such zeal produces both alpha particles and neutrons. (The neutrons are used to produce tritium from a lithium blanket surrounding the reactor.)

Another common misconception is that nuclear fusion power is a virtually unlimited source of energy because of the enormous quantity of deuterium in the sea. Actually, its limits are set by the amount of available lithium, which is about as plentiful as uranium in the Earth's crust. Research should certainly continue on controlled nuclear fusion, but no energy program should be premised on its existence until it has proven practical. For the immediate future, we must continue to use hydroelectric power, nuclear fission, and fossil fuels to meet our energy needs. The energy sources already in major use are in major use for good reason.

1. The primary purpose of the passage is to
  - (A) criticize scientists who believe that the deuterium-tritium fusion reaction can be made feasible as an energy source
  - (B) admonish scientists who have failed to correctly calculate the amount of lithium available for use in nuclear fusion reactors
  - (C) defend the continued short-term use of fossil fuels as a major energy source
  - (D) caution against uncritical embrace of nuclear fusion power as a major energy source
  - (E) correct the misconception that nuclear fusion power is entirely free of radioactivity
2. It can be inferred from the passage that the author believes which of the following about the current state of public awareness concerning nuclear fusion power?
  - (A) The public has been deliberately misinformed about the advantages and disadvantages of nuclear fusion power.
  - (B) The public is unaware of the principal advantage of nuclear fusion over nuclear fission as an energy source.
  - (C) The public's awareness of the scientific facts concerning nuclear fusion power is somewhat distorted and incomplete.
  - (D) The public is not interested in increasing its awareness of the advantage and disadvantage of nuclear fusion power.
  - (E) The public is aware of the disadvantages of nuclear fusion power but not of its advantages.
3. The passage provides information that would answer which of the following questions?
  - (A) What is likely to be the principal source of deuterium for nuclear fusion power?
  - (B) How much incidental radiation is produced in the deuterium-tritium fusion reaction?
  - (C) Why are scientists exploring the deuterium-tritium fusion reaction with such zeal?
  - (D) Why must the tritium for nuclear fusion be synthesized from lithium?
  - (E) Why does the deuterium-tritium reaction yield both alpha particles and neutrons?
4. Which of the following statements concerning nuclear scientists is most directly suggested in the passage?
  - (A) Nuclear scientists are not themselves aware of all of the facts surrounding the deuterium-tritium fusion reaction.
  - (B) Nuclear scientists exploring the deuterium-tritium reaction have overlooked key facts in their eagerness to prove nuclear fusion practical.
  - (C) Nuclear scientists may have overestimated the amount of lithium actually available in the Earth's crust.
  - (D) Nuclear scientists have not been entirely dispassionate in their investigation of the deuterium-tritium reaction.
  - (E) Nuclear scientists have insufficiently investigated the lithium-to-tritium reaction in nuclear fusion.

**Passage 22**

The stratospheric ozone layer is not a completely uniform stratum, nor does it occur at the same altitude around the globe. It lies closest to the Earth over the poles and rises to maximum altitude over the equator. In the stratosphere, ozone is continuously being made and destroyed by natural processes. During the day the Sun breaks down some of the oxygen molecules to single oxygen atoms, and these, reacting with the oxygen molecules that have not been dissociated form ozone. However, the sunlight also breaks down ozone by converting some of it back to normal oxygen. In addition, naturally occurring nitrogen oxides enter into the cycle and speed the breakdown reactions. The amount of ozone present at any one time is the balance between the processes that create it and those that destroy it.

Since the splitting of the oxygen molecules depends directly upon the intensity of solar radiation, the greatest rate of ozone production occurs over the tropics. However, ozone is also destroyed most rapidly there, and wind circulation patterns carry the ozone-enriched upper layers of the atmosphere away from the equator. It turns out that the largest total ozone amounts are found at high latitudes. On a typical day the amount of ozone over Minnesota, for example, is 30 percent greater than the amount over Texas, 900 miles farther south. The density and altitude of the ozone layer also change with the seasons, the weather, and the amount of solar activity. Nevertheless, at any one place above the Earth's surface, the long-term averages maintained by natural processes are believed to be reasonably constant.

The amount of ozone near the Earth is only a small percent of the amount in the stratosphere, and exchange of molecules between the ozone layer and the air at ground level is thought to be relatively small. Furthermore, the ozone molecule is so unstable that only a tiny fraction of ground-level ozone could survive the long trip to the stratosphere, so the ozone layer will not be replenished to any significant degree by the increasing concentrations of ozone that have been detected in recent years near the earth's surface. The long-term averages of ozone both near ground level and in the stratosphere are regulated by continuous processes that are constantly destroying and creating it in each of these places. This is why scientists are so concerned about human beings' injection into the stratosphere of chemicals like nitrogen oxides, which are catalysts that facilitate the breakdown of ozone. If the ozone layer is depleted significantly, more ultraviolet radiation would penetrate to the Earth's surface and damage many living organisms.

1. The passage suggests that factors contributing to the variation in the amount of ozone above different areas of the Earth's surface include which of the following?
  - I. Some of the ozone found at higher latitudes was produced elsewhere.
  - II. There is usually a smaller amount of naturally occurring nitrogen oxide over high latitudes.
  - III. The rate of ozone production over the poles is less than that over the tropics.

(A) II only  
(B) III only  
(C) I and II only  
(D) I and III only  
(E) I, II, and III
2. Which of the following best states the central idea of the passage?

(A) Naturally occurring nitrogen oxides as well as those introduced by humans threaten to deplete the layer of ozone in the stratosphere.  
(B) A delicate but reasonably constant balance exists between the natural processes that produce and those that destroy ozone in the stratosphere.  
(C) There is little hope that the increased concentrations of ground-level ozone observed in recent years can offset any future depletion of stratospheric ozone.  
(D) Meteorologically induced changes in the concentration of ozone in the stratosphere tend to cancel themselves out over a period of time.  
(E) Solar radiation not only produces and destroys ozone but also poses a hazard to human life.

3. The processes that determine the amount of ozone in a given portion of the stratosphere most resemble which of the following?
- (A) Automobile emissions and seasonal fog that create a layer of smog over a city
  - (B) Planting and harvesting activities that produce a crop whose size is always about the same
  - (C) Withdrawals and deposits made in a bank account whose average balance remains about the same
  - (D) Assets and liabilities that determine the net worth of a corporation
  - (E) High grades and low grades made by a student whose average remains about the same from term to term
4. According to the passage, which of the following has the least effect on the amount of ozone at a given location in the upper atmosphere?
- (A) Latitude
  - (B) Weather
  - (C) Season
  - (D) Ground-level ozone
  - (E) Solar activity
5. The author provides information that answers which of the following questions?
- I. What is the average thickness of the stratospheric ozone layer?
  - II. Why does increased exposure to ultraviolet radiation damage many living organisms?
  - III. What is the role of oxygen in the production of stratospheric ozone?
- (A) I only
  - (B) II only
  - (C) III only
  - (D) I and II
  - (E) II and III
6. In explaining what determines the amount of ozone in the stratosphere, the author describes natural processes that form
- (A) an interactive relationship
  - (B) a reductive system
  - (C) a linear progression
  - (D) a set of randomly occurring phenomena
  - (E) a set of sporadically recurring events

**Passage 23**

The evolution of intelligence among early large mammals of the grasslands was due in great measure to the interaction between two ecologically synchronized groups of animals - the hunting carnivores and the behaviors of the animals that they hunted. The interaction resulting  
5 from the differences between predator and prey led to a general improvement in brain functions; however certain components of intelligence were improved far more than others.

The kind of intelligence favored by the interplay of increasingly smarter catchers and increasingly keener escapers is defined by attention  
10 - that aspect of mind carrying consciousness forward from one moment to the next. It ranges from a passive, free-floating awareness to a highly focused, active fixation.

The range through these states is mediated by the arousal system, a network of tracts converging from sensory systems to integrating centers  
15 in the brain stem. From the more relaxed to the more vigorous levels, sensitivity to novelty is increased. The organism is more awake, more vigilant; this increased vigilance results in the apprehension of ever more subtle signals as the organism becomes more sensitive to its surroundings. The processes of arousal and concentration give attention  
20 its direction. Arousal is at first general, with a flooding of impulses in the brain stem; then gradually the activation is channeled. Thus begins concentration, the holding of consistent images. One meaning of intelligence is the way in which these images and other alertly searched information are used in the context of previous experience. Consciousness  
25 links past attention to the present and permits the integration of details with perceived ends and purposes.

The elements of intelligence and consciousness come together marvelously to produce different styles in predator and prey. Herbivores and carnivores develop different kinds of attention related to escaping or  
30 chasing. Although, in both kinds of animals, arousal stimulates the production of adrenaline and non-epinephrine by the adrenal glands, the effect in herbivores is primarily fear, whereas in carnivores the effect is primarily aggression. For both, arousal attunes the animal to what is ahead. Perhaps it does not experience forethought as we know it, but the  
35 animal does experience something like it. The predator is searchingly aggressive, inner-directed, tuned by the nervous system and the adrenal hormones, but aware in a sense closer to human consciousness than, say, a hungry lizard's instinctive snap at a passing beetle. Using past events as a framework, the large mammal predator is working out a relationship  
40 between movement and food, sensitive to possibilities in cold tracts and distant sounds and yesterday's unforgotten lessons. The herbivore prey is of a different mind. Its mood is of wariness rather than searching, and its attitude of general expectancy instead of anticipating are silk-thin veils of tranquillity over an explosive endocrine system.

1. The author is primarily concerned with
  - (A) disproving the view that herbivores are less intelligent than carnivores
  - (B) describing a relationship between animals' intelligence and their ecological roles
  - (C) establishing a direct link between early large mammals and their modern counterparts
  - (D) analyzing the ecological basis for the dominance of some carnivores over other carnivores
  - (E) demonstrating the importance of hormones in mental activity
2. The author refers to a hungry lizard (line 38) primarily in order to
  - (A) demonstrate the similarity between the hunting methods of mammals and those of non-mammals
  - (B) broaden the application of his argument by including an insectivore as an example



- (C) make a distinction between higher and lower levels of consciousness
  - (D) provide an additional illustration of the brutality characteristic of predators
  - (E) offer an objection to suggestions that all animals lack consciousness
3. It can be inferred from the passage that in animals less intelligent than the mammals discussed in the passage
- (A) past experience is less helpful in ensuring survival
  - (B) attention is more highly focused
  - (C) muscular coordination is less highly developed
  - (D) there is less need of competition among species
  - (E) environment is more important in establishing the proper ratio of prey to predator
4. The sensitivity described in lines 40-45 is most clearly an example of
- (A) "free-floating awareness" (line 11)
  - (B) "flooding of impulses in the brain stem" (lines 20-21)
  - (C) "the holding of consistent images" (line 22)
  - (D) "integration of details with perceived ends and purposes" (lines 25-26)
  - (E) "silk-thin veils of tranquillity" (lines 44-45)
5. The author's attitude toward the mammals discussed in the passage is best described as
- (A) superior and condescending
  - (B) lighthearted and jocular
  - (C) apologetic and conciliatory
  - (D) wistful and tender
  - (E) respectful and admiring
6. The author provides information that would answer which of the following questions?
- I. Why is an aroused herbivore usually fearful?
  - II. What are some of the degrees of attention in large mammals?
  - III. What occurs when the stimulus that causes arousal of a mammal is removed?
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
7. According to the passage, improvement in brain function among early large mammals resulted primarily from which of the following?
- (A) Interplay of predator and prey
  - (B) Persistence of free-floating awareness in animals of the grasslands
  - (C) gradual dominance of warm-blooded mammals over cold-blooded reptiles
  - (D) Interaction of early large mammals with less intelligent species
  - (E) Improvement of the capacity for memory among herbivores and carnivores
8. According to the passage, as the process of arousal in an organism continues, all of the following may occur EXCEPT:
- (A) the production of adrenaline
  - (B) the production of non-repinephrine
  - (C) a heightening of sensitivity to stimuli
  - (D) an increase in selectivity with respect to stimuli
  - (E) an expansion of the range of states mediated by the brain system

**Passage 24**

It has long been known that the rate of oxidative metabolism (the process that uses oxygen to convert food into energy) in any animal has a profound effect on its living patterns. The high metabolic rate of small animals, for example, gives them sustained power and activity per unit of weight, but at the cost of requiring constant consumption of food and water. Very large animals, with their relatively low metabolic rates, can survive well on a sporadic food supply, but can generate little metabolic energy per gram of body weight. If only oxidative metabolic rate is considered, therefore, one might assume that smaller, more active, animals could prey on larger ones, at least if they attacked in groups. Perhaps they could if it were not for anaerobic glycolysis, the great equalizer.

Anaerobic glycolysis is a process in which energy is produced without oxygen, through the breakdown of muscle glycogen into lactic acid and adenosine tri-phosphate (ATP), the energy provider. The amount of energy that can be produced anaerobically is a function of the amount of glycogen present - in all vertebrates about 0.5 percent of their muscles' wet weight. Thus the anaerobic energy reserves of a vertebrate are proportional to the size of the animal. If, for example, some predators had attacked a 100-ton dinosaur, normally torpid, the dinosaur would have been able to generate almost instantaneously, via anaerobic glycolysis, the energy of 3,000 humans at maximum oxidative metabolic energy production. This explains how a number of large species have managed to compete with their more active neighbors: the compensation for a low oxidative metabolic rate is glycolysis.

There are limitations, however, to this compensation. The glycogen reserves of any animal are good, at most, for only about two minutes at maximum effort, after which only the normal oxidative metabolic source of energy remains. With the conclusion of a burst of activity, the lactic acid level is high in the body fluids, leaving the large animal vulnerable to attack until the acid is reconverted, via oxidative metabolism, by the liver into glucose, which is then sent (in part) back to the muscles for glycogen resynthesis. During this process the enormous energy debt that the animal has run up through anaerobic glycolysis must be repaid, a debt that is proportionally much greater for the larger vertebrates than for the smaller ones. Whereas the tiny shrew can replace in minutes the glycogen used for maximum effort, for example, the gigantic dinosaur would have required more than three weeks. It might seem that this interminably long recovery time in a large vertebrate would prove a grave disadvantage for survival. Fortunately, muscle glycogen is used only when needed and even then only in whatever quantity is necessary. Only in times of panic or during mortal combat would the entire reserves be consumed.

1. The primary purpose of the passage is to
  - (A) refute a misconception about anaerobic glycolysis
  - (B) introduce a new hypothesis about anaerobic glycolysis
  - (C) describe the limitations of anaerobic glycolysis
  - (D) analyze the chemistry of anaerobic glycolysis and its similarity to oxidative metabolism
  - (E) explain anaerobic glycolysis and its effects on animal survival
2. According to the author, glycogen is crucial to the process of anaerobic glycolysis because glycogen
  - (A) increases the organism's need for ATP
  - (B) reduces the amount of ATP in the tissues
  - (C) is an inhibitor of the oxidative metabolic production of ATP
  - (D) ensures that the synthesis of ATP will occur speedily
  - (E) is the material from which ATP is derived
3. According to the author, a major limitation of anaerobic glycolysis is that it can
  - (A) produce in large animals more lactic acid than the liver can safely reconvert
  - (B) necessitate a dangerously long recovery period in large animals
  - (C) produce energy more slowly than it can be used by large animals
  - (D) consume all of the available glycogen regardless of need
  - (E) reduce significantly the rate at which energy is produced by oxidative metabolism

4. The passage suggests that the total anaerobic energy reserves of a vertebrate are proportional to the vertebrate's size because
- (A) larger vertebrates conserve more energy than smaller vertebrates
  - (B) larger vertebrates use less oxygen per unit weight than smaller vertebrates
  - (C) the ability of a vertebrate to consume food is a function of its size
  - (D) the amount of muscle tissue in a vertebrate is directly related to its size
  - (E) the size of a vertebrate is proportional to the quantity of energy it can utilize
5. The author suggests that, on the basis of energy production, a 100-ton dinosaur would have been markedly vulnerable to which of the following?
- I. Repeated attacks by a single smaller, more active adversary.
  - II. Sustained attack by numerous smaller, more active adversaries
  - III. An attack by an individual adversary of similar size
- (A) II only
  - (B) I and II only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II, and III
6. It can be inferred from the passage that the time required to replenish muscle glycogen following anaerobic glycolysis is determined by which of the following factors?
- I. Rate of oxidative metabolism
  - II. Quantity of lactic acid in the body fluids
  - III. Percentage of glucose that is returned to the muscles
- (A) I only
  - (B) III only
  - (C) I and II only
  - (D) I and III only
  - (E) I, II, and III
7. The author is most probably addressing which of the following audiences?
- (A) College students in an introductory course on animal physiology
  - (B) Historians of science investigating the discovery of anaerobic glycolysis
  - (C) Graduate students with specialized training in comparative anatomy
  - (D) Zoologists interested in prehistoric animals
  - (E) Biochemists doing research on oxidative metabolism
8. Which of the following best states the central idea of the passage?
- (A) The disadvantage of a low oxidative metabolic rate in large animals can be offset by their ability to convert substantial amounts of glycogen into energy.
  - (B) The most significant problem facing animals that have used anaerobic glycolysis for energy is the resynthesis of its by-product, glucose, into glycogen.
  - (C) The benefits to animals of anaerobic glycolysis are offset by the profound costs that must be paid.
  - (D) The major factor ensuring that a large animal will triumph over a smaller animal is the large animal's ability to produce energy via anaerobic glycolysis.
  - (E) The great differences that exist in metabolic rates between species of small animals and species of large animals can have important effects on the patterns of their activities.

**Passage 25**

The dark regions in the starry night sky are not pockets in the universe that are devoid of stars as had long been thought. Rather, they are dark because of interstellar dust that hides the stars behind it. Although its visual effect is so pronounced, dust is only a minor constituent of the material, extremely low in density, that lies between the stars. Dust accounts for about one percent of the total mass of interstellar matter. The rest is hydrogen and helium gas, with small amounts of other elements. The interstellar material, rather like terrestrial clouds, comes in all shapes and sizes. The average density of interstellar material in the vicinity of our Sun is 1,000 to 10,000 times less than the best terrestrial laboratory vacuum. It is only because of the enormous interstellar distances that so little material per unit of volume becomes so significant. Optical astronomy is most directly affected, for although interstellar gas is perfectly transparent, the dust is not.

1. According to the passage, which of the following is a direct perceptual consequence of interstellar dust?
  - (A) Some stars are rendered invisible to observers on Earth.
  - (B) Many visible stars are made to seem brighter than they really are.
  - (C) The presence of hydrogen and helium gas is revealed.
  - (D) The night sky appears dusty at all times to observers on Earth.
  - (E) The dust is conspicuously visible against a background of bright stars.
2. It can be inferred from the passage that the density of interstellar material is
  - (A) higher where distances between the stars are shorter
  - (B) equal to that of interstellar dust
  - (C) unusually low in the vicinity of our Sun
  - (D) independent of the incidence of gaseous components
  - (E) not homogeneous throughout interstellar space
3. It can be inferred from the passage that it is because space is so vast that
  - (A) little of the interstellar material in it seems substantial
  - (B) normal units of volume seem futile for measurement of density
  - (C) stars can be so far enough from Earth to be obscured even by very sparsely distributed matter
  - (D) interstellar gases can, for all practical purposes, be regarded as transparent
  - (E) optical astronomy would be of little use even if no interstellar dust existed

**Passage 26**

Currently, the paramount problem in the field of biomaterials, the science of replacing deceased tissue with human-made implants, is control over the interface, or surface, between implanted biomaterials and living tissues. The physical properties of most tissues can be matched by careful  
5 selection of raw materials: metals, ceramics, or several varieties of polymer materials. Even the requirement that biomaterials processed from these materials be nontoxic to host tissue can be met by techniques derived from studying the reactions of tissue cultures to biomaterials or from short-term implants. But achieving necessary matches in physical  
10 properties across interfaces between living and non-living matter requires knowledge of which molecules control the bonding of cells to each other – an area that we have not yet explored thoroughly. Although recent research has allowed us to stabilize the tissue-biomaterial interface by controlling either the chemical reactions or the microstructure of the  
15 biomaterials, our fundamental understanding of how implant devices adhere to tissues remains woefully incomplete.

1. According to the passage, the major problem currently facing scientists in the field of bio-materials is
  - (A) assessing and regulating the bonding between host tissue and implants
  - (B) controlling the transfer of potentially toxic materials across the interface of tissue and implant
  - (C) discovering new materials from which to construct implant devices
  - (D) deciding in what situations implants are needed
  - (E) determining the importance of short-term implants to long-term stability of tissue-implant interfaces
2. The passage suggests which of the following about the recent research mentioned in lines 12-16?
  - (A) It has solved one set of problems but has created another.
  - (B) It has concentrated on secondary concerns but has ignored primary concerns.
  - (C) It has ignored practical applications of biomaterial technology without providing a complete theoretical explanation of that improvement
  - (D) It has thoroughly investigated properties of biomaterials but has paid little attention to relevant characteristics of human tissue
  - (E) It has provided considerable information on short-term implant technology but little on long-term implant technology
3. The author's primary purpose is to
  - (A) answer a theoretical question in the field of biomaterials
  - (B) discuss the current state of technology in the field of biomaterials
  - (C) resolve a research dispute in the field of biomaterials
  - (D) predict an ethical crisis for biomaterials researchers
  - (E) suggest some practical benefits of biomaterial implants

**Passage 27**

Our visual perception depends on the reception of energy reflecting or radiating from that which we wish to perceive. If our eyes could receive and measure infinitely delicate sense-data, we could perceive the world with infinite precision. The natural limits of our eyes have, of course, been  
 5 extended by mechanical instruments; telescopes and microscopes, for example, expand our capabilities greatly. There is, however, an ultimate limit beyond which no instrument can take us; this limit is imposed by our inability to receive sense-data smaller than those conveyed by an individual quantum of energy. Since these quanta are believed to be  
 10 indivisible packages of energy and so cannot be further refined, we reach a point beyond which further resolution of the world is not possible. It is like a drawing a child might make by sticking indivisible discs of color onto a canvas.

We might think that we could avoid this limitation by using quanta  
 15 with extremely long wavelengths; such quanta would be sufficiently sensitive to convey extremely delicate sense-data. And these quanta would be useful, as long as we only wanted to measure energy, but a completely accurate perception of the world will depend also on the exact measurement of the lengths and positions of what we wish to perceive. For  
 20 this, quanta of extremely long wavelengths are useless. To measure a length accurately to within a millionth of an inch, we must have a measure graduated in millionths of an inch; a yardstick graduated in inches is useless. Quanta with a wavelength of one inch would be, in a sense, measures that are graduated in inches. Quanta of extremely long  
 25 wavelength are useless in measuring anything except extremely large dimensions.

Despite these difficulties, quanta have important theoretical implications for physics. It used to be supposed that, in the observation of nature, the universe could be divided into two distinct parts - a perceiving  
 30 subject and a perceived object. In physics, subject and object were supposed to be entirely distinct, so that a description of any part of the universe would be independent of the observer. The quantum theory, however, suggests otherwise, for every observation involves the passage of a complete quantum from the object to the subject, and it now appears that  
 35 this passage constitutes an important coupling between the observer and the observed. We can no longer make a sharp division between the two in an effort to observe nature objectively. Such an attempt at objectivity would distort the crucial interrelationship of the observer and the observed as parts of a single whole. But, even for scientists, it is only in the world of  
 40 atoms that this new development makes any appreciable difference in the explanation of observations.

1. The primary purpose of the passage is to
  - (A) discuss a problem that hinders precise perception of the world
  - (B) point out the inadequacies of accepted units of measurement
  - (C) criticize attempts to distinguish between perceiving subjects and perceived objects
  - (D) compare and contrast rival scientific hypotheses about how the world should be measured and observed
  - (E) suggest the limited function of sensory observation
2. According to the passage, quanta with an extremely long wavelength cannot be used to give complete information about the physical world because they
  - (A) exist independently of sense-data
  - (B) are graduated only in inches
  - (C) have an insignificant amount of energy
  - (D) cannot, with present-day instrument, be isolated from quanta of shorter wave-length
  - (E) provide an insufficiently precise means of measuring length and position

3. Which of the following describes a situation most analogous to the situation discussed in lines 6-9?
- (A) A mathematician can only solve problems the solution of which can be deduced from known axioms.
  - (B) An animal can respond to no command that is more complicated syntactically than any it has previously received.
  - (C) A viewer who has not learned, at least intuitively, the conventions of painting, cannot understand perspective in a drawing.
  - (D) A sensitized film will record no detail on a scale that is smaller than the grain of the film.
  - (E) A shadow cast on a screen by an opaque object will have a sharp edge only if the light source is small or very distant.
4. The author uses the analogy of the child's drawing (lines 12-13) primarily in order to
- (A) illustrate the ultimate limitation in the precision of sense-data conveyed by quanta
  - (B) show the sense of helplessness scientists feel in the face of significant observational problems
  - (C) anticipate the objections of those scientists who believe that no instrumental aid to observation is entirely reliable
  - (D) exemplify the similarities between packages of energy and varieties of color
  - (E) disparage those scientists who believe that measurement by means of quanta offers an accurate picture of the world
5. The author implies that making a sharp division between subject and object in physics is
- (A) possible in a measurement of an object's length and position, but not in a measurement of its energy
  - (B) still theoretically possible in the small-scale world of atoms and electrons
  - (C) possible in the case of observations involving the passage of a complete quantum
  - (D) no longer an entirely accurate way to describe observation of the universe
  - (E) a goal at which scientists still aim
6. The author's use of the phrase "in a sense" (line 23) implies which of the following?
- (A) Quanta of extremely long wavelength are essentially graduated in inches.
  - (B) Quanta of one-inch wavelength are not precisely analogous to yardsticks graduated in inches.
  - (C) Quanta of extremely long wavelength, in at least one respect, resemble quanta of shorter wavelength.
  - (D) Quanta of one-inch wavelength and quanta of extremely long wavelength do not differ only in their wavelengths
  - (E) Quanta of one-inch wavelength must be measured by different standards than quanta of extremely long wavelength.
7. According to the passage, the quantum theory can be distinguished from previous theories of physics by its
- (A) insistence on scrupulously precise mathematical formulations
  - (B) understanding of the inherent interrelationship of perceiver and perceived
  - (C) recognition of the need for sophisticated instruments of measurement
  - (D) emphasis on small-scale rather than on large-scale phenomena
  - (E) regard for philosophical issues as well as for strictly scientific ones

**Passage 28**

Designers have been interested for decades in the possibility of using ceramics in heat engines such as turbines and diesels. However, it was not until recently that the two prerequisites were present: thermal-shock-resistant structural ceramics sufficiently developed to be considered as engineering materials, and, equally important, computer capability sufficiently developed to handle the complex job of detailing stresses with the high degree of refinement required in brittle materials design.

Ceramics based on silicon carbide and silicon nitride have unique combination of properties that makes them very attractive to designers of vehicular engines, energy conversion systems, and industrial heat exchangers. In particular, they provide high strength at high temperatures, good thermal stress resistance, and excellent resistance to oxidation, corrosion, and erosion. This combination of properties can be used to increase the operating temperature or to reduce the heat lost to cooling in gas turbine, diesel and Stirling engines and in industrial heat exchangers, thereby yielding more power per unit of fuel. The low density of these ceramics may provide engine components of lower weight and inertia, which would translate into improved performance for conventional automotive engines. Recent estimates indicate that fuel savings of one-half-billion barrels of oil per year, amounting to \$ 17.5 billion at current prices, might be realized if ceramics were used in highway vehicles and industrial heat exchangers. Moreover, the universal abundance and inherent low cost of the elements silicon, carbon, and nitrogen contrast sharply with the increasingly short supply and increasingly high cost of critical metals - such as chromium, nickel, cobalt, and tungsten - that are used in high temperature alloys.

So far, I have made silicon carbide and silicon nitride ceramics sound like panaceas. If these materials have so many attractive properties, why are they not used operationally in today's engines, other energy conversion devices, and industrial heat exchangers? One answer is that ceramic materials are too brittle - but this alone is too simplistic an answer. All engineering design represents a trade-off in which (we hope) the best compromise in the use of materials and design emerges. The practice in engineering design to date has been to take advantage of the fact that metals relieve local overstresses by local yielding, simplifying the design process. The trade-off is that metals soften or melt and must be cooled for high temperature use. Management of the cooling fluid adds design complexity and weight, and drains power. Up to now, the compromise in design that have been required to use metals have had a net payoff. However, in either economic or actual physical terms, the end of this line of development is in sight. Further development of heat engines requires higher temperatures with reduced cooling and at acceptable costs. Thus, the materials-design trade-offs will soon favor ceramics.

1. The primary purpose of the passage is to
  - (A) pose a question
  - (B) defend a decision
  - (C) criticize a proposal
  - (D) resolve a controversy
  - (E) discuss an alternative
2. It can be inferred from the passage that the author would most likely agree with which of the following generalization about engineering design?
  - (A) When engineers attempt to simplify the design process, they frequently make trade-offs that result in damage to the environment.
  - (B) When engineers choose materials for particular design purposes, they are usually influenced both by the physical properties of the materials and by the cost of using those materials.
  - (C) Once engineers have developed the computer capability to design a machine using a particular



- material, the adoption of that material for that machine will usually follow.
- (D) In examining the design trade-offs that engineers have made, one can assume that an ideal use of materials has been achieved
- (E) Materials are not sufficiently developed to be considered as engineering materials until engineers have discovered how to take advantage of all the inherent physical properties of the materials
3. According to the passage, which of the following is a property of metals that is an advantage when metals are used in engines?
- (A) Low cost
- (B) Low weight
- (C) Local yielding
- (D) Resistance to erosion
- (E) Thermal-stress resistance
4. The author mentions "fuel savings of one-half billion barrels of oil per year, amounting to \$17.5 billion at current prices" most probably in order to
- (A) support the arguments that ceramics have a combination of properties that makes them very attractive
- (B) criticize the suggestion that low-density materials should be used in conventional automotive engines
- (C) defend the use of conventional automotive engines on the grounds that the use of ceramics will greatly increase the fuel consumption of such engines
- (D) imply that improving the performance of conventional automotive engines is less important than saving fuel in other highway vehicles and in industrial heat exchangers
- (E) suggest that current prices for oil are unusually high and that estimated fuel savings might therefore decrease in the future
5. It can be inferred from the passage that one of the impediments to using ceramics in turbines and diesels in the past was
- (A) an insufficient supply of the elements that compose silicon carbide and silicon nitride ceramics
- (B) the inability of designers to detail stresses in a very precise manner
- (C) the low density of silicon carbide and silicon nitride ceramics
- (D) the high temperature at which turbines and diesels operate
- (E) the design complexity that is required for reducing heat in engines
6. The statement that ceramics are too brittle to be used in engines is regarded by the author as an
- (A) illogical assertion
- (B) insufficiently complex explanation
- (C) erroneous description of the current use of ceramics
- (D) irrelevant analysis of the physical properties of ceramics
- (E) appropriate response to a straightforward question
7. It can be inferred from the passage that compared to engines that use metals, engines that use ceramics would require
- (A) less cooling
- (B) less refined stress analysis
- (C) more fuel
- (D) more protection from oxidation
- (E) higher operating temperatures
8. The passage provides the answer to which of the following questions?
- (A) What development in computer technology has enabled designers to do highly refined analysis of stresses?
- (B) How were thermal-shock-resistant structural ceramics developed?
- (C) How much fuel might be saved by using ceramics in highway vehicles and industrial exchangers?
- (D) Why does further development of heat engines require higher temperatures?
- (E) Why do silicon carbide and silicon nitride ceramics provide high strength at high temperatures?

**Passage 29**

The transfer of heat and water vapor from the ocean to the air above it depends on a disequilibrium at the interface of the water and the air. Within about a millimeter of the water, air temperature is close to that of the surface water, and the air is nearly saturated with water vapor. But the differences, however small, are crucial, and the disequilibrium is maintained by air near the surface mixing with air higher up, which is typically appreciably cooler and lower in water-vapor content. The air is mixed by means of turbulence that depends on the wind for its energy. As wind speed increases, so does turbulence, and thus the rate of heat and moisture transfer. Detailed understanding of this phenomenon awaits further study. An interacting - and complicating - phenomenon is wind-to-water transfer of momentum that occurs when waves are formed. When the wind makes waves, it transfers important amounts of energy - energy that is therefore not available to provide turbulence.

1. The primary purpose of the passage is to
  - (A) resolve a controversy
  - (B) describe a phenomenon
  - (C) outline a theory
  - (D) confirm research findings
  - (E) classify various observations
2. According to the passage, wind over the ocean generally does which of the following?
  - I. Causes relatively cool, dry air to come into proximity with the ocean surface.
  - II. Maintains a steady rate of heat and moisture transfer between the ocean and the air.
  - III. Causes frequent changes in the temperature of the water at the ocean's surface.
  - (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II and III
3. It can be inferred from the passage that the author regards current knowledge about heat and moisture transfer from the ocean to air as
  - (A) revolutionary
  - (B) inconsequential
  - (C) outdated
  - (D) derivative
  - (E) incomplete
4. The passage suggests that if on a certain day the wind were to decrease until there was no wind at all, which of the following would occur?
  - (A) The air closest to the ocean surface would become saturated with water vapor.
  - (B) The air closest to the ocean surface would be warmer than the water.
  - (C) The amount of moisture in the air closest to the ocean surface would decrease.
  - (D) The rate of heat and moisture transfer would increase.
  - (E) The air closest to the ocean would be at the same temperature as the air higher up.

**Passage 30**

A mysterious phenomenon is the ability of over-water migrants to travel on course. Birds, bees, and other species can keep track of time without any sensory cues from the outside world, and such “biological clocks” clearly contribute to their “compass sense.” For example, they can use the position  
 5 of the Sun or stars, along with the time of day, to find north. But compass sense alone cannot explain how birds navigate the ocean: after a flock traveling east is blown far south by a storm, it will assume the proper northeasterly course to compensate. Perhaps, some scientists thought, migrants determine their geographic position on Earth by celestial  
 10 navigation, almost as human navigators use stars and planets, but this would demand of the animals a fantastic map sense. Researchers now know that some species have a magnetic sense, which might allow migrants to determine their geographic location by detecting variations in the strength of the Earth’s magnetic field.

1. The main idea of the passage is that
  - (A) migration over land requires a simpler explanation than migration over water does
  - (B) the means by which animals migrate over water are complex and only partly understood
  - (C) the ability of migrant animals to keep track of time is related to their magnetic sense
  - (D) knowledge of geographic location is essential to migrants with little or no compass sense
  - (E) explanations of how animals migrate tend to replace, rather than build on, one another
  
2. It can be inferred from the passage that if the flock of birds described in lines 6-8 were navigating by compass sense alone, they would, after the storm, fly
  - (A) east
  - (B) north
  - (C) northwest
  - (D) south
  - (E) southeast
  
3. In maintaining that migrating animals would need “a fantastic map sense” (line 11) to determine their geographic position by celestial navigation, the author intends to express
  - (A) admiration for the ability of the migrants
  - (B) skepticism about celestial navigation as an explanation
  - (C) certainty that the phenomenon of migration will remain mysterious
  - (D) interest in a new method of accounting for over-water migration
  - (E) surprise that animals apparently navigate in much the same way that human beings do
  
4. Of the following descriptions of migrating animals, which most strongly suggests that the animals are depending on magnetic cues to orient themselves?
  - (A) Pigeons can properly readjust their course even when flying long distances through exceedingly dense fogs.
  - (B) Bisons are able to reach their destination by passing through a landscape that has been partially altered by a recent fire.
  - (C) Elephants are able to find grounds that some members of the herd have never seen before.
  - (D) Swallows are able to return to a given spot at the same time every year.
  - (E) Monarch butterflies coming from different parts of North America are able to arrive at the same location each winter.

## Chapter 5

### ANSWERS & ANALYSIS

Much of what is contained in a comprehension passage will be new to you. The passage may contain words whose meanings you do not know. It may also contain technical as well as Latin or Greek words.

Do not feel discouraged if you are not able to absorb all that is contained in a passage during your first reading. ***This is the case with almost every candidate taking the test.***

Do not waste time reading the passage twice or thrice. Let your first reading itself be at an appropriate pace so that you get a general idea of what the passage is all about.

As we have illustrated with the three examples in pages 6 to 15, by adopting the special techniques for answering each type of question, you can get the correct answer every time *even without understanding every detail that is stated in the entire passage.*

So, what you should do as soon as you see a new question on the computer screen is ***to determine what type of question it is*** among the ten categories we have identified in Chapter 1, and then *use the appropriate technique* for answering it..

*We shall again recall the techniques for answering each type for your benefit.*

#### ***I. 'Specific Fact' question***

For answering a 'Specific Fact' question (which usually starts with the phrase "According to the passage", "The passage says" or "According to the author"), first *identify the key word or phrase* in that question.

Then quickly scan the passage *to locate where the key word or phrase occurs.*

Scroll the passage so that the sentence in which the key word or phrase occurs appears *in the middle of the computer screen.*

Now read the sentences that are visible to you, and you will find the answer there, *but in a slightly different phraseology* from what is mentioned in the question.

Thus, a 'Specific Fact' question can be answered *with reference to a very small portion of the passage.*

#### ***II. 'Inference' question***

For answering an 'Inference' question (which usually starts with the phrase "It can be inferred from the passage" or "The passage suggests") also, follow the same procedure as above *by first identifying the key word or phrase, locating where it occurs in the given passage, and then scrolling the passage till the relevant sentence comes to the middle of the computer screen.*

The correct answer can then be got by *a simple logical extension* of what you can read on the computer screen.

(In the case of both types of questions above, if the question itself *contains the line number*, your task is made *easier* because *you do not have to strain yourself to locate the key word or phrase.*)

#### ***III. 'Negative or Exception' question***

For answering a 'Negative or Exception' question, identify *the key word or phrase in each of the answer choices*, and *locate where they occur in the passage.*

You will find that *only four* of them occur in the passage. The choice *that does not occur anywhere in the passage* is the correct answer.

#### ***IV. 'Roman Numerals' question***

For answering a 'Roman Numerals' question, identify the key word or phrase *in each of the sentences* defined by the numerals I, II and III, and *locate where the word or phrase occurs in the passage.*

The validity or otherwise of the sentence can then be determined from *the information available in the neighbourhood of the key word or phrase.*

#### ***V. 'Main Idea' question***

For answering a 'Main Idea' question (which usually starts with the phrase, "In this passage, the author is mainly concerned with ...", "The primary purpose of the author is to ...", "The passage primarily focuses on ...", "Which of the following summarizes the author's main point?", or "What is the most appropriate title to the passage?"), *look for a hint in the first two sentences of the passage.*

If the passage consists of more than one paragraph, *identify the idea which recurs in the first sentence of each paragraph.*

The wrong choices under a 'Main Idea' question will usually contain statements which are true, but *which are touched upon in just a single sentence in the passage*. You must reject such choices in favour of an idea *which occurs repeatedly in the passage*.

You should straightaway reject choices *which do not even mention the main person or a main idea* which is repeatedly referred to in the passage.

#### VI. 'Tone of the Passage' question

Remember that the answer choices to a 'Tone of the Passage' question usually contain single words or phrases, and *you should reject abusive or highly critical words as inappropriate*.

#### VII. 'Next Sentence' question

A 'Next Sentence' question should be answered by *referring to the last two sentences of the given passage*, and identifying the choice which has a *logical continuity* with the information contained in them.

#### VIII. 'Audience or Source' question

A comprehension passage is invariably addressed to *the general reader who does not have much prior knowledge of what is contained in them*. So, the correct answer to an 'Audience' question is invariably 'a general reader' or 'a student', and never 'an expert in the field'.

Similarly, the correct answer to a 'Source' question is usually "an article in a magazine", "an essay describing ....", and never "a research paper submitted for a doctoral degree".

#### IX. 'Technique' and X. 'Extrapolation' questions

The "Technique" and "Extrapolation" questions are those *which do not have direct answers within the passage*, and expect you to use *your analytical skills* to spot the correct choice.

These questions should be answered by examining each answer choice and eliminating those which are inappropriate.

**Remember that, in all cases, you should read each of the answer choices, even if you feel that (A) itself is the correct choice.**

### Chapter 1: 'Humanities' Passages

#### Passage 1

Answers: 1. C 2. A 3. D 4. A

{The difficult words in this passage are *blend* (combine); *portraiture* (art of painting the picture of a real person); *genre* (style of painting scenes from real or rustic life); *acquaintances* (friends); *spontaneity* (naturalness); *depiction* (description); *aesthetic* (artistic); and *edification* (enlightenment)}

1. (*This is a 'specific fact' question, and the key phrase is 'modern viewers'.*) The phrase 'modern viewers' does not occur explicitly in the passage, but lines 9-11 state, "we no longer require artists to provide ideal images of humanity *for our moral edification*". So, according to the passage, modern viewers are not likely to look for *moral* lessons from artistic paintings. So, (C) is the answer.

2. (*This is an 'inference' question, and the key phrases are 'Le Nain brothers' and 'George de La Tour'.*) The author says in lines 6-8 that the Le Nain brothers and Georges de La Tour, two other artists who had also specialized in genre paintings, were *largely ignored* during their lifetimes, but have a *present high standing*. So, if Duparc's artistic reputation were to follow theirs, the present day assessment of her works would *give her works also a high status*. So, (A) is the answer.

3. (*This is an 'inference' question, and the key phrase is 'genre painting'.*) Lines 3-5 describe genre painting as *depicting everyday activities of acquaintances including members of the humblest class*. Among the given choices, it is only (D) which conforms to this description, and is the answer.

4. (*This is an 'inference' question, and the key phrase is 'judgements of artistic works'.*) After mentioning that Le Nain brothers and Georges de La Tour, who had chosen themes involving members of the humblest classes for their paintings, were *largely ignored* during their period, the author states, "Their *present high standing* is due to a *different, more democratic political climate* ...." This implies that the author believes that aes-

thetic judgements can be influenced by the political beliefs of those making the judgement. Thus, (A) is the answer.

### Passage 2

Answers: 1.E 2. D 3. C

{The difficult words in this passage are *otherworldly* (strange); *mystify* (puzzle); *ambiguity* (doubt); *accentuate* (emphasize); *gloss over* (disregard); *transcend* (go beyond); *compassionate* (sympathetic) and *rationality* (logically)}

1. (Because of the use of the verb 'suggests', this is an 'inference' question, the key phrase being 'optimistic about the ability of human to ....') The penultimate sentence says that comic artists 'are willing to assume the human risks of acting rationally'. Obviously, they are optimistic that it is possible for human beings to act rationally. So, (E) is the answer.

(You may be tempted to make the mistake of choosing (C) because the words 'good' and 'evil' are found in the first sentence. But what the first sentence means is that, for the comic artist, whatever differs from good is not evil or, in other words, he does not distinguish clearly between good and evil, because even something which is evil may contain some good.)

2. (This is also an 'inference' question, the key phrase being 'the author admires great comic artists primarily for') Every sentence in the passage is in praise of comic artist. But, in the sixth line, the author says, "... the moment of transcendence in great comic art is born out of the conviction that we are human, though we try to be gods". The admiration of the author for great comic artists is therefore based primarily on their insistence on (or conviction about) the truth of the human condition. So, (D) is the answer.

You can easily see that none of the other choices is mentioned as attributes of great comic artists.

3. (This is a 'Technique' question, and should be answered by examining each answer choice and eliminating the inappropriate ones.) Since there is no 'prediction' regarding comic art in the passage, (A) is wrong.

Each sentence in the passage stands by itself, and describes a fact about comic art and comic artists. The passage does not therefore form a 'list of inferences' based on a set of facts. So, (B) is also wrong.

(D) is wrong because no specific examples of comic artists are enumerated in the passage.

(E) is wrong because all the ideas in the passage are general in nature, and there is no transition of ideas from the specific to the general.

(C) is the best choice, because the passage contains a series of assertions about one general subject, namely, great comic art.

### Passage 3

Answers: 1. A 2. D 3. A 4. E 5. B 6. C 7. D

{The difficult words in this passage are *juxtaposing* (placing side by side); *persisted* (continued); *syntax* (rules of construction); *chronological* (strictly according to time sequence); *eclectic* (varied); *pretensions* (claims) and *ludicrous* (laughable)}

1. (This is a 'main idea' question, and we should identify the theme which runs through the entire passage.) Almost each sentence in the passage refers to David Griffith. So, choices (B) and (D), which do not even mention his name, can first be eliminated.

It is only the second sentence which talks of the state of American cinema before the advent of Griffith. So, a description of "the state of the American cinema before the advent of Griffith" cannot be considered to be the primary purpose of the passage. So, (C) is also wrong.

The emphasis in the passage is on the various techniques introduced by Griffith in presenting the stories or subject matters that he had chosen, and not on the choice of the themes by him. So, (E) is not the answer.

After stating in the very first sentence that the artistic maturing of the cinema was the single-handed achievement of Griffith, almost every sentence of the passage talks of his contribution to the growth of cinema. The passage is then wound up with the statement that his film *Judith of Bethulia* provoked endless debate and discussion and gave a new intellectual respectability to the cinema. So, we can say that the primary purpose of the passage is to discuss the importance of Griffith in the development of the cinema. So, (A) is the answer.

2. (This is an 'exception' question, and we must look for the key phrases in each of the choices within the passage, and eliminate those which are found in it.) The first sentence of para 3 says that Griffith achieved

dramatic effects by means of *creative editing*. So, (A) is not the answer

The last two sentences of the first paragraph talk of Griffith's *innovative use of the camera*. So, (B) is not the answer.

The third sentence says that Griffith was the first director to lay emphasis on *scene composition*. So, (C) is not the answer.

The third sentence starts with the statement, "From the beginning of his career as a director, Griffith employed composition", and the subsequent lines give instances of his *innovative directorial touches such as using the flashback, splitting an event into fragments and recording each from the most suitable camera position, juxtaposing images and varying the speed and rhythm of their presentation etc.* So, (E) is not the answer.

What is *not* mentioned anywhere in the passage is any innovation by him in the field of *sound editing*. (The obvious reason is that, during the period that Griffith was active (namely the first two decades of the twentieth century), cinema consisted of *only silent films*.) So, (D) is the answer.

3. (This is an 'inference' question, the key phrase being 'running time of a film before 1910') The first sentence of the last para says that, when Griffith made *Enoch Arden* in 1911, the conventional length of a cinema was *one reel*. The third sentence of this para says that his *Judith of Bethulia* had "an unprecedented length of *four reels, or one hour's running time*". We can infer from these statements that the normal running time of a cinema till 1910 was *just about 15 minutes*. So, (A) is the answer.

4. (This is an exception question, and must be answered by trying to locate the key phrase in each answer choice within the passage, and eliminate those which are found in it.) "Treatment of social issues" is mentioned in the penultimate line of para 4. So, (A) is not the answer.

"Adaptations from Tennyson" is mentioned in the fourth line of para 4. So, (B) is not the answer.

"The flashback' and other editing techniques are mentioned in lines 7-10 of para 3. So, (C) is not the answer.

Griffith's *inspiration from Victorian paintings* is mentioned in line 6 of para 1. So, (D) is not the answer.

The last sentence of para 3 talks of the influence of Victorian *novels*, and *not* of Victorian *theater*, on Griffith's work. So, it is (E) which is *not* mentioned in the passage, and is the answer.

5. (This is a 'Roman Numerals' question, and must be answered by examining each of the sentences enumerated.) Regarding Victorian novels, the passage merely says (last two lines of para 3), "In thus exploiting fully the possibilities of editing, Griffith transposed devices of the Victorian novel to film, and gave film *mastery of time as well as space*". This implies that the contribution of Victorian novels to films was in the nature of new *techniques of editing*. The statement in I that Victorian novels became "popular sources for film subjects" is therefore *not* suggested by the passage.

The passage is entirely about experimentations by Griffith, and does not talk of *other* film directors' experimentations with cinematic syntax, or of the *audience reaction* to them. So, II is *not* suggested by the information in the passage.

The passage first says (lines 2-5), "Before Griffith, photograph in dramatic films consisted of *little more than placing the actors before a stationary camera* and showing them in full length as they would have appeared on stage." The rest of the passage enumerates the many ways in which Griffith *overcame this limitation*, and "gave film a mastery of time as well as space" (last two lines of para 3). So, III is repeatedly suggested by the passage.

So, (B) is the answer.

6. (This is an 'exception' question, and consists of five choices, with four of which the author will not agree. We should identify these four, and select the fifth through elimination.) While the passage talks of the many achievements of Griffith, it does not mention anywhere that he was in *any great hurry* to try out new ideas. So, (A) is *not* substantiated in the passage.

The entire passage is about Griffith's emphasis on new *directorial techniques*, and it does not mention anywhere the *ability of the actors*. So, (B) is also *not* substantiated in the passage.

A major part of the first paragraph is about how Griffith used *the full potentialities of the camera* "to produce novel dramatic effects". So, he would certainly agree with the statement that *the camera must be considered an integral and active element in the creation of a film*. So, (C) is the answer.

Since the passage does not talk of *portraying human problems*, (D) is *not* substantiated in the passage.

The passage implies that Griffith laid *equal emphasis* on the composition of scenes and the subsequent details of their editing. So, (E) is *not* substantiated in the passage.

7. (*This is a 'tone' question, which should be answered through a process of elimination of the wrong choices.*) The sentence that refers to photography before the advent of Griffith is, "Before Griffith, photography in dramatic films consisted of *little more than placing the actors before a stationary camera and showing them in full length as they would have appeared on stage.*" This cannot be described as "sympathetic", "nostalgic" (meaning *remembering with fondness*), or "amused", or "hostile". It can be described as "condescending", meaning "assuming an air of superiority". So, (D) is the answer.

#### Passage 4

Answers: 1. B 2. E 3. C 4. D 5. A 6. B 7. C

{The difficult words in this passage are: *sculptor* (one who makes three-dimensional carvings in stones, wood, marbles etc); *sculpture* (carvings in stones, wood, marbles etc); *Neolithic times* (Advanced Stone Age); *prerogative* (preserve, monopoly); *prominence* (fame); *distinctive* (unique); *aesthetic* (artistic); *hoarded* (collected and stored) and *connotations* (symbolic meanings). *While the name 'Louis' would normally refer to a male, 'Louise' is a female name*)

1. (*This is a 'main idea' question.*) The first sentence itself starts with reference to Louise Nevelson, identifying her as the greatest sculptor of the twentieth century. Then, after explaining why women had not taken to sculpting till recent times, the passage describes Nevelson's artistic work in detail in the last three paragraphs. So, the main focus of the passage is *on the work of a particular artist*. So, (B) is the answer. (Note that none of the choices has 'Nevelson' by name, but this is the only choice which refers to her *at least indirectly*.)

The other choices are general in nature, and do not make even an implied reference to Louise Nevelson, *whose work is the subject matter of a major part of the passage*. So, none of them can even remotely be considered to be the *main focus* of the passage.

2. (*This is an 'exception' question, and we should eliminate four of the five choices by examining each of them before arriving at the correct answer.*) Lines 9-11 state, "It has been in the United States, especially since the decades of the fifties and sixties, that women sculptors have shown *the greatest originality and creative power*", and lines 13-17 state, "It was only after 1945 - when New York was rapidly becoming the art capital of the world - that major sculpture was produced in the United States. *Some of the best was the work of women*". From these limited references to US women sculptors, we cannot conclude that, since 1945, women sculptors in the United States *have produced more sculpture than have men sculptors*. So, (A) is *not* the answer.

Merely from the statement in lines 14-17 that, "It was only after 1945 - when New York was becoming the art capital of the world - that *major sculpture was produced in the United States*", we cannot conclude that, since 1950, sculpture produced in the United States has been *the most original and creative sculpture produced anywhere in the world*. So, (B) is not the answer.

Since Europe is not mentioned anywhere in the passage, (C) cannot be inferred from the passage.

(D) is in fact a *factually wrong* statement, because the author says in lines 10-11 that it was only since the decades of the fifties and sixties that *women sculptors* in the United States *have shown the greatest originality and creative power*. So, the question of *many women sculptors* being ignored by critics prior to 1945 does not arise. So, (D) is the answer.

From the information in lines 12-17 that, while there had been a few talented sculptors in the United States prior to 1945, *it was only after 1945 that major sculpture was produced in the United States*, we can infer that there was *very little major sculpture* produced by men or women sculptures in the United States *prior to 1945*. So, (E) is the answer.

3. (*This is an inference question, with 'Hilton Kramer' as the key phrase and particular reference to lines 20-21. For answering questions of this type, which asks you to identify the purpose of a particular statement, you should always refer to the previous and succeeding sentences.*) In the previous sentence, the author says that, in the eyes of many critics, Louise Nevelson is the most original female artists alive today. He then quotes Hilton Kramer, calling him a famous and influential critic, as saying, "For myself, I think Ms. Nevelson succeeds where the painters often fail". So, we can infer that Hilton Kramer is quoted by the author *to illustrate the critical acclaim* of Ms. Nevelson's work. It is (C) which says this, and is the answer.

From the very next sentence which says that Nevelson's works have been compared to the *Cubist* constructions of Picasso and the *Surrealistic* objects of Miro, we can infer that Nevelson's works were *impressionistic* and *not realistic*. So, (A) is wrong.

Kramer's quotation compares Nevelson's *sculptures* not with *sculptures of others*, but with the works of *painters*. We cannot infer from this that Nevelson's sculptures had *unique qualities as sculpture*. Moreover, the



next two sentences state that Nevelson's work was comparable with those of Picasso, Miro and Merzbau, and that *she had been influenced by all of these and by African sculpture*. So, (B) is wrong.

Kramer's quotation is about the *works of Ms. Nevelson*, and *not* about paintings and sculptures *in general*. So, (D) is not the answer.

Since Kramer's quotation gives *no reason* for the prominence of women sculptors since 1950, (E) is not the answer.

4. (*This is also an 'exception' question which should be answered through a process of elimination of the wrong choices. The key is the quotation in lines 28-29.*) In lines 28-29, Nevelson is quoted as saying, "I have always wanted to show to the world that *art is everywhere*, except that *it has to pass through a creative mind*". The next sentence says, "Using mostly discarded wooden objects like packing crates, broken pieces of furniture, and abandoned architectural ornaments, she assembles architectural constructions of great beauty and power". It is in producing exquisite works of art from commonplace objects in which people would not normally see any artistic possibilities, that she illustrates her theory that "*art is everywhere and it only has to pass through a creative mind*". So, (D) is the answer.

The *use of wood rather than metal or stone* does not by itself prove the statement that "art is everywhere". So, (A) is not the answer.

*Painting pictures and framing them in boxes* also do not prove that "art is everywhere". So, (B) is wrong.

Similarly, *not making preliminary sketches before starting on her sculpting* does not prove that "art is everywhere". So, (C) is also wrong.

The fact that Nevelson's sculptures *do not convey symbolic or religious meanings* is not illustrative of the statement that "art is everywhere". So, (E) is also wrong.

5. (*This is an 'exception' question, and we should spot the correct answer by a process of elimination of the wrong choices.*) From the sentence in lines 38-40, "Although she has denied any symbolic or religious intent in her works, their three-dimensional grandeur and even their titles, such as *Sky Cathedral* and *Night Cathedral*, suggest such connotations", we can infer that the author believes that Nevelson's sculptures *suggest religious and symbolic meanings*. So, (A) itself is the answer.

Even the very first sentence says that Louise Nevelson is considered to be the greatest twentieth-century sculptor. So, we cannot say that the author believes that her works *do not have qualities characteristic of sculpture*. Even his statement in the last sentence, "*some of her most ambitious works are closer to architecture than to sculpture*" does not mean that *none* of her works has qualities which are characteristic of sculpture. So, (B) is wrong.

While the statement that her works are *mysterious and awe-inspiring* is corroborated in lines 46-47, the statement that they are *not beautiful* is *wrong*, because the author states in line 42 that she assembles architectural constructions of "*great beauty and power*". So, (C) is wrong.

(D) is wrong because the first two sentences of the last paragraph state that Nevelson's works have been influenced by *non-American* artists such as Picasso, Miro and Schwitters, and also by *African sculpture*.

From the statement in the same sentence that she had been influenced by *Native American* and *pre-Columbian* art, we can say that (E) is also wrong.

6. (*This is an 'inference' question, with the key word being 'remarkable', and we should spot the answer from the sentence in which it occurs and the sentence following it.*) The author says in the first sentence itself that Louis Nevelson being regarded as the greatest sculptor is all the more remarkable because "*the greatest resistance to women artists has been, until recently, in the field of sculpture*". So, (B) is the ready answer.

(A) is a *factually wrong* statement because, in the entire passage, the author *agrees with the assessment* that Nevelson is the greatest sculptor of the twentieth century, and gives reasons for this assessment.

None of the other choices is even factually correct.

7. (*This is an 'exception' question, and must be answered by eliminating the incorrect choices.*) The author does not imply anywhere that Nevelson's sculptors are all meant for *display outside*. On the contrary, he says, "She places them in boxes ...." (Line 35). So, (A) is wrong.

In line 34, the author says that Nevelson paints her works black or, *more rarely*, white or gold. So, the statement that she *often* paints them *in several colours* is wrong. So, (B) is not the answer.

From the statement in the last sentence, "In some ways, her most ambitious works are *closer to architecture* than to traditional sculpture", we can infer that *some of her sculptures are very large*. So, (C) is the answer.

The last paragraph says that Nevelson "glues and nails objects together". So, her works are *not hand-carved* by her. So, (D) is wrong.

While the author says in the last paragraph that Nevelson often uses discarded wooden objects, he does not say that her works are *built around a central wooden object*. So, (E) cannot be inferred from the passage, and is not the answer.

### Passage 5

Answers: 1. E 2. D 3. B 4. D 5. A 6. E 7. B

{The difficult words in this passage are *flying in the face of* (contradicting, disproving); *transcends* (goes beyond); *coherent* (logical); *relegated* (downgraded); *aesthetic* (artistic); *stifling* (restrictive); and *confines* (limits)}

1. (*This is a 'specific fact' question for which the key phrase is 'relating diverse phenomenon to one another'.*) This phrase occurs in lines 10-11, the full sentence being '*innovative science produces new propositions in terms of which diverse phenomena can be related to one another in more coherent ways*'. Among the choices, it is '*highly creative scientific activity*' that means the same as '*innovative science*'. So, (E) is the answer.

2. (*This is an 'inference' question, in which the key words are 'Beethoven' and 'strikingly original'.*) The phrase '*strikingly original*' occurs in the very last line of the passage. The answer to this question must therefore be found from the information available in the last two sentences.

Since this sentence does not say that Beethoven felt himself as a *competitor* to his predecessors or that Beethoven was *the first composer in the history of music to exploit limits*, (A) is wrong.

Since it is *not* said that Beethoven '*fundamentally changed*' the musical forms of his predecessors, (B) is also wrong.

(C) is wrong because the sentence does *not* say that Beethoven *copied* the melodies of his predecessors and *interwove them to produce new ones*.

Since Beethoven's accomplishment, of exploiting limits which had not been touched upon by his predecessors, was *not an illusion but a fact*, (E) is also wrong.

(D) is what neatly summarizes the last sentence in the passage (because the phrase "*strikingly original*" has the same meaning as "*highly innovative*"), and is the answer.

3. (*This is a 'specific fact' question for which the key phrase is 'operas of Florentine Camerata'.*) It is the third sentence of para 2 which refers to Florentine Camerata. It says "Because they embody a new principle of organisation, some musical works, such as the operas of the Florentine Camerata, are of *signal historical importance, but few listeners or musicologists would include these among the great works of music*". Among the choices, it is (B) which neatly paraphrases this sentence, and is the answer.

4. (*This is an 'exception' question, and must be answered through a process of elimination of the wrong choices.*) The very first sentence in the passage answers (A) in the affirmative. So, (A) is not the answer.

The last sentence answers (B) in the affirmative. So, (B) can be discarded.

Lines 9-11 in the second para state, "Mozart's *The Marriage of Figaro* is surely among the masterpieces of music even though its modest innovations are confined to extending existing means'. So, this work is not considered by the author as '*a creative work that transcended limits*'. So, (C) can be answered in the negative, and is not the answer.

The author of the article himself claims what is stated in (E). So, (E) is not the answer.

It is (D) which *cannot be answered* from the passage, because the only composers other than Monteverdi when the author mentions are Florentine Camerata (whose works embody new principles of organisation *but are not of high aesthetic value*), Mozart (whose work has high aesthetic value *but cannot be considered to have new principles of organisation*) and Beethoven (whose works are highly aesthetic, but *who also did not introduce any new principles but only extended existing ones*). So, (D) is the answer.

5. (*This is a 'tone' question, and must be answered through a process of elimination of the wrong choices.*) The author says that the statement that *all highly creative activity transcends limits* may be applicable to science but not to arts, and he substantiates his view by giving specific instances in the field of music. So he regards the idea that all highly creative artistic activity transcends limits *with deep skepticism* (meaning *suspicion*) So, (A) is the answer.

(B) is wrong because the author does not display *a sense of anger* anywhere in the essay.

(C) is wrong because if he had been *indifferent* to the idea, he would not have written *an essay to disprove it*.

There is no indication of *amusement* or *contempt* (*derision*) about this idea in the passage, and so (D) and (E) are also wrong.

6. (This is an 'inference' question, with 'an innovative scientific contribution' as the key phrase.) The fifth sentence of para 1, in which the phrase 'innovative science' occurs, states, "Innovative science produces new propositions in terms of which diverse phenomena can be related to one another in more coherent ways. Such phenomena as a brilliant diamond or a nesting bird are relegated to the role of *data*, serving as the means for *formulating or testing a new theory*". Among the choices, it is the phrase 'introduces a new valid generalization' which means the same as 'formulating a new theory'. So, (E) is the answer.

(A) and (B) are not at all mentioned in the passage.

(C) is in fact *contradictory* to what is stated in the sentence quoted above.

(D) is wrong because, according to the author, innovative scientific contribution is one which produces a new *theory* - not a new *fact*.

7. (This is a 'next sentence' question, and must be answered by extending the logic of the last two sentences of the passage.) The purpose of the second paragraph is to give some instances of musical composers who *either established a new principle of organisation or transcended existing limits to create an aesthetic piece*. So (A), which gives an instance of a musician *who did not do so*, would *not* find a place in the next paragraph.

Monteverdi is cited by the author as the only composer who *transcended limits and simultaneously produced artistic masterpieces*. Each of the others cited by him later had *only one* of the two accomplishments. So, (C) cannot be a logical sentence to follow the passage.

Since the second paragraph relates only to the field of *music*, it is not likely that the author will introduce *literature* in the next paragraph. So, (D) is wrong.

Since the second paragraph does not talk of *contemporaneous reaction* to the works of the composers cited, (E) is also not an appropriate finale to this passage.

By elimination, (B) should be the answer, and appropriately so, because it *continues the same trend of thought and argument of the second paragraph*.

### Passage 6

Answers: 1. A 2. A 3. A 4. E 5. B 6. A 7. C

{The difficult words in this passage are *proponents* (supporters); *titanic* (very big); *improvisation* (innovation on the spot); *modal* (relating to the church); *dogged* (persistent); *prodigious* (amazingly large); *jettison* (throw out); *stacked* (placed one over the other); *motif* (theme); *modulated* (altered in pitch and tone); *debuted* (performed for the first time); *watershed* (turning point); *astounding* (very surprising); *brooding* (thinking moodily); *giddy* (intoxicating) and *raucous* (hoarse; harsh)}

1. (This is a 'primary purpose' question and must be answered on the basis of information that is available in a *major part of the passage*, and not just in one or two sentences or paragraphs.) Starting from the fourth sentence, the entire passage is about John Coltrane (who is described as a 'titanic figure' in jazz music *whose influence on all types of jazz was immeasurable*), how he fused all forms of jazz in his style, and how he improvised on each one of them. So, the primary purpose of the passage can best be described as 'discussing the place of John Coltrane in the world of jazz, and describing his musical explorations'. So, (A) is the answer.

(B) and (E) do not even mention the name of Coltrane, and can straightaway be eliminated for that reason alone.

The influence of modal, Indian and African melodies as well as bebop on Coltrane's music is discussed only in para 2. So, (C) cannot be considered to be the *primary purpose* of the passage.

The influence of Coltrane's music on the rock musicians is mentioned *only in the last paragraph*. So, (D) cannot be considered to be the *main purpose* of the passage.

2. (This is an 'inference' question for which the key phrase is 'My Favorite Things'.) 'My Favorite Things' has been referred to in the last four lines of the fourth paragraph, and we must look for the answer to this question here. These lines state, "My Favourite Things is another kind of watershed. Here Coltrane played the soprano saxophone, *an instrument seldom used by jazz musicians*. Musically, the results were astounding. With the soprano's piping sound, ideas *that had sounded dark and brooding* acquired a feeling of *giddy fantasy*'. This implies that, if some other traditional instrument such as tenor had been played instead of soprano, the result would have been 'dark and brooding'. 'Somber' is another word for 'dark and brooding'. So, (A) is the answer.

3. (This is a 'technique' question, and must be answered through a process of elimination of the inappropriate choices.) The fourth paragraph starts with the sentence, "Three recordings illustrate Coltrane's *energizing explorations*", which is a restatement of the thesis mentioned in the first sentence of para 2, "Coltrane himself probably believed that the only essential characteristic of jazz was *improvisation*, the one constant in his journey from bebop to open-ended improvisations on modal, Indian and African melodies". This paragraph later names them as *Kind of Blue*, *Giant Steps*, and *My Favorite Things*, each as an illustration of such an energizing exploration. So, (A) is the answer.

(B) is wrong, because what is stated in the first sentence of para 4 is not a new thesis, nor do the three examples given later imply a need to correct a thesis referred to earlier in the passage.

(C) is wrong, because the three illustrations in para 4 are not ranked in any particular order of importance of their support to the thesis restated in the first sentence of the para.

(D) is wrong, because the three examples are not opposites of one another, but equally illustrate the thesis stated in the first sentence.

(E) is wrong for the same reason as (D), because the examples given are not dissimilar.

4. (This is an 'exception' question, and must be answered through a process of elimination of the wrong choices.) The third line in para 2 refers to Coltrane's 'improvisations on modal, Indian and African melodies'. So, (A) is mentioned in the passage, and is not the answer.

The third line of para 4 says that Coltrane played 'surging, lengthy solos', while the fifth line says that, on *Giant Steps*, Coltrane debuted as leader. So, (B) is mentioned in the passage, and is not the answer.

From the statement in lines 4-5 of para 2, "this dogged student and prodigious technician who insisted on spending hours each day practicing scales from theory books", we can infer (C) and therefore eliminate it.

The last four lines of the fourth paragraph gives the information, "Here Coltrane played the soprano saxophone, an instrument seldom used by jazz musicians". So, (D) is mentioned in the passage, and is not the answer.

From the statement in line 21-22, "he was never able to jettison completely the influence of bebop", we can choose (E) as the answer.

5. (This is an 'inference' question, the key phrase being 'Ornette Coleman'.) Lines 34-38 state, "Here he (Coltrane) played surging, lengthy solos built largely around repeated motifs - an organizing principle unlike that of free jazz saxophone player Ornette Coleman, who modulated or altered melodies in his solos". So, the purpose of the author in mentioning Ornette Coleman is to compare Coltrane's solo with the work of another jazz artist. So, (B) is the answer.

You can easily discard all other choices as unsuitable.

6. (This is a 'specific fact' question, the key phrase being 'major difference between Coltrane and other jazz musicians'.) The passage starts with the sentence, "Proponents of different jazz styles have always argued that their predecessors' musical style did not include essential characteristics that define jazz as jazz", and then illustrates it by saying, "The 1940's swing was belittled by beboppers of the 1950's, who were themselves attacked by free jazzers of the 1960's. The neoboppers of the 1980's and 1990's attacked almost everybody else". We learn thereby that other jazz musicians tended to classify themselves rigidly as swingers, beboppers, free jazzers and neoboppers.

Lines 6-7 say, "In his musical journey he (Coltrane) drew from all those styles".

Thus a major difference between Coltrane and other jazz musicians, according to the passage, was the degree to which Coltrane's music encompasses all of jazz. So, (A) is the answer.

7. (This is a 'tone' question, and should be answered by examining each of the choices.) The entire passage is about John Coltrane, whom the author describes as a 'titanic figure' (line 5), and says "His influence on all types of jazz was immeasurable" (lines 7-8). Later he calls him a 'prodigious technician' and describes the musical result of his using soprano saxophone in *My Favorite Things* as 'astounding'. So, the passage can best be characterized as one of 'enthusiastic praise'. So, (C) is the answer.

You can easily discard each of the other choices as inappropriate.

### Passage 7

Answers: 1. C 2. D 3. E 4. E 5. B 6. A 7. C 8. D

{The difficult words in this passage are: *denigrated* (belittled); *espoused by* (advocated by); *connoisseurs* (knowledgeable critics); *obscure* (unknown); *chiaroscuro* (the pattern of light and dark predominating over col-

our); *contemporaries* (those living at the same time); *frescoes* (paintings on damp surface of wall); and *scrupulous* (careful)}

1. (*This is a variation of the 'main purpose' question, and must be answered by identifying the theme that runs through the entire passage.*) The very first sentence says, "The history of the response to the work of the artist Sandro Botticelli suggests that widespread appreciation by critics is a *relatively recent phenomenon*". It then gives specific information how, Vasari in 1550 and other critics later, were highly critical of his work which remained outside of accepted taste, pleasing neither amateur observers nor connoisseurs (lines 7-9). The second paragraph gives detailed reasons why Botticelli was unpopular with critics. The last paragraph says that, since 1850, there has been a total reassessment of his work, and 'his reputation began to grow'. The last sentence makes an emphatic statement that "the twentieth century has come to appreciate Botticelli's achievements". Thus the first two paragraphs deal elaborately with the *denigration* and the last paragraph with the *appreciation* of Botticelli. So, the most appropriate title to the passage from among the choices is "Sandro Botticelli: From Denigration to Appreciation". So, (C) is the answer.

2. (*This is an 'inference' question, the key phrase of which is 'the author would be likely to find most beneficial about a study of an artist'.*) The correct answer to this question has to be got from the last three lines of the passage, in which the author says that the twentieth century has come to appreciate Botticelli because of Horne's emphasis 'on the way a talented artist *reflects a tradition, yet moves beyond that tradition, an emphasis that is crucial to any study of art*'. Thus, analysis of an artist's work in terms of both *traditional characteristics* and *unique achievements* is what the author would find most beneficial in the study of an artist. So, (D) is the answer.

3. (*This is an inference question, the key word in which is 'Vasari'*) Vasari is mentioned only in the second sentence, which implies that Vasari could include Botticelli in his history of art only *with difficulty* ('fitted awkwardly in this evolutionary scheme of the history of art'). This was the reason why Vasari was *not enthusiastic about* ('or expressed an unease with') Botticelli's work. Vasari would obviously have been *more enthusiastic* if Botticelli's work could have been included more readily in his discussion of art history. So, (E) is the answer.

4. (*This is an inference question, the answer to which has to be found in the neighbourhood of the lines 10-11 referred to.*) After stating that Botticelli's art pleased neither amateurs nor experts, the author goes on to say that many of his *best* paintings, however, *remained hidden away in obscure churches and private homes*. He obviously implies that, *if these had been made available* to the public, their reaction *might have been different*. So, (E) is the correct answer.

5. (*This is a 'Roman Numerals' question, and the key phrases are 'academic art historians' and the 'anti-academic art historians'.*) The answer is to be found from lines 5-7, where these phrases occur. These lines state that the anti-academic historians 'rejected *many of the standards of evaluation* espoused by their predecessors'. The disagreement between these two groups of art historians must therefore be on 'standards of evaluation of art', which means the same as 'the criteria by which art should be judged'. So, II is true.

I is not true because these lines imply that anti-academic historians also did not think highly of Botticelli's work.

III is not mentioned in the passage.

So, (B) is the answer.

6. (*This is a 'specific fact' question, with 'Botticelli's relation to classical art' as the key phrase.*) The phrase 'classical art' occurs in lines 19-23 and we must look for the answer here. Lines 21-23 state, "Indeed it is paradoxical that a *painter of large-scale classical subjects* adopted a style that was *only slightly similar* to that of classical art". This means that Botticelli made use of classical *subject matter* but not of *classical style*. It is (A) which states this, and is the answer.

7. (*This is also a 'specific fact' question, the key phrases being 'Horne', 'Sistine frescoes' and 'Florentine art'*) Horne's assessment of the Sistine frescoes in comparison with Florentine art is mentioned in lines 29-36, the latter part of which says, "Horne argued that Botticelli did not treat these qualities as ends in themselves - rather, that he emphasized clear depiction of a story, a unique achievement and one *that made the traditional Florentine qualities less central*". Among the choices, it is (C) which paraphrases this, and is the answer.

8. (*This is an 'inference' question, with 'Horne began to study Botticelli's work in 1908' as the key phrase.*) Horne and 1908 are both mentioned in the sentences contained in line 31, and we must look for the answer here.

The relevant sentence implies that the Sistine frescoes were *subjected to a thorough investigation for the first time* by Horne in 1908, implying no such investigation had been made before that year. So, (D) is the answer.

### Passage 8

Answers: 1. C 2. D 3. A 4. C 5. A 6. B 7. E 8. D 9. B

{The difficult words in this passage are *distinctive* (individualistic); *pretentious* (not genuine); *gentility* (high social status); *reminiscent of* (making one remember) and *incredibly* (unbelievably)}

1. (*This is a 'specific fact' question, in which the key phrase is 'American films of the 1930's and 1940's.'*) In the second sentence, the author says, "*Like most American films of this period* (namely the 1930's and 40's), the dialogue comedy used *visual image primarily to support talk*". We can therefore infer that a characteristic of most American films of this period was that *visual images were employed mainly to assist the dialogue*. So, (C) is the ready answer.

2. (*This is also a 'specific fact' question, with 'Robert Riskin' as the key phrase.*) Robert Riskin is referred to in line 9, and we must look for the answer to this question in this neighbourhood. The relevant sentence is, "In the shaping of dialogue comedies .... sometimes a *clever script writer such as Robert Riskin* or Charles Lederer even went so far as to overwhelm a weak director". We learn from this sentence that Robert Riskin was a *writer of dialogue for dialogue comedies*. So, (D) is the answer.

You can easily see that none of the other choices is substantiated in the passage.

3. (*This is an 'inference' question, the key phrase being 'critics mentioned in line 12.'*) Line 12 mentions only one view of the critics - that *the director is a film's prime mover*. Obviously, these critics most probably believe that a *scriptwriter is not the main influence on a film*. So, (A) itself is the answer.

You can easily see that none of the other choices follows from line 20.

In fact, (C) even *contradicts* the view of the critics.

4. (*This is also a 'specific fact' question, with 'Preston Sturges' as the key phrase.*) Preston Sturges is mentioned for the first time in the last paragraph, the first sentence of which states, 'No director made better dialogue comedies than Preston Sturges, primarily because *no one wrote better comic dialogue*'. It follows that Sturges was *both a writer and a director* of dialogue comedies. So, (C) is the answer.

5. (*This is a 'main idea' question relating to only the second paragraph.*) Each sentence in para 2 mentions one characteristic of 'the best of the dialogue comedies'. So, (A) is the answer.

6. (*This is a 'tone' question relating to a limited portion of the passage, with 'values mentioned in line 23' as the critical phrase.*) To answer this question, we have to read the entire sentence in which the word 'values' occurs. This sentence is, "And in shedding the clichés, these comedies frequently implied a *more human and sensible system of emotional relationship and moral values*". The adjectives *more human* and *sensible* imply that the author is *supportive* of these. Among the choices, 'approving', or (B), is the appropriate answer.

7. (*This is an 'inference' question, in which the key phrase is 'rebellion against the Hollywood studio system'.*) The phrase 'rebellion against the rigid Hollywood studio system' occurs in the first sentence of para 2, and we must look for the answer to this question here. The full sentence reads, "Underlying the best of the dialogue comedies was usually a *subtle and sly* rebellion against the rigid Hollywood studio system". "Subtle" means "hidden", and "sly" means "clever". So, the rebellion against Hollywood studio system that can be observed in these films was *not glaring or clumsy*. So, the most appropriate choice is (E).

8. (*This is an 'inference' question, in which the key phrase is 'American film comedies that predate dialogue comedies'.*) The only place where film comedies of a period prior to the dialogue comedies are mentioned is in lines 23-24. These lines state that, in these film comedies, "the sting of *sincerity* exploded the balloon of pretentious gentility", meaning that these comedies *discredited* insincere (or *affected*) social behavior. So, the correct choice is (D).

9. (*This is also an 'inference' question in which the key phrase is 'two shot used in Preston Sturges's films'.*) The phrase 'two shot' is found in line 33 in connection with the various cinematographic techniques used by Sturges. The full sentence says that Sturges' photographic technique relied on the *conventional American film*

*two-shot* to capture the faces of characters. This means that this technique was *not an invention of Sturges*, but had been *regularly used by other directors even earlier*. So, (B) is the answer.

### Passage 9

Answers: 1. D 2. B 3. A

{The difficult words in this passage are *beyond the pale of* (outside the scope of); *anesthesia* (numbness) and *freemasonry* (commonalty)}

1. (*This is a 'main idea' question and, in a short passage like this, the hint will be available in the very first sentence.*) Having asked the question in the very first sentence, 'What are the basic elements in the laughable?', the author proceeds to list them one by one in the subsequent parts of the passage. So, "pointing out some general characteristics of that which is comic", or (D), is the best choice.

It is easy to see that the other choices are all totally inappropriate.

2. (*This is an 'inference' question, with no particular key word or phrase. We should therefore arrive at the answer by examining each choice and eliminating those which are inappropriate.*) The statements that 'laughter has no greater foe than emotion' and that 'comic demands a momentary anesthesia (or numbing) of the heart' imply that, if you pity a person (which means that you are emotional towards him), you cannot, at the same time, laugh at him. So, (B) is the statement that is best supported by the passage.

(A) is incorrect since the author nowhere rules out our capacity to laugh at an ugly person.

(C) appears to be a plausible answer, but you should note that, while the author is *assertive* in his opinions 'the laughter has no greater foe than emotion' and 'the comic demands a momentary anesthesia of the heart', he merely mentions that laughter *appears to need an echo*. Thus (C) is not as good an inference as (B) from the passage.

(D) is wrong since the object of a joke can certainly be angry at those laughing at him and will not be indifferent to them.

(E) does not convey any sensible meaning.

3. (*This is an 'extrapolation' question, which must be answered through a process of elimination of the inappropriate choices.*) In lines 4-5, the author asserts that we can laugh at something which is *not strictly human* only by *detecting some human attitude or human expression in it*. Among the choices, it is only (A) which refers to a non-human object having the attributes of a human being, and is the answer.

(B) refers to a wave which, by itself, does not have the attributes of a human being.

All the other choices refer to human beings in different circumstances, and do not contain an analogy to an animal referred to in line 4-5.

### Passage 10

Answers: 1. B 2. E 3. D 4. C 5. A 6. D 7. E

{The difficult words in this passage are *nag and carp* (criticise and complain); *strata* (levels); *militant* (quarrelsome); *catastrophe* (great tragedy); *bruised* (injured); *gritty* (bold); *perpetual* (continuous; never-ending); *doggedly* (with determination); *polemicist* (one who indulges in unnecessary quarrels); *prolix* (lengthy) and *leavening* (mixture)}

1. (*This is a 'Roman Numeral' question, in which the key phrase is 'Lessing's feminism'. We should therefore evaluate each of the numbered phrases with reference to her feminism.*) The only reference to males in the passage is in the third sentence of para 3, which says that 'her men are *rather poor creatures* compared to her bruised but gritty women'. We cannot deduce from this phrase 'a lack of concern for the well-being of males'. I is therefore *not* true.

Since there is no mention of 'women in professional life' anywhere in the passage, II is also not true.

From the latter part of the first sentence in the second paragraph, "she insisted that relations between the sexes were difficult and unequal", we can deduce III.

So the answer is (B).

2. (*This is an 'inference' question which has to be answered through a process of elimination of the wrong choices.*) There is no reference in the passage to Lessing's *humor*, or *scholarship*, or *candidness* (meaning frankness). So, (A), (C) and (D) can straightaway be ruled out first.

An idealist is one who lives in the hope that his ideals can be achieved. But the author says “one does not feel that Lessing sees any hope but *only perpetual deadlock*” (last sentence of para 3). Therefore, his portrayal of Lessing is *not* that of an *idealist*. So, (B) is wrong.

In two places in the passage, he mentions her *moralism*. (E) is therefore the best answer among the given choices.

3. (This is a ‘specific fact’ question, the key phrase being ‘Lessing’s concern with warning society of its deterioration’.) In lines 6-8, the author says, “The *moralist* in Lessing, struggling with the very skilled writer, at times has made her writing *prolix, clogged, slow*”. This means that, in warning society of its deterioration, Lessing allows her prose to become labored (meaning clogged and slow) and verbose (meaning *prolix*). So, (D) is the answer.

The author implies that there is recurrence of the same *messages* in her writings, not the same *situations*. Thus, (A) is wrong.

There is no mention in the passage of the *interests of readers* of Lessing. Thus, (B) is also not appropriate.

The third sentence of para 4 says that the critics have ‘the problem of distinguishing between her message and her craftsmanship’. This does not mean that they concentrate on her craftsmanship rather than on her message. So, (C) is also wrong.

4. (This is an ‘inference’ question, in which the key phrase is ‘the author admires writers’.) The author is generally appreciative of Lessing except in the last three sentences where he finds fault with her for being ‘prolix, cloggy and slow’. He compares her with other better writers who ‘in an *economical* page or two can make us feel our dilemmas *more piercingly* than she does in a *leisurely fictional experience*’. What he would admire in a writer is therefore *a forceful and brief presentation of messages*. So, (C) (“whose insights are *succinctly* and *trenchantly* developed”) is the closest approximation to this preference of the author, and is the answer.

5. (This is an ‘inference’ question in which the key phrase is ‘communism as an ideology’.) The only place where the word ‘communist’ occurs is in the fifth line of para 2, and we must look for the answer here. This sentence says, “She has been a communist, *but then moved on from a belief in simplistic political solutions* ...” So, the author equates communism with an ideology that looks for ‘*simplistic political solutions*’. Among the choices, ‘*fails to accommodate the complexities of society*’, or (A), is what paraphrases this idea neatly, and is the answer.

6. (This is a ‘tone’ question which should be answered by examining each of the choices and selecting the most appropriate.) As we have pointed out above, the author is *generally appreciative* of the message and moralism of Lessing, but *finds fault with her verbosity*. Among the choices, it is ‘qualified admiration’ that sums up his attitude: *admiration* for her *moralism, message and productivity*, which however is *qualified* by his *criticism of her verbosity*. So, (D) is the answer.

His attitude towards her cannot be described as one of ‘serious reservation’, or ‘enthusiastic endorsement’, or ‘unresolved ambivalence’.

In the latter part of the first paragraph (“at the peak of her writing career, which is where Lessing now stands, the years of solid achievement command maximum respect”) and in the first sentence of para 4 (“Certainly Lessing has earned the respect accorded to a writer of her stature and productivity”), the author showers unreserved and open praise of Lessing, and there is nothing ‘grudging’ about this praise. So, (B) is not correct.

7. (This is an ‘inference’ question in which the key phrase is ‘change in the opinion regarding Lessing’s feminism’.) The change in public opinion regarding her feminism is mentioned in the sentence “She has been accused of being a feminist, and then accused by feminists of *not being feminist enough*”. Reading this with the previous sentence “She was *once considered very daring and very militant*’ in regard to relations between the sexes, we can infer that *the period when she was considered a feminist* coincided with the period *when she was also considered militant*. It is therefore the *downtrend of the militancy in her views* that had resulted in the change of public opinion on her feminism. The most appropriate paraphrase of the italicized phrase is “her views no longer seem as revolutionary as they once did”. So, (E) is the answer.

(A) is relevant for *her transition from a communist sympathiser*, and *not for her feminism*.

There is no indication in the passage that Lessing has adopted a ‘more conservative position on the role and rights of women’, because the present complaint against her is not that she has *ceased* to be a feminist, but that she is *not feminist enough*. So, (B) is not the answer.

(C) means that there has been no change in her writings at all, but yet *feminists of today* disapprove of her writings whereas the feminists of the past had found them relevant to their concerns. Obviously, this is not borne out by the passage.



'The social and psychological freedom of women' is not mentioned or indicated in the passage at all, and therefore (D) is also not appropriate.

### Passage 11

Answers: 1. B 2. E 3. D 4. C

{The difficult words in this passage are *scrupulous* (careful); *prerequisite* (precondition); *components* (parts); *discerning* (carefully identifying) and *accrue* (add up)}

1. (This is a 'specific fact' question, with "New Critics" and "a novelist's ideas" as the key phrases.) The third sentence says "A novelist's ideas were now significant mainly as components of his or her writing technique". By substituting synonyms of the words in this sentence, it can be rewritten as "A novelist's ideas were now important primarily as aspects of his writing style". This is what is stated in (B), which is the answer.

2. (This is an 'inference' question, with "D. H. Lawrence" as the key phrase.) D. H. Lawrence is mentioned in the last sentence, which says, "One novelist who benefited from this new emphasis (by New Critics) on text was D. H. Lawrence, whose work was rescued from hostile critics who had attacked it as mere ideology". It is (E) which paraphrases this neatly, and is the answer.

3. (This is an 'inference' question for which the key phrases are "New Critics" and "isolated symbol hunting".) The phrase "isolated symbol hunting" occurs in the penultimate sentence which reads, "This permitted a more complete understanding of the symbol to emerge than that which could be discovered through isolated symbol hunting". This implies that, according to the New Critics, isolated symbol hunting provided *only an incomplete understanding of a symbol*. Among the choices, it is (D) ("oversimplify the meaning of the symbol") which is closest in meaning to this phrase, and is the answer.

4. (This is an 'inference question' in which the key phrase is "biographical information in literary criticism".) The word "biographical" appears only in the third sentence, and this reads, "In practice, this meant a new emphasis in the reading of fiction on scrupulous textual analysis as a prerequisite for biographical and ideological comment". Among the choices, it is (C) which paraphrases this, and is the answer.

### Passage 12

Answers: 1. A 2. B 3. C 4. D 5. A 6. E 7. C

{The difficult words in this passage are *distortion* (misrepresentation); *perforce* (necessarily) and *dialect* (slang)}

1. (This is a 'specific fact' question, the key phrase being "most turn-of-the-century black poets".) The turn-of-the-century Black poets are referred to in the first sentence of para 4 and we should look for the answer here. This sentence reads, "At the turn of the century, by contrast, most Black poets generally wrote in the conventional manner of the age". The phrase among the choices which best paraphrases this is "They wrote in ways that did not challenge accepted literary practice". So, (A) is the answer.

2. (This is also a 'specific fact' question, the key phrase being "Black poets in the 1920's".) This phrase occurs in the first sentence of para 3, and we should look for the answer in its neighbourhood. The next sentence says, "They asked whether they should only write about Black experience for a Black audience ...". So, the issue facing them was whether they should write exclusively about and for Blacks. So, (B) is the answer.

3. (This is an inference question, with the key phrase being "Black poets of the 1910's and 1920's".) This phrase occurs in the beginning of para 2. The author says that the distinctions that literary historians make between 'conservative' and 'experimental' poets will be of little significance in a discussion of Black poets of this era, because "Black poets were not battling over old or new styles; rather, one accomplished poet was ready to welcome another, whatever his or her styles, for what mattered was racial pride" (Lines 18-20). What we can infer from this is that the Black poets in these two decades were "fundamentally united by a sense of racial achievement despite differences in poetic style". So, (C) is the answer.

4. (This is an 'inference' question for which the lead is given in the question itself in the form of line numbers 35-37.) The previous two lines state that the refusal of Black poets at the turn of the century to write only about

racial subjects *had both positive and negative consequences*. It is in this context that the author quotes Sterling Brown who pointed out the *negative consequence* (or *effect*), “They refused to look into their hearts and write”. Later he says (in the last two lines of the passage) that they “*consequently produced not very memorable poems about vague topics*”. Thus, the purpose of the author’s quoting Sterling Brown is to point out the effects of the Black poets’ decision not to write about racial subjects. So, (D) is the answer.

5. (This is an ‘inference’ question in which the key phrase is ‘majority of Black poets at the turn of the century’.) This phrase occurs in the first sentence of para 4, which reads, “At the turn of the century, most Black poets generally wrote in the conventional manner of the age, and expressed noble, *if vague*, emotions in their poetry. Those poets were *not unusually gifted*”. Among the choices, ‘unexciting’ (A) is what expresses the last sentiment, and is the answer.

6. (This is an ‘inference’ question in which the key phrase is ‘poets tending to produce better poems’.) Note that, while the passage is mostly about Black poets, it is only the last sentence that talks of *poets in general*, including Black and White poets. It says, “They (White poets of the period) *too often turned from their own experience*, and *consequently produced not very memorable poems about vague topics*”. So, we can infer that, in the author’s view, poets tend to produce better poems *when they write from their personal experience*. So, (E) is the answer.

7. (This is a ‘tone’ question, with ‘classification as a technique in literary history’ as the key phrase.) The word ‘classification’ occurs in the very sentence of the passage in which the author says, “The making of classifications by literary historians can be *a somewhat risky enterprise*”. Among the choices, it is ‘wary’, meaning ‘cautious’ that best expresses this attitude of the author. So, (C) is the answer.

### Passage 13

Answers: 1. D 2. C 3. C 4. D

{The difficult words in the passage are *crucial* (important, critical); *allusion* (indirect reference); *metaphysical* (philosophical); *articulate* (express in words); *disjunctions* (separations, discontinuities) and *inhere* (remain inside)}

1. (This is a ‘main idea’ question and, in a short passage like this, we should look for the hint in the very first sentence.) The first sentence states that the two novels *Frankenstein* and *Wuthering Heights* treat women *very differently*. In the first 8 lines, the author mentions other *differences* between the two novels. In the 8th line he says, “Nevertheless these two novels are alike in several crucial ways”, and then enumerates the similarities between them. So, among the choices, ‘compare and contrast the two novels’ (D) is the most appropriate choice.

(A) is not correct since there is neither a *controversial interpretation* nor its *defence* in the passage. The *sources of responses to the two novels* are not mentioned anywhere, and so (B) is also not correct.

As stated earlier, the first ten lines mention the broad *differences* between the two novels, but the latter half of the passage explains their *common features*. Therefore the main purpose of the author cannot be (C).

The passage is too short for us to come to the conclusion that its main purpose is *to criticise and evaluate* the two novels. So, (E) is incorrect.

2. (This is a ‘specific fact’ question, in which the key phrase is ‘the difference between *Frankenstein* and *Wuthering Heights*’.) From the second sentence of para 1 and the first sentence of para 2, we can readily state that the two novels portrayed *men’s role in the development of their plots differently*. It is (C) which paraphrases this, and is the answer.

3. (This is an ‘inference’ question in which the key phrase is ‘evidentiary narrative technique’.) The ‘evidentiary narrative technique’ is mentioned in the very last sentence of the passage. This, according to the author, consists of two parts. - (i) *disjunctions* (meaning *discontinuities or inconsistencies*) in the manner in which the same event is perceived by different characters, and (ii) *tensions* that are inherent in the relationship between the novelist’s real intentions and the events described by her. Once you understand the meaning of the last sentence in this manner, the answer (C) is obvious.

4. (This is a ‘specific fact’ question in which the key phrase is ‘plots of *Wuthering Heights* and *Frankenstein*’.) The *common features* of the plots of the two novels are described after line 8, and we must look for the answer to this question *in the second half of the passage*. ‘Mystery’ is mentioned in line 9, and ‘irony’ is mentioned in lines

14 and 15. So, (D) is the answer.

Though 'tension' is mentioned as a common characteristic of both the novels, (B) has to be discarded because the other word 'heroism' in it is not emphasized in *Wuthering Heights*.

### Passage 14

Answers: 1. A 2. C 3. E 4. B

{The difficult words in the first passage are *chronology* (arrangement according to dates); *set ideas* (pre-conceived ideas); *cumulative* (total)}

1. (*This is a 'main purpose' question. In a short passage like this, we should get the hint from the very first sentence.*) The first sentence introduces Vinaver theory (which holds that Malory's eight romances, which were once thought to be fundamentally unified, were in fact eight independent works), and all the subsequent sentences evaluate this theory. So, the purpose of the passage is to discuss the validity of a theory (or hypothesis). So, (A) is the answer.

None of the other choices even mentions a theory or a hypothesis, and each of them can be discarded for that reason alone.

2. (*This is a 'Roman Numerals' question, and we should test the validity of each numbered phrase for arriving at the answer.*) The author first describes the Vinaver theory about Malory's eight romances - namely, that they are eight *independent* works. Having said that, he adds that "nevertheless.... *one cannot avoid the conclusion* that the eight romances are *only one work* ...." He further adds that though he may agree with the *Vinaver theory itself*, he will be inclined to *reject its implications*, namely, "that the romances may be *taken in any order*, that they have *no cumulative effect* and that they are ". This means that, in the author's view, "the romances must be *taken in a particular order*, that they *have a cumulative effect* and that they are not to be considered as *totally separate* works". It can therefore be inferred that the author thinks that there are *meaningful links* among the eight romances, and that their overall unity is more important than their *chronology*. Thus I and III are true.

II does not follow from the passage.

So, (C) is the answer.

3. (*This is an 'inference' question.*) From the phrase "after lengthy consideration of the theory's *refined* but *legitimate* observation ....." in lines 7-9, we can say that the author concedes that Vinaver theory is *subtle* (refined) and *valid* (legitimate). So, (E) is the answer.

4. (*This is an 'inference' question.*) From the fourth sentence "Part of this (disagreeable) response (to Vinaver's theory) was the natural reaction *to the disturbance of set ideas* (about Malory's works)", we can choose (B) as the answer.

### Passage 15

Answers: 1. C 2. B 3. A 4. C 5. E 6. A 7. E

{The difficult words in this passage are *tranquil* (peaceful); *disconcerting* (puzzling); *egocentric* (self-centered); *of a piece* (similar); *culmination* (climax); *dogmatic* (authoritative); *buoyant* (enthusiastic); *pessimism* (negativism); *cynicism* (defeatism); *yearning* (eagerly seeking); *canons* (rules) and *ordained* (imposed)}

1. (*This is a 'tone' question, and must be answered through a process of elimination of the wrong choices.*) The 'cynicism' of Tolstoi is mentioned by the author in line 19, but she says that even this cynicism arose out of 'the restless depths of an independent spirit yearning to get at the truth of its experience'. This *cannot* be considered to be *deprecating* the novelist. (A) is therefore wrong.

(B) is *factually incorrect* since, in lines 29-30, the author implies that, in Tolstoi's work, the 'artificial and genuine' were evenly matched.

The statements "he means what he says" (lines 7-8); 'his identity with life is so complete as to make us forget he is an artist' (lines 9-10), and "Truth remained his hero" (line 21) show that *the author admires Tolstoi's sincerity*. So, (C) is the answer.

Lines 14-20 show that the author considers the fundamental change ('conversion') in Tolstoi's work (reflecting an *inconsistency* in him) *fully justified*. Therefore, (D) is wrong.

The fact that "Tolstoi reversed all preconceptions, and in every respect he overthrew the system" (lines 40-

42) show that *Tolstoi was against orthodoxy* and certainly was not devoted to it. Thus, (E) is wrong.

2. (*This is a 'specific fact' question.*) This question asks us to paraphrase the first four lines. The statement "Masterpieces are great works of art and are dumb" means that *great works of art are silent*. "They have a tranquil aspect like the very products of nature" means that they are *as calm or silent as natural objects*. You can easily see that it is only choice (B) which contains this meaning (The phrase "they do not explain themselves to us" means that *they are silent*.)

(A) is wrong, since 'a later age' is not at all referred to in these lines.

Since 'uniqueness' is not mentioned here, (C) is also wrong.

Since 'orderliness' is not mentioned in these lines, (D) is also wrong.

What Flaubert says is that masterpieces are *similar to products of nature*. He doesn't say that they *represent* them. Moreover, large animals and mountains cannot be considered to be 'forces' of nature.

Thus, (E) is also wrong.

3. (*This is a 'specific fact' question which has 'quotation of Bayley' as the key phrase.*) In lines 11-12, Bayley is quoted as saying, "Tolstoi identifies himself with life and this identification is so complete that we forget that he is an artist. He is the center of his work". Earlier, in line 7, he is quoted as saying 'For Tolstoi, *the world is as he sees it*'. The second of these means that Tolstoi *observed life* and the first of these means that, while writing his novels, *he exhibited no distance between himself and the life as he portrayed*. (A) is what summarizes this idea, and is the answer.

(B) is not mentioned anywhere in the first para, and is wrong.

The adjectives used by Bayley of Tolstoi's qualities are 'overpowering' (line 5) and 'impressive' (line 7). It would therefore be wrong to say that Bayley considered that Tolstoi's works had 'limitations'. So, (C) is wrong.

The phrase, "Tolstoi made a casual assumption that the world is as he sees it" cannot be paraphrased as, "Tolstoi works casually and makes unwarranted assumptions". In fact, the adjectives 'vast', 'unfathomable' and 'majesty' attributed to Tolstoi's epic novel *War and Peace* in lines 3-4 show that Tolstoi *had taken tremendous pains* in writing the novel, and did not take it 'casually'. Thus (D) is incorrect.

(E) is *factually incorrect*, since what Bayley says is that Tolstoi's work is extremely simple, to the extent that *its simplicity is overpowering*. Thus (E) is also wrong.

4. (*This is a 'specific fact' question, for which the key phrase is 'Tolstoi's conversion'.*) This phrase occurs in the second sentence of para 2, which says "The famous conversion of his middle years .... *was a culmination of his earlier spiritual life*, not a departure from it". Among the choices, it is 'the natural outcome of his earlier beliefs' that paraphrases the italicized phrase. So, (C) is the answer.

5. (*This is a 'specific fact' question in which the key phrase is 'artistic values of his time'.*) Though this phrase does not occur in the passage, its synonym '*established canons of art*' occurs in line 25, and we should look for the answer to this question in this region. The next sentence says, "Tolstoi *reversed* all preconceptions". Line 33 says that, in Tolstoi's work, '*knowledge gained from observation* was pitted against assertions of borrowed faiths'. Combining these two statements, we can say that Tolstoi 'upset the artistic values of his time in order to be faithful to his experience'. So, (E) is the answer.

You can easily see that none of the other choices is substantiated in the passage.

6. (*This is an inference question, the key phrase being 'War and Peace'.*) The phrase 'War and Peace' occurs in line 3 and in line 18. The information about it in line 3 does not support any of the answer choices. From lines 16-20, we learn that the *fundamental change* in Tolstoi was from (a) *epic narrative to dogmatic parable*, (b) *a joyous, buoyant attitude to pessimism and cynicism*, and (c) from *War and Peace* to *The Kreuzer Sonata*. This means that *War and Peace* was written by Tolstoi *before* he underwent the change, while the *Kreuzer Sonata* was written by him *after* the change had manifested. Therefore *War and Peace* must have belonged to an *earlier period of Tolstoi's work*. So, (A) is the answer.

7. (*This is a 'specific answer' question, in which the key phrase is 'magical simplicity' of Tolstoi.*) The first two lines of para 3 say that, in Tolstoi's work, *the artificial and the genuine* (or *the pretentious and the natural*) are *always exhibited in dramatic opposition*. Line 34 says that Tolstoi's *magical simplicity* is a *product of these tensions*. What these sentences together mean is that Tolstoi's magical simplicity lies 'partly in *his attempt to represent the natural in opposition to the pretentious*'. So, (E) is the answer.

You can see that none of the other choices is implied by the information in the last two paragraphs.

## Passage 16

Answers: 1. E 2. A 3. D 4. B 5. C 6. E 7. B

{The difficult words in this passage are *intense* (strong); *provocative* (challenging); *reverie* (daydream); *intricate* (complicated); *cavalier* (haughty; arrogant); *impinge on* (react with); *antipathy* (hatred); *satiric* (ironical); *philanthropic* (charitable); *coherent* (logical); *bear witness* (see) and *root and branch* (completely) and polemic (*bitter controversy*)}

1. (*This is a 'main idea' question in a different form, and we should locate the hint in the first sentence of each paragraph.*) The very first sentence quotes Virginia Woolf as saying, "I want to criticize the social system, ....". The first sentence of the second para says, "In her novels, Woolf is deeply engaged by the questions of how individuals are shaped (or deformed) by their social environments ....". The third para starts with the phrase, "Woolf's focus on society ....". The fourth para also starts with a reference to "Woolf's social criticism". In the concluding para also, the first sentence says, "Woolf's literary models were acute social observers like Chekov and Chaucer". Thus, 'social criticism' by Woolf is a theme that runs through the entire passage, while 'individual' is mentioned in para 2. Among the choices, it is "Virginia Woolf's Novels: Critical Reflections on the Individual and on Society", or (E), is the most appropriate title to the passage.

(D) appears to be a possible choice, but is wrong because nowhere in the passage is it mentioned that Virginia Woolf treats society as an allegory for the individual.

(A) is wrong because the passage is about Virginia Woolf's own novels and not about others' poems and satires which had an influence on her.

(B) is wrong because the passage is on Virginia Woolf's own novels and not on her role as a critic of other authors' novels.

It (C) were true, the passage must have explained and analyzed various reform movements, but it does not do so.

2. (*This is a 'tone' question, and must be answered through a process of elimination of the wrong choices.*) In the last sentence of para 1, the author says, "literary critics' cavalier (meaning arrogant) dismissal of Woolf's social vision will not withstand scrutiny". He is thus highly critical of these literary critics. None of the choices except 'disparaging' has this sense. So, (A) is the answer.

3. (*This is an 'inference' question, with 'Chaucer' and 'literary model' as the key phrases.*) These words appear in lines 34-35, and we must look for the answer in their vicinity. In the next sentence, the author quotes Woolf as writing "... as we read him (Chaucer), we are absorbing morality in every pore". So, she believed that Chaucer's writing was effective in subtly influencing the moral attitudes of his readers. It is (D) which says this and is the answer.

4. (*This is an 'inference' question, in which the key phrase is 'social setting in Woolf's novels'.*) The phrase 'social setting' occurs in the last sentence of para 2 which says, "Most of her novels are rooted in a realistically rendered social setting and in a precise historical time". This, by itself, does not have the answer to the given question, and we should therefore refer to the previous sentence which says, "In her novels, Woolf is deeply engaged by the questions of how individuals are shaped (or deformed) by their social environments, how historical forces impinge on people's lives, ....". So, we can infer that the reason why Woolf realistically described the social setting in her novels was that she wanted to portray the effect of a person's social milieu on his character and actions. It is (B) which states this, and is the answer.

5. (*This is a 'specific fact' question which asks us to get the meaning of the word 'contemplative' as used in line 27.*) To get the full meaning in which the word 'contemplative' is used by the author in lines 27, you must read all the lines 26-30. These say that Woolf thought that her social criticism must be 'based on observation and not direct commentary; she would provide phenomena and materials to the reader for a judgement about society and social issues; it is for the reader to put the observations together (and make the judgement)". This means that Woolf does not wish to thrust her judgment on the readers but wants them to make their own judgments. It is (C) which paraphrases this, and is the answer.

(A) is wrong because Woolf did not accept all existing social mores (lines 31-32).

(B) is wrong because, in that case, the author would not have considered her a social critic.

(D) is wrong because, as we have seen earlier, Woolf focused again and again on individual characters.

(E) is wrong because of what is stated in line 38, "Like Chaucer, Woolf chose to understand as well as to judge ...."

6. (*This is an 'inference' question in which the key phrase is 'satirist's art'.*) The phrase "satirist's art" is found in line 33, and is defined in lines 31-33 as "indirect, subtly undermining officially accepted mores, mocking, suggesting and calling into question, rather than asserting, advocating or bearing witness". In the last three lines, the author also says that Woolf produced (satiric) art rather than 'polemic'. Combining these ideas, (E) is the most apt answer.

7. (*This is a 'specific fact' question which has to be answered by eliminating the wrong answer choices.*) The key phrase in (A) is 'Chaucer and Chekov', and these are mentioned only in the last paragraph. But this paragraph does not contain any information about the *attitudes of literary critics towards them*. So, (A) cannot be answered from the information in the passage.

The key phrase in (B) is 'introspective and visionary novelist'. The word 'visionary' occurs in line 8, and we should look for the answer to this question in its vicinity. In lines 7-9, the author says, "Woolf was a *realistic* as well as a *poetic* novelist, a *satirist* and *social critic* as well as a *visionary*". So, the author does *not* believe that Woolf was solely an *introspective* and *visionary* novelist. So the passage has information which enables us to answer (B) *in the negative*. So, (B) is the answer.

You can easily see that (C) and (D) are not answered at all in the passage.

While the author says (lines 10-12) that Woolf was *deeply engaged* by the role of *social environments* and *historical forces* in shaping individual lives, he does not say which of these two was *more important* in her opinion. So, (E) cannot be answered from the information within the passage.

### Passage 17

Answer: 1. D 2. A 3. B

{The difficult words in this passage are *enduring* (continuing); *insistence* (emphasis); *secular* (not concerned with religion); *evangelical* (pertaining to the Gospels); *fervour* (enthusiasm); *hymnals* (books containing religious songs); *sympiotic* (supporting each other); *metaphysical* (relating to psychic phenomena which cannot be verified by experiments), *salvation* (deliverance) and *inextricably intertwined* (inseparable)}

1. (*This is a 'primary purpose' question for which, in a short passage like this, we should get the hint from the first sentence itself.*) The very first sentence refers to the 'most enduring contribution' of Wagner to the study of Afro-American poetry', and almost every sentence thereafter explains the importance of this contribution. So, (D) is the best answer.

(A) is wrong, because the third sentence of para 1 contrasts Wagner's theory with those that prevailed 'before Wagner', and not with those of Wagner's contemporaries.

(B) is wrong, because Wagner's work consisted in *analyzing* Afro-American poetry, and *not in influencing its development*.

(C) and (E) are wrong, because Wagner's work related basically to the study of Afro-American poetry, and not to the study of Afro-American religion or spirituality.

2. (*This is an 'exception' question in which the key phrase is 'Wesleyan hymnals', and should be answered by analyzing each answer choice and rejecting the inappropriate ones.*) The phrase 'Wesleyan hymnals' occurs in the second sentence which says that the Black poetic tradition owed its 'early forms (structures), rhythms, vocabulary (word choice) and *evangelical fervour* (tone) to Wesleyan hymnals'. What is *not* mentioned here is 'subject matter'. So, (A) is the answer.

3. (*This is an 'inference' question, in which the key phrase is 'students of Afro-American poetry before Wagner'.*) The phrase 'Before Wagner' occurs in the last sentence of para 1, and we must look for the answer in its neighbourhood. In the previous sentence, the author points out that the early forms of Afro-American poetry were greatly influenced by *Wesleyan hymnals, or religious poetry*. In the next sentence, he says that, *before Wagner*, students analyzed Afro-American poetry primarily in the context of 'political and social protest'. This implies that these students *had ignored some of the historical and religious roots of Afro-American poetry*. So, (B) is the answer.

### Passage 18

Answers: 1. C 2. B 3. E 4. D

{The difficult words in this passage are *from without* (from outside); *siege* (being surrounded by enemy forces) and *blithely* (cheerfully)}

1. (This is an 'inference' question for which the key word and the key lines are mentioned in the question itself.) We can easily infer from the second and third sentences that the author uses Maynard Mack's categories of 'life-as-spectacle' and 'life-as-experience' to refer to *Odyssey* and respectively. The purpose of the author in referring to Mack's "categories" is obviously to *suggest one way in which Odyssey and the Iliad can be distinguished*. So, (C) is the answer.

(A) is wrong, because, while stating that *Odyssey* has always been more popular than the *Iliad*, the author does not argue that this relative popularity must be reversed.

There is no indication in the passage that Mack had proposed the classification "life-as-spectacle" and "life-as-experience" *only in relation to the two works of Homer*. It is quite likely that Mack's classification related to the entire field of literature, and Mack may not have commented on Homer's works at all. So, we *cannot* infer from the passage that *Mack was an authoritative commentator on the Iliad and Odyssey*. So, (B) is wrong.

If people have difficulties in reading the *Odyssey* or the *Iliad*, *these would not have become popular epics at all*. So, (D) is wrong.

The second sentence talks of *the difference in the attitudes to be adopted by the readers* while reading the *Odyssey* and while reading the *Iliad*, and not of *the distinction between the heroes of these two epics*. So, the purpose of quoting Mack's categories is *not to compare the respective heroes of the two epics*. So, (E) is also wrong.

2. (This is an 'inference' question in which the key phrase is 'variety of incidents in the Odyssey'.) The phrase 'various incidents' occurs in the second sentence which reads, "Its subject is 'life-as-spectacle', for readers, *diverted* by its various incidents, observe its hero, *Odysseus primarily from without*" whereas, according to the next sentence, the readers of the *Iliad* are asked to identify with the mind of Achilles, its hero. So, according to the author, the variety of incidents in the *Odyssey* is likely to *divert the reader from concentrating on the psychology of the poem's central character, Odysseus*. It is (B) which states this, and is the answer.

3. (This is a 'primary purpose' question for which the hint must be got from the very first sentence.) The very first sentence starts by *contrasting* the respective popularities of *Odyssey* and the *Iliad*, basing them on the difference in the number of features of mythology contained in each of them. Each sentence thereafter presents *one more contrast* between the two epics. So, among the choices, 'developing a contrast' (E) is the most appropriate answer.

The phrases "In addition" and "Finally" in the third and fourth sentences show that the author is *enumerating* arguments, and *not distinguishing* between them. So, (A) is the wrong.

Since *only one pair* of classifications is mentioned in the passage, namely, "life-as-spectacle" and 'life-as-experience', and that too *only in one sentence*, the primary purpose of the passage cannot be stated to be "applying classifications". So, (B) is wrong.

The author makes *specific* and *conclusive* statements in the passage, and cannot be said to be "initiating a debate". So, (C) is wrong.

The author first states that *Odyssey* has always been more popular than the *Iliad*, and gives reasons for it. There is no reference in this passage to *any dispute in this regard*, nor does the author offer a solution to the dispute. So, its purpose cannot be said to be the *resolution of a dispute*. So, (D) is also wrong.

4. (This is an 'inference' question, in which the key phrase is 'identifying with the poem's hero'.) The phrase 'identifying with the mind of Achilles' occurs in lines 6-7, which say "readers are asked to identify with the mind of Achilles, *whose motivations render him a not particularly likable hero*". This can be paraphrased as 'the hero's emotions often do not seem appealing to the reader' as in (D), which is the answer.

### Passage 19

Answers: 1. D 2. A 3. E 4. B 5. C 6. D 7. E

{The difficult words in this passage are *expounding* (explaining, interpreting); *overtly* (openly); *propounds* (proposes, advocates); *circumvents* (bypasses); *affinities* (relationships); *contemporaneous* (at the same period of time); *distinct* (unique); *coherent* (consistent); *recurring* (repeated); *chronology* (continuity in time); *thematic* (based on a theme); *appraise* (critically evaluate); *diffuse* (vague); *verges on* (borders on); *surrealism* (a form of art based on the subconscious rather than on conscious reason); *astute* (intelligent) and *exemplifies* (is an example of)}

1. (This is a 'specific fact' question in which the key phrase is 'Addison Gayle'.) The name of Addison Gayle occurs in the last sentence of para 1 where we should find the answer to this question. In this sentence, the author criticizes Addison Gayle's work because "it judges the value of Black fiction by overtly *political stand-*

ards” and not by literary standards as correctly done by Roger Rosenblatt (referred to in the first sentence). So, (D) is the ready answer.

2. (This is a ‘primary purpose’ question and we should look for a theme that runs through the entire passage.) The passage is essentially an assessment of Roger Rosenblatt’s book *Black Fiction*, which itself is a work of criticism of Black writing. The author describes the positive aspects of this book in the first three paragraphs, but points out (in the fourth paragraph) that “the book, however, does leave some aesthetic questions open”. In the last paragraph, he concludes that, “in spite of such omissions, what Rosenblatt does include in his discussion makes for an astute and worthwhile study”. Thus, the primary concern of the author of the passage is the evaluation of the soundness of a work of criticism. So, (A) is the answer.

The passage is mainly concerned with one critical approach to Black writing (namely that of Roger Rosenblatt), and it refers to other approaches only in passing in the first paragraph. So, (B) cannot be said to be the primary purpose of the passage.

The author refers to the limitations of the earlier kind of criticism of Black writing (by applying sociopolitical, rather than literary, criteria to it) only in the first paragraph, and so (C) cannot be considered to be the primary purpose of the passage.

The author does not merely summarize the points made in Roger Rosenblatt’s *Black Fiction*, but also evaluates them. So, (D) is not as good an answer as (A).

The author does not refer to a theoretical background of the book *Black Fiction*. So, (E) is not the answer.

3. (This is an ‘inference’ question, the key phrase being ‘Black Fiction would have been improved’.) A shortcoming of Roger Rosenblatt’s book *Black Fiction* is referred to in the fourth paragraph, and we should look for the answer to this question here. Lines 2-5 of this para state, “... he even explicitly states that it is not his intention to judge the merit of the various works - yet his reluctance seems misplaced, especially since an attempt to appraise might have led to interesting results”. So, the author believes that *Black Fiction* would have been improved if Rosenblatt had assessed the merit of the various works that he was writing about. Among the choices, it is (E) which states this, and is the answer.

4. (This is a ‘tone’ question, and must be answered through a process of elimination of the inappropriate choices.) In the very first sentence, the author praises Rosenblatt’s book for successfully altering the approach taken by most previous studies on Black literature. In all subsequent sentences in the passage, except in para 4 in which he mentions a shortcoming of the book, the author is appreciative of Rosenblatt’s book. Therefore, ‘critical but admiring’ is the most appropriate phrase among the choices that can be applied to the author’s attitude towards the book. So (B) is the answer.

5. (This is an ‘exception’ question, and we must spot the answer through a process of elimination of the wrong choices.) All the views expressed by the author in this passage relate to Black writing. What the author disapproves of in the first para of the passage is, “the judging of the value of Black fiction by overtly political standards”. (A) relates to the personal ideologies of Black writers and how they developed, and the author is not concerned about them so long as they are not reflected in their writing. So, (A) is not the answer.

Since an autobiography is not a fictional work, (B) is not the appropriate answer.

In the very first sentence, the author commends Roger Rosenblatt’s new approach of applying literary, rather than sociopolitical, criteria in the appraisal of Black writing. In the second sentence of para 2, he says, “Rosenblatt’s literary analysis discloses affinities and connections among works of Black fiction which solely political studies have overlooked or ignored”. So, what the author would disapprove of is the appraisal of the merits of a literary work according to the political acceptability of their themes. So, (C) is the answer.

(D) is what has already been attempted by Rosenblatt, and is reviewed in appreciative terms by the author. So, (D) is wrong.

(E) is what will be welcomed by the author, because he considers the non-examination of aesthetic qualities in Black fiction as a negative feature of Rosenblatt’s study. So, (E) is also wrong.

6. (This is an ‘exception’ question that should be answered through an elimination of the inappropriate choices.) The author uses two rhetorical questions in the last two sentences of para 4. So, (A) is not the answer.

The author cites specific examples of (i) Addison Gayle’s recent work, to illustrate an earlier approach in the assessment of Black fiction, (ii) Jean Toomer’s *Cane*, as an example of surrealistic style in Black fiction, and (iii) Weldon Johnson’s *Autobiography of an Ex-Colored Man*, as an example of some little-known Black works analyzed in Rosenblatt’s book. So, (B) is not the answer.

Since, in the very first paragraph, he compares and contrasts Roger Rosenblatt’s approach to the study of



Black fiction *with that of most previous studies*, (C) is not the answer.

The passage is in fact dominated by the *personal opinion of the author himself*, both relating to Black fiction and Rosenblatt's study of it in his book. So, (E) is not the answer.

Since the author has not *defined any particular term* in the passage, (D) is the answer.

7. (*This is an 'inference' question in which the key phrase is 'James Weldon Johnson's Autobiography of an Ex-Colored Man'.*) This phrase is available in the very last sentence, which says, "*Black Fiction* surveys a wide variety of novels, bringing to our attention in the process *some fascinating and little-known works* such as Weldon Johnson's *Autobiography of an Ex-Colored Man*", we can infer that the author's purpose in mentioning this book is to give a specific example of one of the *accomplishments* of Rosenblatt's work, namely *bringing to our attention some fascinating and little-known works*. So, (E) is the answer.

### Passage 20

Answers: 1. E 2. D 3. C

{The difficult words in this passage are: *abstract* (general; undefined); *extensive* (many); *semantic* (relating to words); *conceptual* (theoretical); *nuances* (minor variations); *metaphorical* (resembling); *juxtaposition* (placement next to each other); *contraries* (opposite); *complement* (give mutuality); *evoke* (give rise to); *connote* (mean); *traits* (qualities) and *mode* (type)}

1. (*This is a 'main purpose' question. In a small passage like this, we must get the hint from the first sentence itself.*) The first sentence implies that Nahuatl language could be used *for expressing abstract universal concepts*. The next two sentences say that Nahuatl *allowed the formation of extensive compounds which could express complex conceptual relations, often of an abstract universal character*. The next paragraph says that learned men among Nahuatls had a rich stock of abstract terms to express nuances of their thought, and other forms of expressions with metaphorical meaning. The last sentence says that, juxtaposed Nahuatl words constituted metaphors introducing a mode of poetry as an almost habitual form of expression.

Among the choices, it is 'description of some conceptual and aesthetic resources of the Nahuatl language', or (E), that expresses the main idea of the passage.

The second paragraph merely refers to the effective use of the Nahuatl language by *tlamatinime*, and not *of their function in society*. So, (A) is not the answer.

For the same reason as above, (B) is not the answer.

'Poetic expression' is referred to *only in the last sentence of the passage*, and cannot be its main purpose.

Toltec coinages is referred to *in just one sentence* of the passage, and is not the answer.

2. (*This is a 'specific purpose' question, in which the key phrase is 'abstract universal ideas'.*) The phrase 'relations of an abstract universal character' occurs in the last sentence of para 1, which reads, "*By the combination of radicals or semantic elements*, single compound words can express complex conceptual relations, often of an abstract universal character". Among the choices, *putting various meaningful elements together in one word* is what means this. So, (D) is the answer.

3. (*This is an 'inference' question, with no key word or phrase in it. We should therefore arrive at the answer through a process of elimination of inappropriate choices.*) Since the second sentence talks of *only Nahuatl, Greek and German* as languages that allow the formation of extensive compounds, (A) cannot be inferred from the passage.

The passage talks of the characteristics of *only Nahuatl language*, and so, the general statement in (B), applicable to *all languages*, is not an inference warranted from the passage.

From the fact that the author extensively discusses the thoughts of the *tlamatinime* (the learned people among the tribes: "those who knew") in the second paragraph, *we can infer that some record or evidence of the thought of these people exists, and was available to him*. So, (C) is the answer.

The passage says that the *tlamatinime* ("those who know") used metaphors often to express their thoughts; we cannot infer therefrom that *all speakers of this language always used metaphors*. So, (D) is wrong.

(E) is wrong because what the last sentence says is that it is the *juxtaposed terms used habitually as metaphors* (and not the *abstract terms* of the Nahuatl language) that introduce a mode of poetry.

## Chapter 2: 'Social Science' Passages

### Passage 1

Answers: 1. E 2. C 3. B

{The difficult words in this passage are *articulated* (expressed); *pervasive* (widespread); *specious* (misleading); *inexplicable* (unexplainable); and *factions* (groups)}

1. (*This is a 'specific fact' question, in which the key phrase is 'Woodrow Wilson'.*) In the second sentence, the author mentions the analogy *individual : nation state :: nation state : international community*. Then he quotes Woodrow Wilson (who believed in this analogy) as having said, "nations must be governed in their conduct toward each other *by the same principles that govern the individual citizens of all modern nations*". This is obviously an elucidation or *clarification* of the analogy mentioned by the author first. So, (E) is the answer.

(A) is wrong since *no contradiction* is mentioned by Wilson in the quotation.

The *wants* of an individual or of a nation are not mentioned at all in the passage, and so, (B) is wrong.

The *popularity* of classical liberalism is not mentioned anywhere in the passage, and therefore, (C) is also wrong.

The analogical relationship mentioned first by the author can have only the interpretation as given by Wilson, and therefore Wilson's cannot be considered as a 'new' interpretation. Thus, (D) is also wrong.

2. (*This is a 'Roman Numerals' question, for which the key phrase is 'those who accept the assumptions of the philosophy of classical liberalism'.*) In the very first sentence, the author equates 'philosophy of classical liberalism' with the analogy "individual : nation state :: nation state : international community". In lines 5-7, the author says, "This analogy suggests that each nation *has a unitary national will*". So, I is true.

In lines 7-9, the author says that this analogy creates difficulties *both in the case of nondemocratic and democratic governments*. We cannot deduce from this that *the classical liberals favour a dictatorial form of government*. So, II is *not* true.

In lines 9-11, the author says, "The acceptance of these two specious assumptions leads to the seeming inexplicability of reversals in diplomatic negotiations ....", which means 'failure to anticipate abrupt changes in a nation's policies because of the change of government in it'. Thus, III is true.

So, (C) is the answer.

3. (*This is a 'primary purpose' question. In a short passage like this, the hint to the correct answer is usually found in the first sentence itself.*) The author opens the passage with "A *false analogy* underlies the *philosophy of classical liberalisers*", and *substantiates this statement* in each of the subsequent sentences. So, his main concern in the passage can best be stated as 'rejection of the tenets of classical liberalism'. So, (B) is the answer.

### Passage 2

Answers: 1. A 2. E 3. B 4. C 5. E 6. A 7. D

{The difficult words in this passage are *periphery* (outer boundary); *commensurate with* (proportionate to); *entomology* (science dealing with the study of insects) and *compatible with* (consistent with)}

1. (*This is a 'primary purpose' question, and we must spot the theme that is repeatedly touched upon in the passage.*) In the first para, the author says that, in the nineteenth century, women scientists *remained on the periphery of the scientific community*, and yet made valuable contributions to professional science. In the subsequent paragraphs, he *gives reasons* for their remaining on the periphery and gives instances of women scientists *who slowly broke through the handicaps* and paved the way for women *getting access to scientific education*. So, the primary purpose of the passage can be stated to be "*to discuss women's entrance into the field of scientific study*". So, (A) itself is the answer.

(B) is wrong because, though the author mentions 'social disapproval of women *considered too learned*' (line 6), *he does not further analyze it*.

(C) is wrong because the author mentions *only three* women scientists by name, and his main purpose could not therefore have been to describe *all women who were interested in science*.

(D) is wrong because it talks of 'intellectual activities' in a *general* way, while the main purpose of the passage is about *women's rise* in participation and advancement of *scientific knowledge*.

(E) is wrong because, according to the passage, science was *already* getting professionalised *without the help and participation of women*.

2. (This is a 'specific fact' question, in which the key phrase is 'women in science in the 1880's'.) "1880's" is first mentioned in line 35, and we should look for the answer to this question in its neighbourhood. The previous sentence says, "....., during post-Civil War years, the women's colleges, with women faculty members, provided significant support for women in science". The first sentence of this para, *which refers to the earlier period*, says that women at that time could only attend 'private scientific study groups and summer schools'. So, we learn that, compared to women in science during the early part of the nineteenth century, women in science in the 1880's were more likely to have access to formal education. So, (E) is the answer.

3. (This is an 'inference question', with 'scientific community in the United States' as the key phrase.) The phrase 'scientific community' occurs in line 10, and we should look for the answer in its vicinity. The full sentence reads, "Moreover, the scientific community itself, in its conscious effort to professionalize, to establish an international reputation, and to raise the status of science in the United States, *formed national professional associations .....*". We can infer from this sentence that the community considered itself to be *too informal and too loosely structured until then*. So, (B) is the answer.

4. (This is an 'inference' question, the key phrase in which is 'professionalization of the scientific community'.) The phrase 'professional association' occurs in line 13, and we should look for the answer here. This sentence says that scientists refused to recognize anyone *whom they perceived to be an amateur*. The second sentence in this paragraph says that women interested in science could, at that time, at best be *helpmates of men scientists* implying that they could *only be treated as amateurs*. So, the purpose of the author referring to professionalization of the scientific community is to show *how their attitude affected women*. So, (C) is the answer.

5. (This is a 'specific fact' question, and we must arrive at the answer through a process of elimination of the wrong choices.) Not all women of the nineteenth century, but *only a few*, were interested in scientific studies. The passage does not give any reason for their interest. So, (A) *cannot be answered* from the given information.

The passage gives an example of Margaretta Morris merely as *a woman scientist who worked against odds*, but does *not* say that she was the '*greatest woman scientist of the century*'. So, (B) is wrong.

(C) and (D) are also not answered in the passage at all.

Paras 4 and 5 explain in detail how women scientists such as Almira Phelps and Orra White helped advance women's participation in science through writing scientific books, illustrating them, and generally providing the foundation for 'advanced training and scientific association for this generation'. So, (E) *can be answered* from the information available in the passage, and is the answer.

6. (This is a 'specific fact' question, in which the key phrase is 'limit to women's participation in the field of science in the nineteenth century'.) The phrase 'women's participation in scientific studies' occurs in the first sentence of para 2 which reads, "Social disapproval of women considered too learned" as a reason that 'restricted' women's participation in scientific studies. Among the choices, "social attitudes towards education for women" (A) is the most appropriate choice.

7. (This is an 'inference' question, in which the key phrase is 'restricting women's participation in scientific associations'.) The phrase 'professional associations' occurs in the last sentence of para 2 which says that they *refused to recognize anyone (particularly women) who were considered to be amateurs*. The second sentence of this para says, "Lack of recognition as independent scientists ... meant that many women were only permitted to assist male researchers and these women rarely achieved recognition commensurate with their skills". So, among the choices, 'women's lack of independent status as scientists', or (D), is the answer.

### Passage 3

Answers: 1. B 2. C 3. D

{The difficult words in this passage are: *truancy* (running away from home); *juveniles* or *adolescents* (teenagers)}

1. (This is a 'specific point' question, in which the key word is 'irony' and 'lines 9-10'.) What the passage says is that, while *male juvenile crimes* relate to thefts or violence, the only offence of which *female juveniles* are accused is merely *running away from their homes*. The female juveniles are restrained in institutions under custody (purported to be in their own interest) *for longer periods* than juvenile male offenders *who are accused of graver crimes against persons or property*. The irony pointed out by the author is that, though the female juveniles are kept *longer under custody* for acts *which would not be considered a crime either in adults or even in juvenile*

males, scholars in criminal justice *do not concern themselves with the study of female juvenile delinquency*.

Lines 9-10 say that the plight of female delinquents receives little attention because they are normally accused of *less serious* offences. This is same as (B) which says that *the plight of male delinquents receives larger attention because they are normally accused of more serious crimes*. Thus, (B) is the answer.

2. (This is an 'inference' question, in which the key phrase is 'traditional stereotypes of women'.) This phrase occurs in the last sentence, and we must therefore look for the answer hereabouts. This sentence says that such stereotypes have resulted in 'longer periods of *misdirected* supervision for female delinquents'. The use of the adjective 'misdirected' implies that the author considers the result *harmful* for the female delinquents. So, (C) is the answer.

3. (This is an 'inference' question, in which the key phrase is 'scholars in criminal justice'.) In lines 6-9, the author attributes the reluctance of the scholars in criminal justice to study female juvenile crime to the fact that the offences committed by them *do not involve damage to persons or property*. This means that these scholars are *unjustifiably concerned only with crimes involving damage to persons or property*. So, (D) is the criticism that can be levelled against these scholars.

#### Passage 4

Answers: 1. B 2. C 3. D 4. E

{The difficult words in this passage are *pristine* (pure) and *aesthetic* (artistic)}.

1. (This is a 'specific fact' question in which the key phrases are 'studies of folk tales told by Afro-American slaves' and their 'inadequacy'.) In the first sentence, the author says that most studies of the folk tales told by Afro-American slaves *unfortunately* concentrate on their *sources* and *bypass their meaning*. He then goes on to say that, among the folk-tales borrowed from their white masters, it is only those *which had features similar to those of their motherland (Africa)* that had *mostly influenced* them. According to the author, *it is this aspect that most studies of such folk-tales had missed*. So, (B) is the answer.

You can easily see that the other choices are irrelevant to the passage.

2. (This is a 'primary idea' question and, in a short passage like this, we should try to get the hint from the first sentence itself.) The first sentence says that 'extended debate concerning the *exact point of the origin* of individual folk tales told by Afro-American slaves has *unfortunately taken precedence* over the *analysis of the tales' meaning and function*'. In the subsequent sentences he enumerates reasons why the tales' *meaning and function* should be accorded *greater importance* in such studies. So, among the choices, '*change the focus* of a field of study', or (C), is the best answer.

From the reference to the existence of an '*extended debate*' in the first sentence, we can assert that what the author is proposing is *not a new field* of study. So, (A) is not correct.

It is not the author's purpose to *discredit* the study of the folk-tales of Afro-American slaves, but *to point out a flaw in the focus* of the studies made so far. So, (B) is also wrong.

(D) and (E) are obviously wrong.

3. (This is an 'inference' question, in which the key phrase is "slaves' cultural continuities with Africa".) The phrase 'cultural continuities with Africa' occurs in the second sentence of the passage, and we should look for the answer in this region. This and the next sentence say that such cultural continuities did not depend on direct importation from Africa or on their extent of purity, but '*in the place that the tales occupied in the lives of the slaves and in the meanings that the slaves derived from them*'. Among the choices, 'the specific way the slaves used folk tales to impart moral teachings to their children', or (D), has the closest meaning to this, and is the answer.

(A) is wrong, because the passage does not talk of *nineteenth-century America* anywhere.

Since *regional differences within America* are not mentioned anywhere in the passage, (B) is wrong.

*White children raised by slaves* are not referred to in the passage and, therefore, (C) is also wrong.

Since there is no mention in the passage of the *plots of these tales being either simple or complex*, (E) is wrong.

4. (This is a 'technique' question which should be answered by examining each choice and discarding the inappropriate ones.) There is no obvious *cliché* (meaning *an often repeated idiom or phrase which has consequently lost its punch*) in the passage to which the author is trying to impart a new meaning. So, (A) is wrong.

There is no particular *key term* in the passage for which we do not know the meaning, and which the author is *not defining*. So, (B) is also wrong.

Since the entire passage consists of *general* statements and does not refer to any *concrete* details (such as a *particular folk-tale*), (C) is also wrong.

The first point made in the passage is that the studies of Afro-American folk-tales should not concentrate on their *origin*, but should examine their *meaning* and *function* in the lives of the slaves. The concluding sentence merely states that *the slaves quickly adopted the folk-tales to suit their own lives, irrespective of the origin of these tales*. Thus, the last sentence does *not* restate the idea in the first sentence. So, (D) is also wrong.

You can easily see that, starting from the second sentence, every pair of consecutive sentences consists of statements of *what is not the case and what is the case*. So, (E) is the answer.

### Passage 5

Answers: 1. A 2. C 3. D 4. E 5. B 6. C 7. A 8. C

{The difficult words in this passage are: *impinging on* (having an effect on); and *optimal* (the most advantageous)}

1. (*This is a 'primary purpose' question, and we must answer it by identifying the single theme that runs continuously throughout the passage.*) In the very first sentence of the passage, the author indicates that he is going to discuss the '*legal approaches* that may be followed in attempting to *channel technological development in socially useful directions*', and enumerates them as "specific directives, market incentive modifications, criminal prohibitions, and changes in decision-making structures".

In the subsequent paragraphs, he goes on to describe *each of these in more detail*.

So, the primary purpose of the passage can be stated as 'to describe the objectives and legal methods for directing technological development'. So, (A) is the answer.

The other choices are merely touched upon in limited regions of the passage, and none of them can be stated to be its 'primary purpose'.

2. (*This is a 'specific fact' question in which the key phrase is 'air pollution from motor vehicles'.*) The phrase 'air pollution from motor vehicles' occurs in line 34, and we must look for the answer to this question in its vicinity. In the penultimate two sentences of the previous paragraph, the author defines *external* costs as those *accruing to third parties or to society as a whole* because of the production and use of the goods by a seller and a buyer. In the first sentence of the next paragraph, he gives the illustration of air pollution from automobiles which results in costs to *society as a whole*, though this cost was not taken into consideration *in the price that the buyer had paid to the car manufacturer*. So, the author has included this example *to illustrate a cost not included in the buyer-seller bargains*. So, (C) is the answer.

3. (*This is a 'specific fact' question in which the key phrase is 'transactions between private buyers and sellers'.*) The word 'transaction' occurs in line 39, and we should look for the answer to this question in this region. The previous sentence reads, "Such externalities lead to nonoptimal resource allocation, because *the private net product and the social net product of market activity are not often identical*". This means that market transactions between buyers and sellers have effects not only on them *but also on society as a whole*. Among the choices, it is (D) which states this, and is the answer.

The author gives *only one* example of a transaction between a buyer and a seller that has a *harmful* effect on society (namely *air pollution due to automobiles*). We *cannot generalize* this to mean that *every transaction* between a buyer and a seller *is harmful to society*. So, (A) is wrong.

(B) is wrong for the same reason.

(C) is the *exact opposite* of what the author is trying to emphasize in the passage, namely, that, without Government intervention through the four methods enumerated, individual buyer-seller transactions resulting from technological improvement *would not result in optimal allocation of natural resources*.

(E) is wrong, because it is the author's assertion that the transactions between buyers and sellers *must be* guided by *legal controls on the development of technology*. He does *not* say that such controls exist *already*.

4. (*This is an 'exception' question, which should be answered through a process of elimination of the wrong choices.*) In lines 34-35, the author *deprecates* air pollution from motor vehicles. So, he is *in favor of protecting the environment for future use*. So, (A) is not the answer.

In advocating 'the addition of public-interest members to corporate boards' (lines 23-24), the author is *in favor of changing the balance of power* between opposing interests in business. So, (B) is not the answer.

One of the approaches advocated by the author is 'market incentive modifications' which are defined by him in line 10 as '*deliberative alteration of the market*'. So, (C) is not the answer.

In line 39, the author advocates that 'all *externalities* (meaning *the cost to everyone in society*) should be *internalized* (meaning that *it should be included in the price paid by the buyer*). So, (D) will be agreed to by the author.

What the author is advocating in the passage is that technological development must be *channeled in socially-useful directions*. He would certainly not favour the *total cessation* of technological development. So, it is (E) which will not be agreed to by the author, and is the answer.

5. (This is a 'specific fact' question, in which the key phrase is 'gasoline-conservation tax on the purchase of large automobiles to be rebated to purchasers of small automobiles'.) Lines 9-13 define 'market incentive modifications' as those which may consist of *imposing taxes to cover the costs to society of a given technology* and *granting subsidies to pay for social benefits of a technology*. Imposing a tax on large automobiles and using the resultant revenue to subsidize the purchase of smaller automobiles is an example of such market incentive modification. So, (B) is the answer.

6. (This is an 'inference' question, in which the key phrase is 'external costs'.) 'External costs' have been defined by the author in lines 31-34 as *costs which are not included in the price at which a commodity is bought*, but are nevertheless borne by persons *who are not party to the transaction*. In line 34, the author says that 'such (external) costs are *internalized* when buyers pay them'. Therefore, if there are *no external costs* in a transaction, it means that the buyer has paid a price to the seller *which has also included all costs to third parties or the whole society*. So, (C) is the answer.

7. (This is an 'inference' question, in which the key phrase is 'optimal allocation of resources'.) The author mentions 'optimal allocation of resources' in the very last line, and says that this could be achieved if all *external costs* (meaning *the cost to the society arising from the damage caused by the production and use of a technological product*) can be *internalized* (meaning *included in the price paid by the buyer*). Obviously, the author assumes that a *monetary value (or price)* can be assigned to the damage that results from the use of technology. So, (A) is the answer.

8. (This is an 'inference' question with no particular key phrase, and we should answer it through a process of elimination of the wrong choices.) The passage does not say anywhere that Government should *own* all technological operations. What the author is advocating is *regulation* and not *ownership*. So, (A) is wrong.

(B) is the *exact opposite* of what the author is advocating, and is wrong.

In lines 12-13, the author advocates the granting of subsidies 'to pay for *social benefits of a technology*'. He would therefore agree that *some technological developments* are socially *beneficial*. So, (C) is the answer.

(D) and (E) will not be fully endorsed by the author.

### Passage 6

Answers: 1. B 2. E 3. A 4. B

{The difficult words in this passage are *ethos* (atmosphere, general attitudes of the population); *combat* (fighting); *deterrence* (the military policy that ensures that the other side does not attack first; this policy could, in the long run, make actual war unnecessary or improbable.)

1. (This is a 'primary purpose' question and, in a short passage like this, we must get the hint from the first sentence itself.) (Till recently, USA did not have a voluntary armed force, but able-bodied men had to necessarily enlist for military duty whenever the occasion arose. This was known as "drafting".) In the first sentence, the author makes the point that the recent change to all-volunteer armed forces in USA is likely to result only in a *gradual increase* in the proportion of women in the armed forces, and warns that one cannot expect any *dramatic* results in this direction. He then says that, so long as there is *reluctance on the part of the public* to see women *actually engage in combat* activities, this situation is likely to continue. He concludes the passage by forecasting that, with the growing emphasis on deterrence, *which may make actual combat with the enemy unnecessary*, women are likely to receive *greater scope* to be engaged in novel types of *noncombat military assignments*. We can characterize this as a "reasoned *prognosis* (meaning *forecast*) of the status of women in the new US all-volunteer armed forces". So, (B) is the answer.

The other choices refer to points each of which is *just touched upon in a single sentence* in the passage, and cannot be considered to be the 'primary purpose' of the passage.

2. (This is a 'specific fact' question, in which the key phrase is 'occupational equality for women'.) The phrase 'occupational equality' occurs in line 6, and we must look for the answer to this question here. The next two sentences say, "The difficulty is that women are unlikely to be trained for any *direct combat* operations. A *significant portion of the larger society remains uncomfortable as yet with extending equality in that direction.*" This is summarized by the statement that, in spite of the armed forces' commitment to occupational equality for women in the military, *certain other factors preclude women's being assigned all the military tasks* (namely *combat operations*) *that are assigned to men.* It is (E) which states this, and is the answer.

The author says in line 8-9 that the federal sanction of equal pay for equal work is *subscribed to by the army.* So, (A) is wrong.

The author talks of only jobs *involving direct combat operations* as being reserved for men. So, the phrase "positions of *responsibility at most levels*" in (B) is inappropriate. So, (B) is wrong.

(C) is wrong for the same reason as (B).

(D) *contradicts* the forecast of the author that women are likely to benefit from *new opportunities in non-combat functions* arising from the growing emphasis on deterrence. So, (D) is wrong.

3. (This is an 'inference' question, in which the key phrase is 'more equitable representation of women in US armed forces'.) The very first sentence of the passage says that "*the recent change to all-volunteer armed forces in the United States will eventually produce a gradual increase in the proportion of women in the armed forces.*" So, (A) itself is the answer.

In the subsequent sentences, the author gives reasons why such increase is likely to be *gradual*, and why the functions of women are likely to be limited until the growing emphasis on deterrence creates *novel types of noncombat assignments in the army.* (B) and (C) are *irrelevant* to this discussion, and are wrong.

(D) in fact *contradicts* the forecast of the author that the proportion of deterrence-oriented noncombat assignments are likely to *increase* in future. So, (D) is wrong.

Since *restrictive past policies* cannot be *conducive* to a more equitable representation for women *in future*, (E) is wrong.

4. (This is an 'inference' question, in which the key phrases are cited by the line numbers.) The "dramatic gains for women" are mentioned in line 4 *as a prospect that is not likely to materialise.* In lines 7-8, the author gives the reason for his pessimism as, "The difficulty is that *women are unlikely to be trained for any direct combat operations.*" In the next two lines, he gives the reason for this difficulty as, "*A significant portion of the larger society remains uncomfortable as yet with extending equality in that direction.*" Thus, the author puts forward the "attitude of a significant portion of the larger society" as *the major reason* for the absence of "dramatic gains for women". It is (B) which states this, and is the answer.

You can easily see that none of the other choices is an appropriate logical connection between the two phrases quoted in the question.

### Passage 7

Answers: 1. E 2. D 3. E 4. D

{The difficult words in this passage are *chimp* (chimpanzee); *gull* (goose); *ethology* (study of comparative behavior of animals, including human beings); *cormorant* (a bird); *inhibit* (restrain) and *appease* (pacify)}

1. (This is a 'primary purpose' question. In a short passage like this, we should look for the hint in the beginning of the passage itself.) In the second sentence, the author says, "True, human beings are animals; they *share certain anatomical features* with other animals, and *some* items of human behavior may seem *analogous* to the behavior of other animals". In the next sentence, he says, "but *such analogies can seriously mislead ....*". In the last sentence of the passage, he says, "ethnologists can accomplish little beyond reminding us that we are animals - *until they study humans as cultural beings*". So, the single theme that runs through the passage is that human behaviour *cannot be straightforwardly compared with animal behavior* as is being done by ethnologists. It is (E) which says this, and is the answer.

There is no reference in the passage to the 'limits' of human behaviour. Therefore, (A) is wrong.

(B) is wrong, since the author himself concedes that human beings are *also a form of animals.*

Since the author is not advocating that human beings must be compared *only with apes*, (C) is wrong.

In the last part of the passage, the author argues that human gift-giving is *not a form of appeasement*, and therefore (D) is wrong.

2. (This is a 'specific fact' question, in which the key phrase is 'gift-giving in humans'.) The phrase 'human

gift-giving' occurs in the last sentence of para 2 which says, "Human gift-giving differs in form and purpose *not only from culture to culture*, but *within the same culture in various social contexts*". This can be paraphrased as, "gift-giving in humans must be considered *within its social context* to be properly understood". So, (D) is the answer.

3. (*This is a 'tone' question which must be answered by a process of elimination of the inappropriate choices.*) The author says in the last sentence that ethnologists are in the habit of considering humans *not as cultural beings* but as *animals*, and therefore they do not accomplish anything except reminding us that *we are animals*. He implies that, if only ethnologists study humans *as cultural beings*, they will realise that we are *more than mere animals*. So, he is *critical* of the ethnologists. Among the choices, 'puzzled', 'conciliatory', 'defensive' and 'amused' are not synonyms of this word, while 'disparaging' is. So, (E) is the answer.

4. (*This is an 'inference' question in which the critical phrase is 'human gift-giving'.*) The author's view on human gift-giving is summarized in the sentence, "Human gift-giving differs in form and purpose *not only from culture to culture*, but also *within the same culture in various social contexts*". It is choice (D) which gives an example of the same act being considered as *acceptable* 'gift-giving' in one context, but *as an insult* in a *different context even within the same culture*. So, (D) is the best answer among the given choices as giving an illustration of the author's view.

### Passage 8

Answers: 1. A 2. D 3. E 4. E 5. B 6. E 7. D

{The difficult words in this passage are *agrarian* (relating to agriculture and farmers); *discontent* (dissatisfaction); *precipitate* (give rise to); *depletion* (reduction); *barren* (unproductive); *transcontinental* (running fully across the continent); *deterred* (discouraged) and *perilous* (risky)}

1. (*This is a 'primary purpose' question for answering which we should identify the single theme that runs throughout the passage.*) In the first 11 lines, the author mentions the interpretation advanced by Frederick J. Turner in the 1890's that the agrarian discontent in US between 1870-1890 was due to the *closing of the internal frontier of US*, meaning the *depletion of availability of new land for further expansion of the American farming system*. In the rest of the para, he cites figures to show that the assumption that there had been depletion of availability of developable land during this period *was wrong*. Later, in the second para, he cites *other pieces of evidence* to advance a *new interpretation* that the *real reason* for the discontent was that US agriculture had *rapidly become dependent on foreign markets*, where, during this period, there was an *uninterrupted decline in the prices for American agricultural products*. So, the author is primarily concerned with *comparing two interpretations* regarding a historical phenomenon, and showing that *one of them is better supported by evidence than the other*. So, (A) is the answer.

Since all the evidence quoted by the author in favour of his interpretation relates to the period 1870-90, these must have been available to Turner, or at least to John Hicks who wrote his book *only in 1931*. So, (B) is wrong.

(C) is wrong, because it is *the author who is countering* the interpretation of most scholars, and not *vice versa*.

(D) is wrong, because the evidence cited by the author *had not been used at all* by the previous scholars, and so, he is not 'reviewing' them.

(E) is wrong, because the author's interpretation is *totally different* from the earlier interpretation, and is not *another version* of it.

2. (*This is a 'specific fact' question, in which the key phrase is 'changes in the conditions of international trade'.*) After describing how the major progress in communications during 1870-90 had led to phenomenal changes in conditions of international trade, the author says in lines 32-34, "As a consequence, agrarian depressions *no longer were local or national* in scope, and they struck *several nations ...*". So, (D) is the answer.

3. (*This is an 'inference' question, in which the key phrase is 'the state of the American farmer's morale during the latter part of the nineteenth century'.*) The phrase 'between the 1870's and the 1890's' (implying the *latter part of the nineteenth century*) occurs in line 34, and we must look for the answer in this region. This sentence and the next say, "Between the early 1870's and 1890's, the *mounting agrarian discontent* in America paralleled the almost uninterrupted decline in the prices of American agricultural products *on foreign markets*. Those staple-growing farmers in the United States *who exhibited the greatest discontent were those who had*



become most dependent on foreign markets for the sale of their products". Among the choices, it is (E) which paraphrases this, and is the answer.

(A) and (B) had occurred *after 1890*, and are therefore wrong.

(D) is wrong, because what lines 38-40 state is that Europe, and *not USA*, was connected in 1874 with South America.

While lines 40-44 state that improvements in agricultural technology made full exploitation of farming lands possible, they do not mention anything about *marketing efforts* by manufacturers of these machineries. So, (C) is also wrong.

4. (*This is a 'specific fact' question, in which the key phrase is 'prior to 1890'.*) (A) is wrong, because the first sentence says that Turner wrote his thesis *in the 1890's* and not *earlier*.

(B) is wrong because, the effect of the Homestead Act was felt *after 1890* (line 11).

There is no mention of 'marketing of agricultural machinery' in the passage, and (C) is wrong.

Lines 24-25 say that Europe was connected by submarine cable with US in 1866 and with South America in 1874. There is no information here that *US and South America* were directly connected to *each other*. So, (D) is wrong.

From lines 25-31, we can choose (E) as the answer.

5. (*This is an 'inference question' in which the key phrase is 'interdependent market system'.*) This phrase occurs in lines 30-31, and the next sentence says, "*As a consequence, agrarian depressions were no longer local or national in scope, and they struck several nations whose internal frontiers had not vanished or were not about to vanish*". This means that the depressions affected a number nations, *including those in which new land was still available for farming*. So, (B) is the answer. (In lines 3-4, the author has defined a nation with a *closed internal frontier* as one in which *no new land is available for farming*. So, a nation with an *open internal frontier* must be one in which *new land is still available for farming*.)

6. (*This is a 'specific fact' question, in which the key phrase is 'newly farmed lands in the United States'.*) The phrase 'new lands were taken up for farming' occurs on line 7, and we must look for the answer in its neighbourhood. In the very first sentence of the passage, the author says that Turner attributed the agrarian discontent in 1870's in America to *the closing of its internal frontier*, meaning that *no new land was available for farming thereafter*. In lines 8-12, the author gives facts and figures to show that considerable extent of new lands were not only available, but, in fact, *were also brought under cultivation throughout and beyond the nineteenth century*. The purpose of giving this information is to show that American frontier *had not become closed* during the nineteenth century or soon thereafter. So, (E) is the answer.

7. (*This is an 'inference' question in which the key phrase is 'yearly price changes during the 1880's'.*) The price changes that *actually* occurred on foreign agricultural markets during 1880's is described by the author as '*almost uninterrupted decline*' (lines 35-46). Naturally, the trend in prices that the American farmers would have preferred is an '*uninterrupted increase*' in such prices. (D) is what describes this situation, and is the answer.

### Passage 9

Answers: 1. D 2. B 3. C 4. A 5. C 6. C 7. B

{The difficult words in this passage are *magnates* (rich persons); *chronicled* (recorded chronologically); *nonelite* (common people); *aridly* (dryly); *deposition* (evidence given in a court of law); *glean* (gather); *indictments* (punishments) and *aggregate* (total)}

1. (*This is an 'inference' question in which the key phrase is 'historical studies before early 1950's of preindustrial Europe'.*) The first 9 lines imply that, *prior to* early 1950's, historians studying preindustrial Europe *confined their investigation* to the two or three percent of the population *who comprised the political elite* such as kings, generals etc. So, (D) is the answer.

2. (*This is a 'specific fact' question, for which the key phrase is 'case histories extracted by historians'.*) The phrase 'extraction of case histories' occurs in line 25, and we should look for the answer in this region. The next sentence says, "Historians who study preindustrial Europe have used these records *to establish a series of categories of crime and to quantify indictments that were issued* over a given number of years". Among the choices, 'indicated the manner in which *those in power apportioned justice*' is what paraphrases this. So, (B) is the answer.

3. (This is an 'inference' question, in which the key phrase is 'European nonelite of the preindustrial period'.) The word 'nonelite' occurs in line 10, and we should look for the answer to this question in its neighbourhood. In the full sentence containing this phrase, the author says that the method of investigation adopted by early historians *reduced the vast majority of the nonelite population to mere statistical numbers*, and they did not know *what this vast majority of nonelites thought or felt*. Obviously, he implies that their study would have been *more illuminating* if they had also referred to records *which described what these nonelite had thought or felt*. Among the choices, it is (C) which says this, and is the answer.

4. (This is a 'specific fact' question, with 'Le Roy Ladurie' as the key phrase.) Ley Roy Ladurie is mentioned in line 17 as a historian *who used the documents of legal courts to extract case histories*. So, (A) is the ready answer.

5. (This is a 'specific fact' question, in which the key phrase is 'indictments for crime in pre-industrial Europe'.) Lines 30-32 say, "We also know that *the number of indictments in preindustrial Europe bears little relation to the number of actual criminal acts*", which means that the number of indictments was *not an accurate indication of the extent of actual criminal activity*. So, (C) is the answer.

6. (This is an 'inference' question, in which the key phrase is 'crime rates per thousand'.) In lines 33-35, the author says, "*aggregated population estimates are very shaky*, and this makes it *difficult* for historians to compare *rates of crime per thousand* in one decade with rates in another decade." So, it can be inferred that, if *more accurate* information was available on the *number of people* who lived in the city in the two different decades, the result of the investigation would be *more accurate*. So, (C) is the answer.

7. (This is a 'source' question, which should be answered through an analysis of each of the choices.) The passage describes the *pre-1950's method* of historical investigation of a subject and compares it with the *post-1950's method* of such investigation of the same subject. So, it is most likely to have formed part of an essay *describing trends in the practice of writing history*. So, (B) is the answer.

### Passage 10

Answers: 1. D 2. E 3. E

{The difficult words in this passage are *fluid* (changing); *egalitarian* (emphasizing equality); *ephemeral* (short-lived); *iconoclastic* (irreverent; disrespectful); *mercurial* (unstable) and *plutocratic* (controlled by a small, rich class)}

1. (This is an 'exception' question that should be answered by examining the validity of each of the answer choices by identifying the key phrase in each.) Line 2 in the second para mentions 'inordinately wealthy class'. So, (A) is *not* the answer.

Line 6 of this para says that 'the wealthiest one percent *constantly increased its share*'. So, (B) is *not* the answer.

Line 3 of this para says that some of them *were active in commerce or the professions*. So, (C) is *not* the answer.

Lines 3-4 of this para states, "most of the wealthy were *not self-made, but had inherited family fortunes*". So, it is (D) which *contradicts a specific information in the passage*, and is the answer.

(E) is substantiated by the phrase 'these great fortunes *survived the financial panics*' in lines 4-5 of para 2.

2. (This is a 'tone' question and should be answered by examining each answer choice.) This question does not relate to the author's attitude towards Pessen's *conclusions*, in which case, from the last sentence, you can choose 'disapproving' as the answer. But it relates to Pessen's *presentation of statistics*, about which the phrase used by the author is '*refreshingly intelligible statistics*' (lines 1-2 of para 2). So his attitude towards it can best be described as 'laudatory'. So, (E) is the answer.

3. (This is a 'primary purpose' question for which, in a short passage like this, we should get the hint in the early part of the passage itself.) Though Tocqueville is mentioned in the very first sentence, there is *no reference to him later*, and the entire subsequent part of the passage is about Pessen *who had contradicted him*.

(B) and (D) *do not mention Pessen at all*, and can be rejected for that reason alone.

We learn from the first sentence that Tocqueville was an *earlier historian* whose views were *contradicted* by Pessen. There is no information in the passage for us to assert that Tocqueville's was a '*previously established*

view'. Moreover, the phrase '*at least so argues E. Pessen*' in line 3 shows that Pessen's views *have not been accepted by everyone yet*. So, (A) is *not even factually correct*, and cannot be the main point of the author.

The author says in the first paragraph that America of the nineteenth century was a '*fluid, egalitarian society*, in which individual wealth and poverty were *ephemeral* (meaning *temporary*) conditions'. This means that the social system in US at that time was *highly changeable*, and *did not have a continuity*. So, (C) is *not factually correct*, and cannot be considered to be the main point of the author.

From the phrase '*Pessen overestimates the importance* of these observations', we infer that the author considers Pessen's conclusions *incorrect*. It is (E) which states this, and is the answer.

### Passage 11

Answers: 1. A 2. C 3. D 4. A

{The difficult words in this passage are *stringent* (strict); *taboos* (prohibitions); *satiated* (eaten enough, satisfied); *gorging* (eating huge quantities) and *nuclear* (small)}

1. (This is a 'specific answer' question, and the key phrase is '*eating in the presence of others who are also not eating*'.) The author argues in the latter half of the passage that an element of fundamental importance which gave rise to *the taboos against eating in the presence of others* was that, in pre-historic times, food was *so precious* and *on-lookers so hungry* that not to offer half of the little food one had was *unthinkable*. If this argument is valid, taboos against eating in the presence of others would be *least likely* in a society *which had a plentiful supply of food*. So, (A) is the answer.

Since the passage is only about *food*, and not about *other worldly goods*, (B) is wrong.

The author's argument refers to *pre-historic times when food was scarce*. Since the nomadic way of life *preceded* the agricultural way of life, the taboo is likely to be *more stringent in a nomadic society* than in an *agricultural society*. So, (C) is *factually wrong*.

Since societies which *overemphasized privacy* are more likely to have *even more stringent* taboos concerning watching other people eat, (D) is wrong.

One of the reasons for the taboos against seeing other people eating is that those who are hungry should not see those who are "shamelessly gorging" or *overindulging*. So, a society which *discourages* overindulgence is *more likely* and *not less likely*, to have such taboos. So, (E) is wrong.

2. (This is also a 'specific fact' question, and the correct answer to it follows from the discussion of the first question.) On the basis of the same argument as in the last question, the author's hypothesis concerning the *origin of taboos* against watching other people eat ("In prehistoric times, when *food was so precious* and the *on-lookers so hungry*.....") emphasizes the "*limited availability of food*" in pre-historic times. So, (C) is the answer.

3. (This is an 'inference' question, and the key phrase is '*past attempts to explain some taboos concerning eating*'.) The phrase 'attempt to explain' occurs in line 3, and the author says here these attempts were in terms of *inappropriate social relationships*. He then says, "*Undoubtedly such elements exist* in the taboos, but there is an *additional element* with a *much more fundamental importance*". So, we can infer that the author believes that past attempts to explain the taboos were *valid but incomplete*.

So, (D) is the answer.

4. (This is a 'technique' question, and we must arrive at the answer after examining each choice and discarding those which are *inappropriate*.) After mentioning a social taboo (namely on 'watching other people eat'), and earlier attempts to explain the *origins of this taboo*, the author says, "*undoubtedly such elements exist* in the taboos, but there is an *additional element* with a *much more fundamental importance*". We can therefore say that, in developing the main idea of the passage, the author *underplays earlier attempts* to explain the origins of the taboo. So, (A) itself is the answer.

No "spiritual relationship" is mentioned either directly or indirectly in the passage. So, (B) is wrong.

Prohibition to see other people eating is a *social* taboo, and cannot be described as a '*biological phenomenon*'. So, (C) is wrong.

The author merely attempts to *explain* how a particular taboo on personal behavior *originated*. He does not try to *reorganize* the system. So, (D) wrong.

No *conjecture* about 'family life' is mentioned in the passage, nor does the author attempt to *codify such conjectures*. So, (E) is wrong.

## Passage 12

Answers: 1. A 2. D 3. C 4. D 5. B 6. A 7. A

{The difficult words in this passage are: *adolescence* (the period in one's life starting from the age of 14 and ending at 18); *sophisticated* (well-developed); *cognitive* (understanding); *dreary* (uninteresting; boring); *unwitting* (unintended); *naïveté* (innocence); *disenchanted* (disillusioned or disappointed); *ordination* (number theory); *magpie* (a small bird) and *integument* (a covering, like the skin for the human body)}.

1. (*This is a 'primary purpose' question, and we must answer it by identifying the single theme that runs through the entire passage.*) In line 5, the author says that political ideology is *dim* or *absent at the beginning of adolescence*, and its development *becomes apparent during adolescence (line 1)*. The last two sentences of para 1 mentions the *understandings (cognitive skills)* that are *required by an adolescent to develop a political ideology*. The next three paragraphs *explain these skills in detail*. So, the primary purpose of the passage can be stated to be "to clarify the kinds of understanding an adolescent must have in order to develop a political ideology" stated in (A), which is the answer.

(B) is disproved by the very first sentence in the passage.

Since there is no mention in the passage of 'political arguments', (C) is wrong.

There is no reference in the passage to any means or methods of *encouraging adolescents to develop personal political ideologies*. Therefore, (D) is wrong.

(E) is a wrong statement since the author holds in line 21 that the adolescents' political ideology is *naive* (meaning *unsophisticated*).

2. (*This is a 'specific fact' question in which the key phrase is 'contribution to the development of political ideology during adolescence'.*) In lines 15-21, the author says that the critical factors that contribute to the development of political ideology are "a feeling for many unspoken assumptions about the political system that comprise the common ground of understanding - such as what the state can appropriately demand of its citizen and vice versa, or *the proper relationship of government to subsidiary social institutions such as schools or churches*". (D) summarizes the italicized phrase above, and is the answer.

(A) is wrong since the recognition by an adolescent of *his own innocence or lack of knowledge* cannot contribute to his *political ideology*.

The knowledge of the theory of numbers may result in the growth of one's *mathematical knowledge*, but not of his *political ideology*. (B) is therefore wrong.

(C) is wrong, because it is only after the various principles are objectively evaluated that one can develop one's specific political ideas; one cannot form one's political ideas *first*, and *then* evaluate the general principles governing these ideas.

(E) is wrong, since the author in fact *emphasizes* (lines 1-9) the need of the ability to do *abstract reasoning for understanding basic political principles*.

3. (*This is an 'inference' question for which the key word and the place of its occurrence are given in the question itself.*) The 'common ground of understanding' (*line 17*) is defined in the previous lines as the 'many *unspoken assumptions* about the *political system*', which can be paraphrased as 'a society's *general awareness* of its own *political activity*'. So, (C) is the answer.

(A) is wrong, since the author talks of *conventions* and not of *legislation*.

The passage talks of the common grounds of understanding of the political system of *the society as a whole* and *not of the adolescents' experiences*. (B) is thus wrong.

Since political *tensions* are not mentioned anywhere in the passage, (D) is wrong.

(E) is wrong since, at least in democratic countries like US and India, the state (meaning the *government*) does not and cannot *control* all social institutions, such as the churches and the schools.

4. (*This is an 'inference' question, in which the key phrase is 'child's difficulty to understand'.*) In lines 21-23, the author says, "Much of the naïveté that characterizes the younger adolescent's grasp of politics stems *not from an ignorance of 'facts'* but from an *incomplete comprehension of the common conventions of the system, of what is and is not customarily done, and of how and why it is, or is not done*".

Among the choices, (A), (B), (C) and (E) are *political facts*. These, according to the author, can be *easily understood by adolescents*.

It is (D) which refers to an *argument* relating to whether something should or should not be done, and is an illustration of lines 23-24. This, according to the author, will be difficult for *young adolescents to comprehend*. So, (D) is the answer.

5. (This is an 'inference' questions, in which the key word is 'schools'.) The word 'schools' occurs in line 19 as an illustration of a *subsidiary social institution* whose relationship with the government the adolescents are learning to understand. Among the choices, it is (B) which states this, and is the answer.

The author does not prescribe anywhere *what the schools should teach the students*. Therefore, all the other choices are wrong.

6. (This is an 'inference' question in which the key phrase is 'accumulation of political knowledge by adolescents'.) In lines 10-11, the author says that the child's *rapid acquisition of political knowledge* promotes the growth of *political ideology*. He therefore considers the acquisition of political knowledge *necessary*. But, in lines 25-26, he says that *he does not wish to overemphasize the significances of increased political knowledge*, as others do. It is choice (A) which summarizes this view of the author, and is the answer.

7. (This is a 'technique' question, the key phrase in which is 'role of political knowledge'.) Political knowledge is referred to for the first time in line 10, where the author says that acquisition of political knowledge *promotes the growth of political ideology during adolescence*. But, in subsequent sentences and paragraphs, he says that acquisition of knowledge by itself is *not sufficient*, unless the adolescent is able to grasp *basic concepts and principles* also. So, (A) is the most appropriate answer to this question.

### Passage 13

Answers: 1. C 2. D 3. D 4. A 5. E 6. E 7. B

{The difficult words in this passage are *little credit* (no credit); *kinship* (blood relationship); *crucial* (very important); *ingenious* (clever); *emancipation* (freedom); *monogamy* (single marriage); *facets* (aspects); *exogamy* (custom which prohibits marriage between blood relations, particularly between cousins); *endogamy* (marriage between blood relations); *kin* (relations); *fictive* (fictitious) and *consanguinity* (blood relationship)}

1. (This is a 'Roman Numerals' question, and must be answered by evaluating each of the numbered phrases.) From the first two sentences, we learn that while Fogel, Engerman and Genovese held that plantation owners also *deserved credit for the achievement of their slaves*, Gutman *did not think so*. (The phrase 'little credit' in fact means 'no credit'). So, I is wrong.

II is true because of the first sentence.

From lines 13-17, we can say that III is also true.

IV is pointed out only by Gutman, and not by the other historians, according to lines 18-19.

So, (C) is the answer.

2. (This is an 'inference' question, in which the key phrase is 'resources that historians ought to use'.) In the first sentence of para 2, the author says, "Gutman recreates the family and extended kinship structure mainly through an ingenious use of *what any historian should draw upon - quantifiable data*". So, (D) is the ready answer.

Since no mention is made in the passage of 'oral' accounts, (A) is not substantiated in it.

(B) is wrong because birth registers are *only one form* of quantifiable data, and the author does not say that *only* birth registers should be relied on by historians for *all* their research.

(C) is wrong because what the author says is that 'quantifiable data' must be 'drawn upon' (meaning 'used'), and he does *not* say that *only such data* should be relied upon *exclusively*.

(E) is wrong, because the author himself says that Gutman's research substantiated or confirmed *some* findings of earlier researchers, *while refuting some other findings*.

3. (This is an 'inference' question, in which the key phrase is 'heritage of folklore, music and religious expression'.) Lines 21-23 in which this phrase occurs say, "the Black heritage of folklore, music and religious expression *from one generation to another*, a heritage that slaves *were continually fashioning out of their African and American experiences*'. This implies that the Black heritage *was not formed out of the experiences of only a single generation of slaves*. So, (D) is the answer.

4. (This is an 'exception' question which should be answered by evaluating each of the answer choices.) (B) is true because of line 30 which states that *marriage between Black cousins was prohibited*.

From line 27 ("Gutman suggests"), we can say that (C) is also true.

Lines 28-29 (the rules "differed from one tribal group to another") show that (D) is true.

Again, from line 27 ("Their preference for exogamy"), we can say that (E) is also true.

(A) is *not* true because lines 34-36 state that ‘fictive’ (or fictitious, or imaginary) kinship arrangements were resorted to *only when blood relationships were few*. The rules governing exogamous marriages could not have been derived from such *fictive arrangements*. So, (A) is the answer.

5. (This is an ‘inference’ question, in which the key phrase is ‘marriage practices of plantation owners’.) In lines 42-44, the author says that the *exogamous tendency* of slaves, which prohibited marriage among cousins, ‘*contrasted sharply with the endogamy practiced by the plantation owners*’. This means that plantation owners *often married their own cousins*. So, (E) is the answer.

6. (This is a ‘technique’ question which should be answered through a process of elimination of the wrong choices.) The passage is mainly about Gutman’s study of slavery in the US. So, (A) and (B), both of which refer to the study of *several* historians, is wrong.

(C) is wrong because the author describes *only Gutman’s study* in detail, and does not put forth *his own* argument.

(D) is wrong because the author does *not* point out I in Gutman’s arguments.

Gutman’s argument is *first mentioned* in lines 6-11, then *described in detail* in the second and third para, and the author gives *his judgement of the significance or value of Gutman’s study* in the last paragraph. So, (E) is the best description of the organisation of the passage.

7. (This is a ‘primary purpose’ question in a different garb, and must be answered by identifying the common theme that runs through the passage.) Since the passage mentions Gutman’s study many times, the title must mention his name prominently. So, the only possible choices for the correct answer are (A) and (B).

Of these, (A) is wrong, because the only other historians mentioned in this passage had views *very different* from Gutman’s, and so they cannot be said to have been *influenced* by Gutman.

It is (B) which is in the nature of a *one-line summary of the passage*, and is its most appropriate title.

### Passage 14

Answers: 1. B 2. A 3. D 4. C 5. D 6. A 7. E 8. D

{The difficult words in this passage are *perceptibly* (openly); *discernible* (noticeable); *radical* (revolutionary); *pagan* (non-Christian); *novel* (new); *buttressed* (strengthened); *cohesion* (unity); *dissent* (disagreement); *ecclesiastical* (religious); *overt* (open) and *discordance* (disagreement)}

1. (This is an ‘inference’ question, in which the key phrase is ‘comparing Islamic law to Jewish law and canon law’.) These phrases appear in the only sentence in para 2, and we must look for the answer in its neighbourhood. The last sentence of the previous para starts with, “Islamic law is a phenomenon so *different from all other forms of law*”, and it is in this context that he adds, “Even the two other representatives of sacred law that are historically and geographically nearest to it, *Jewish law and Roman Catholic canon law, are perceptibly different*”. His purpose in comparing Islamic law to Jewish and canon law is therefore *to support his argument* that Islamic law is a *unique kind of legal phenomenon*. So, (B) is the answer.

2. (This is a ‘specific fact’ question which should be answered by evaluating each of the choices in the light of the information in the passage.) Lines 6-11 of para 2 state, “Islam represented a radical breakaway from the Arab Paganism that preceded it; Islamic law is the result of an examination, from a religious angle, of legal subject matter that was far from uniform, comprising as it *did the various components of the laws of pre-Islamic Arabia and numerous legal elements taken over from the non-Arab peoples of the conquered territories*”. Using this information, the question in (A) can be answered as “Yes”. So, (A) itself is the answer to this question.

Obviously, (B) cannot be answered from the information in the passage.

While the second para states that Jewish and canon law are “two other representatives of sacred law”, it does not say whether or not they are the *most typical* examples of such sacred law. So, (C) *cannot* also be answered from the information in the given passage.

While the passage says that *Islamic law is less uniform* than *Jewish or canon law*, it does not state whether Jewish law or the canon law, *between themselves*, is *more uniform*. So, (D) can also *not* be answered from the information in the given passage.

While the passage says that “Islamic law represented a radical breakaway from the *Arab paganism* that preceded it”. it does not mention the *characteristics of the Arab law*. So, (E) can also *not* be answered from the given passage.

3. (*This is a 'specific fact' question in which the key phrase is 'sacred law'.*) The second para merely mentions that Jewish law and canon law are "historically and geographically nearest to Islamic law". We *cannot* infer from this sentence that *all* systems of sacred law *originated in a limited geographical area*. So, (A) is wrong.

Since, in many places in the passage, the author points out the *differences* between Islamic law, Jewish law and the canon law, we cannot conclude that the various systems of sacred law have had *marked influence on one another*. So, (B) is wrong.

The first few sentences of para 3 imply that there is a continuity in Jewish law, while 'Islam represented a *radical breakaway from the Arab paganism that preceded it*'. So, it is not correct to say that systems of sacred law *usually rely on a wide variety of precedents*. So, (C) is wrong.

From the last two lines of para 2, which state that "the variety of *legal, ethical and ritual rules* is *typical of sacred law*", we can say that systems of sacred law generally contain rules (or prescriptions) governing *different aspects* of human activity. So, (D) is the answer.

Since the *size of the population* governed by a sacred law is not at all mentioned in the passage as a contributing factor to its effectiveness, (E) is *not* the answer.

4. (*This is an 'inference' question in which the key phrase is 'application of Islamic law in Islamic states'.*) The phrase 'Islamic states' occurs in the very last sentence, which reads, "There merely existed *discordance between application of the sacred law and many of the regulations framed by Islamic states*; this antagonism varied according to place and time". Among the choices, "Islamic law has *frequently been at odds with the legal activity of government institutions*" is the best paraphrasing of this sentence, and (C) is the answer.

5. (*This is a 'technique' question and must be answered by evaluating each of the choices.*) The first sentence says, "Islamic law is a particularly instructive example of sacred law" and "it is a phenomenon so different from all other forms of law". After expressing this *general opinion*, the author proceeds to give illustrations of such *differences* vis-a-vis two other forms of sacred law which are historically and geographically nearest to it. Among the choices, it is (D) ("a general opinion is expressed and then supportive illustrations are advanced") which best describes the organisation of the passage, and is the answer.

The statement that "Islamic law is a particularly illustrative example of sacred law" cannot be described as a "*universal principle*". So, (A) is wrong.

The above statement cannot be described by the phrase "*a methodological innovation*". So, (B) is also wrong.

The first para merely states some opinions of *the author himself*, and does not *question* any "traditional interpretation". So, (C) is wrong.

Even if the statement "Islamic law is a phenomenon different from all other forms of law" may be described as a "controversial viewpoint", the passage gives only evidence to *support* it, but no evidence to *refute* it. So, (E) is also wrong.

6. (*This is a 'Roman Numerals' question which should be answered by evaluating the validity of each of the numbered phrases.*) The second sentence states that Islamic law is a phenomenon different from all other forms of law, *even though there are a considerable number of coincidences with one or the other of them as far as subject matter and positive enactments are concerned*. So, we can infer that the Islamic, Jewish and canon law *share some common features*. So, I is *implied* by the passage.

While the passage says that Islamic law was *often antagonistic to secular laws*, it does not say that Islamic law developed *in reaction to* the interference by secular political institutions. So, II *cannot be inferred* from the passage.

The passage enumerates only *two* differences among Islamic law, Jewish law and canon law. The first relates to the *level of uniformity* in them, and the second relates to *their relationship with the state*. There is no mention in the passage of their *relative emphasis on purely ethical rules*. So, III cannot also be inferred from the passage.

So, (A) is the answer.

7. (*This is an 'inference' question in which the key phrase is 'difference between canon law and Islamic law'.*) It is the second half of the last paragraph that describes the difference between canon law and Islamic law in relation to the state, and we must look for the answer to this question here. It says that, in Christianity, the conflict between state and religion appeared *as the struggle for political power* on the part of a tightly organized ecclesiastical hierarchy, and *canon law was one of its political weapons*. Islamic law, on the other hand, was *never supported by an organized institution* and there never developed an overt trial of strength between such an institution and the state. We can infer from these statements that, between Islamic law and canon law, it was

only canon law that played a role in the direct confrontation between institutions (namely the state and the church) vying for power. So, (E) is the answer.

8. (This is an 'exception' question and should be answered through a process of elimination of the wrong choices.) After stating (in the middle of para 3) that Islamic law comprised "various components of the laws of pre-Islamic Arabia and numerous legal elements taken over from the non-Arab peoples of the conquered territories", the author says, "All this was unified by being subjected to the same kind of religious scrutiny, *the impact of which varied greatly*, being almost nonexistent in some fields and in others originating novel institutions". This means that pre-Islamic legal principles were incorporated into Islamic law *with widely differing degrees of change*. So, (A) can be inferred from the passage.

From the same passage quoted above, (B) can also be inferred.

From the statement that both laws of pre-Islamic (pagan) Arabia and numerous legal elements taken over from the non-Arab people of conquered territories were subjected to *the same kind of religious scrutiny*, we can infer that the integrity of Islamic law as a sacred law *had not been compromised* by the incorporation of pagan laws. So, (C) can also be inferred from the passage.

From the statement that numerous legal elements taken over from the non-Arab peoples of conquered territories had also been incorporated in Islamic law after due religious scrutiny, we can infer that Islamic law had been *influenced by ethnically diverse elements*. So, (E) can also be inferred from the passage.

The statement (that, when subjected to the same kind of religious scrutiny, the impact on various legal elements taken over from diverse sources had *varied greatly, being almost nonexistent in some fields and originating novel institutions* in some others) implies that *some* of the legal matter incorporated in Islamic law *had no shared characteristics with the others*. So, (D) is a *factually* wrong statement that *cannot* be inferred from the given passage. So, (D) is the answer.

### Passage 15

Answers: 1. C 2. B 3. A 4. B

{The difficult words in this passage are *entrenched* (deep rooted); *iniquitous* (unjust); *emancipate* (liberate) and *manumit* (set free a slave)}

1. (This is a 'primary purpose' question. In a short passage like this, we should look for the hint in the beginning of the passage itself.) The first two sentences together mean that many white Americans who fought the War of Independence against Great Britain *felt embarrassed by the fact that they were themselves denying such independence to their slaves*. Abigail Adams and Quakers and other religious groups are referred to in the subsequent sentences *as representatives of such embarrassed White Americans who took corrective steps*. Among the choices, it is (C) which best paraphrases this idea, and is the answer.

It can be inferred from the quotation "... to fight *ourselves* for what we are daily robbing and plundering from those who have as good a right to freedom as we have", that Abigail Adams was a *white American* and not a *Black slave*. So, (A) is wrong.

(B) is wrong, because the passage talks of the *feeling of guilt felt by many white Americans* (and not of the *slaves' desire to be free*) that resulted in the gradual emancipation of the slaves.

(D), in fact, *contradicts* the information in the last two sentences that substantial action *was indeed taken to grant freedom to slaves*.

(E) *contradicts* the first sentence which says that, before the War of Independence, the system of slavery was 'deeply entrenched'. So, the word 'renewed' in (E), which implies that there had been a popular movement *even before the War of Independence* to emancipate the Black slaves, is wrong.

2. (This is an 'inference' question in which the key phrase is 'colonies before the War of Independence'.) From the very first sentence, "By the time the American colonists took up arms against Great Britain in order to secure their independence, *the institution of Black slavery was deeply entrenched*", we can infer that, before that war, *White individuals were allowed to own Black slaves*. So, (B) is the answer.

None of the other choices is supported by the passage.

3. (This is a 'Roman Numerals' question which should be answered by evaluating the validity of each of the numbered sentences.) I summarizes what Abigail wrote to her husband, and is true.

The passage does not say that the Americans felt any embarrassment *in fighting the British*, and so II is wrong.

The passage does not talk of any *inconsistency* on the part of Americans in their *conceptions of freedom*; on



the contrary, it says that many thinking Americans thought that *the slaves had as much right to freedom* as they were fighting for themselves, and *some of them even manumitted the slaves*. So, III is also *not* true.

So, the answer is (A).

4. (This is also a 'specific fact' question in which the key phrase is 'American society in the years immediately following the War of Independence.') (You are expected to be aware of enough history to know that the War of Independence was won by American settlers defeating the British troops). It is the last sentence that refers to the years following the War of Independence, and it says that during this period, 'most of the Eastern states *had made provisions for the gradual emancipation of slaves*'. It is (B) which summarizes this, and is the answer.

(D) is not correct because the passage does not say it; in fact, segregation of Black and White children in schools continued till the 1960's and was abolished only during John Kennedy's presidency.

### Passage 16

Answers: 1. D 2. B 3. E 4. E

{The difficult words in this passage are *stems from* (arises from); *ethnic* (relating to a religious, linguistic or racial group); *antagonism* (opposition); and *instigated* (provoked)}

1. (This is a 'specific fact' question without any key word or phrase, which has to be answered by evaluating each of the answer choices.) From the first sentence, we learn that the Marxist sociologist said that racial prejudice is *generated by capitalists as a means of controlling workers*. Thus, it is (D) that can be answered using the information in the very first sentence of the passage.

You can easily see that the passage does not contain information relevant for answering any of the other choices.

2. (This is an 'inference' question, in which the key phrase is 'Marxist sociologist's thesis about the origins of racial prejudice'.) After pointing out the Marxist sociologist's thesis that the origin of racial prejudice is the capitalists' desire to control workers, the author says that while this may be true in respect of Blacks in the United states, *it does not apply to the Chinese in California and the Jews in medieval Europe*. He therefore finds this thesis 'unpersuasive'. So, the answer is (B).

3. (This is an 'inference' question, in which the key phrase is 'racial prejudice in a noncapitalist society'.) Since the Marxist sociologist attributes *the genesis of racial prejudice to capitalism*, he would argue that, *in a non-capitalist society*, racial prejudice will be *nonexistent*. So, (E) is the answer.

4. (This is a 'specific fact' question, in which the key phrase is 'prejudice towards Oriental people in California'.) The phrase 'Chinese in California' occurs in line 8. The next sentence says, "However, since prejudice against these latter peoples *were not inspired by capitalists*, he has to reason that such antagonisms were *not really based on race*". Among the choices, it is (E) which states this, and is the answer.

### Passage 17

Answers: 1. E 2. B 3. A 4. C 5. B 6. C 7. D

{The more difficult words in the second passage are *premise* (assumption); *centaur* (a mythical beast with the head of a human being but the body of a horse); *antitheses* (opposites); *didactic* (instructive); and *segregate* (isolate)}

1. (This is a 'prime purpose' question, and we should spot the theme that is touched upon in a major part of the passage.) Out of the four paragraphs in the passage, the last three are devoted to the argument of the author why the study of the status of women in ancient societies should *not* be based on myths and legends as indulged in by Bachofen. So, (E) is the best answer to this question.

2. (This is an 'exception' question, with 'problems connected with the sources for knowledge of premodern cultures'.) In the second sentence, the author enumerates the problems regarding the sources of knowledge of premodern cultures: "sources are *restricted in number, fragmentary, difficult to interpret and often contradictory*". These phrases are represented by choices (D), (A), (C) and (E) respectively.

It is 'restricted accessibility' that is *not* mentioned in the passage, and (B) is the answer.

3. (This is a 'Roman Numerals' question, with 'myths recorded by ancient Greeks' as the key phrase.) The penultimate sentence in para 2 speaks of Greek records of an Amazonian society in which "women hunted and fought in wars". It is on the basis of such sources that Bachofen argued that "women were dominant in many ancient societies". So I can be inferred from the passage.

As regards inheritance customs, the passage merely mentions 'matrilineal customs' as those in which descent and property rights are traced through the female line. This statement cannot be described as an 'elaborate explanation of inheritance customs'. So II cannot be inferred.

III is incorrect because the author himself enumerates a number of other sources in the last sentence. So, only I is true, and (A) is the answer.

4. (This is a 'specific fact' question in which the key phrase is 'ancient Greeks' description of the Amazons'.) The author's view about the ancient Greeks' description of the Amazons is that it was not historically accurate, but was intended to drive home the moral that a female-dominated society was totally undesirable. In support of this view, the author says, "The Amazons were often characterized, for example, as the equivalents of giants and centaurs, enemies to be slain by Greek heroes". So, it is (C) which is the best answer to this question.

5. (This is a 'tone' question, in which the key phrase is 'reaction of males in ancient Greece to the idea of a society ruled by women'.) The first sentence of the last paragraph says, "the purpose of accounts of the Amazons for the male Greek recorders was didactic, to teach both male and female Greeks that all-female groups, ..., are destructive and dangerous". We can therefore infer that the probable reaction of males to such a society will be 'wary (meaning vigilant) and hostile". So, (B) is the answer.

6. (This is an 'inference' question, in which the key phrase is 'persisting influence of Bachofen's work'.) Having enumerated, in the second sentence of para 1, the difficulties in acquiring reliable information about the ancient world, the author proceeds to say in the next sentence, "Thus, it is not particularly surprising that some earlier scholarship (example: Bachofen) concerning such cultures has so far gone unchallenged". So (C) is the answer.

(A) and (E) are wrong because the first sentence talks of the interest in the status of women "in various periods".

The statement of the author (in the third sentence of last para) that "Bachofen was thus misled in his reliance on myths for information on the status of women" shows that he does not consider that Bachofen had unparalleled knowledge of Amazonian culture. So (B) is not correct.

Since the author disputes the truth of (D), it is not his suggestion at all.

7. (This is a 'tone' question, which should be answered by evaluating each of the choices.) The third sentence of para 4 summarizes the author's view, "Bachofen was thus misled in his reliance on myths for information about the status of women". Among the choices, the answer is 'pointed disagreement'.

### Passage 18

Answers: 1. E 2. B 3. E 4. C 5. E 6. D 7. B 8. C

{The difficult words in this passage are rallied around (supported); egalitarian (advocating equality); decried (criticized); erudition (learning); salon (a small, exclusive club); orientation (upbringing); exalted (acclaimed); regimented (disciplined); cohesion (solidarity, unity); stereotype (fixed image); camouflage (hide); deferred to (obeyed); trail blazer (pioneer) and hemmed in (restricted)}

1. (This is a 'primary purpose' question, which must be answered by spotting the theme that is touched upon in a major part of the passage.) The first sentence of the passage informs us that women were not admitted to higher education in 18th century France and England. The third sentence says, "In spite of the general prejudice against learned women, there was one place where women could exhibit their erudition: the literary salon". The subsequent part of the passage describes such salons, and the different forms they took in France and England. Among the choices, it is (E) which summarizes this, and is the answer.

2. (This is a 'specific fact' passage, with the key phrase as 'significant distinction between salonnaires and Bluestockings'.) The second para says, "The French salon incorporated aristocratic attitudes and exalted courtly pleasures ....The English Bluestockings, originating from a more modest background, emphasized learning and work over pleasure". So, (B) is the answer.

3. (This is also a 'specific fact' question, in which the key phrase is 'differences in social background between salonnières and Bluestockings'.) The sentence following those quoted in the last question says that the *French women* (accustomed to an aristocratic and a regimented life in court circles) tended to be *formal* in their salons, while the *English women* (originating from a more modest background) were *more casual* in their approach. So, (E) is the answer.

4. (This is an 'inference' question in which the key phrase is 'principles of the salonnières'.) From the sentence in the second para, "The French salon incorporated aristocratic attitudes that *exalted courtly pleasure and emphasized artistic accomplishments*", we can readily choose (C) as the answer.

5. (This is an 'inference' question in which the key phrase is 'Bluestockings' impact on society'.) The last para says, "Though the Bluestockings were trailblazers when compared with the *salonnières*, they were *not feminists*. They were *too traditional, too hemmed in by their generation to demand social and political rights*". We can therefore infer that they might have had a *more significant impact on society if they had not been unwilling to defy aggressively the conventions of their age*. So, (E) is the answer.

6. (This is an 'extrapolation' question, and should be answered by evaluating each of the answer choices.) The 18th century salon is defined in the passage (last sentence of para 1) as 'an informal university, where women *exchanged ideas* with educated persons, *read their own works* and *heard those of others*, and *received and gave criticism*." The emphasis in these salons was therefore on *study and exchange of ideas*. Among the choices, 'a humanities study group', or (D), that approaches this characteristic, and is the answer.

7. (This is a 'tone' question, which should be answered on the basis of an evaluation of each of the answer choices.) In the last para, the author first says that the Bluestockings were *not feminists*, but later says that, *nevertheless, they began the process of questioning women's (subordinate) role in society*. So, if someone else asserts that the Bluestockings were feminists, the author *will partly agree and partly disagree* with him. Among the choices, it is 'qualified disagreement' that represents this attitude. So, (B) is the answer.

8. (This is a 'primary purpose' question of a different variety, and must be answered by identifying the single theme that runs through the entire passage.) The passage is basically about *intellectual women* of the eighteenth century in England and in France. So, (A) and (B), *which do not refer to women at all*, can be ruled out straightaway. (D) is to be discarded because the author does not consider these women 'feminists' at all. (E) is wrong because the passage is about *small groups of intellectual women* and not about *women's education* in general.

From the last sentence which says that the Bluestockings "*began the process of questioning women's role in society*", we can say that they were *the precursors of feminism*. Since the entire passage is about them, (C) can be an appropriate title to the passage.

### Passage 19

Answers: 1. E 2. A 3. E

{The difficult words in this passage are *troop* (collective noun for a group of monkeys); *vertebrate* (species having backbones); *gulf* (difference); *hostility* (enmity) and *facile* (simple). *Termites* are white ants and *Rhesus macaque* is a species of monkeys.}

1. (This is a 'main purpose' question for which we should look for the hint in the first sentence itself.) The first sentence says: "When the same parameters and quantitative theory are used to analyze both termite colonies and troops of rhesus macaques, we will have a *unified science of sociobiology*". The subsequent sentences give instances of similarities between them. It is (E) which states in other words the first sentence, and is the answer.

2. (This is a 'tone' question, for which the answer should be chosen through a process of elimination of the wrong choices.) The author says that he has been 'increasingly impressed' with the functional similarities between insect and vertebrate societies, and *speculates* that a comparison between the two can lead to the *beginnings* of a *general theory*. His attitude can therefore best be described as '*guarded optimism*'. So, (A) is the answer.

His attitude cannot be called 'unqualified enthusiasm' because he is only talking of the *beginnings* of a new theory which *may or may not* be finally validated on the basis of further observation and research.

Nor can be called 'objective indifference', 'resignation' or 'dissatisfaction'.

3. (This is an 'inference' question in which there is no particular key phrase because the entire passage is about insect and vertebrate societies.) The catch in this question is in the word 'suggests'. (A), (B), (C) and (D) are explicitly stated in the passage, and are not mere suggestions by the author. Regarding 'structural differences' between insect and vertebrate societies, the author says that they 'seem, at first glance, to constitute such an immense gulf between them'. Thus, it is (E) that is suggested in the passage, and is the answer.

### Passage 20

Answers: 1. A 2. D 3. E 4. E

{The difficult words in this passage are: *morphology* (physical characteristics); *ascribe* (attribute); *constraints* (limitations); *archetypal* (typical); *rage* (anger); *gluttony* (eating a lot of food); *assortment* (mixture); *frailties* (weaknesses); *maladaptive* (poorly suited; harmful); *appendix* (a small growth attached to the large intestine); *comprehend* (understand); and *adaptive* (beneficial)}

1. (This is a 'primary purpose' question, for which, in a short passage like this, we should look for a hint in the first sentence itself.) The first sentence says that some modern anthropologists hold that human behavior, just like human physical characteristics, is shaped by evolution. This may be paraphrased as 'a position on the foundations of human behavior'.

The subsequent sentences say that what these anthropologists imply by their theory is not that evolution dictates human behavior, but that it imposes constraints on human behavior through the complicated emotions of rage, fear, greed etc, which have become as natural to human beings as their appendixes.

In the last sentence, the author says that we must fully understand the implications of the origins of these emotions to realise how badly we are now being guided by them so that we can come out their constraints.

We can therefore say that the primary purpose of the passage is to present 'a position on the foundations of human behavior and on what those foundations imply'. So, (A) is the answer.

The passage does not say that human morphology and human behavior developed *parallelly*, even though, according to some anthropologists, they are both results of evolution. So, (B) is wrong.

The second para says that some emotions are also culture-specific in addition to being evolutionary, but it does not specify any test to classify behavior patterns as either evolutionary or culture-specific. So, (C) is not the answer.

The last sentence says, "we must then begin to resist the pressure (of emotions and motives)", but it does not suggest any practical method for resisting these pressures. So, (D) is not the answer.

Except enumerating the human emotions and motives (rage, fear, greed, gluttony, joy, lust, love), the author does not give any overview (meaning 'general description') of them. So, (E) is wrong.

2. (This is an 'inference' question, in which the key phrase is 'control over the frailties that constrain our behavior'.) The word 'frailties' occurs in para 2, and we must look for the answer to this question here. After pointing out that some of these frailties are presently maladaptive (meaning harmful to us), the author says, "We should need to comprehend thoroughly their adaptive origins in order to understand how badly they guide us now. And we might then begin to resist their pressure". This can be paraphrased as, "Before we try to control these frailties, we should understand how they evolved and how they function now". It is (D) which says this, and is the answer.

3. (This is an 'inference' question in which the key phrase is 'appropriate analogy from human morphology'.) Note that the answer must relate to human 'morphology' or 'physical characteristics', and not to human emotion or behavior. Among the choices, (B) and (D) refer to human emotions or behavior, and can straightaway be ruled out.

The first part of (A) relates to evolutionary physical characteristics, but the second part in it relates to one's knowledge of the names of the different colours, which is a 'culturally acquired', and not a physical, characteristic. So, (A) is not the answer.

The first part of (C) relates to an acquired, and not an evolutionary, skill. So, (C) is not the answer.

The first part of (E) mentions an evolutionary and beneficial physical characteristic of mountain peoples, while the second part refers to an evolutionary physical constraint of people living in the plains. So, (E) is the best analogy from human morphology to the 'details' and 'constraints' relating to human emotions.

4. (This is an 'inference' question, in which the key phrase is 'maladaptive frailties'.) (The word 'evolution' means that every organism will evolve by adapting its characteristics to its external surroundings. What some modern anthropologists hold is that, just like physical characteristics, human behavior has also 'evolved' by

adapting itself to external environment.) The words 'frailties' and 'maladaptive' occur in the first sentence of para 2, and the clue to the answer lies in the phrase '*presently maladaptive*' in this sentence. This implies that some of the human frailties (meaning *emotions such as rage, fear, greed, ...*) which were adaptive and *therefore beneficial in a human environment as it existed once upon a time* have now become maladaptive (or harmful) in the *present* human environment. This means that *changes in total human environment can occur faster than the evolutionary changes in human emotions and motives*. It is (E) which says this, and is the answer.

(This is a relatively more difficult passage than what usually occurs in GRE and GMAT.)

### Passage 21

Answers: 1. C 2. A 3. D 4. E 5. C 6. B 7. D

{The difficult words in this passage are: *aspects* (forms); *emancipation* (giving freedom to slaves); *segregation* (forced isolation of Blacks from the Whites); *fluid* (not rigid); *persuasive* (forcefully argued); *malleable* (flexible; not rigid); *untenable* (illogical); *demographic* (relating to the population); *profiles* (characteristics; qualities); *feasible* (practicable; possible); *overwhelmingly* (predominantly); *manumission* (freeing of slaves); *hedged about with* (circumscribed by); *numerous* (many); *proficient in* (skilled in); *traverse* (cross a barrier); and *counterparts* (similarly placed persons)}

1. (This is a 'primary purpose' question for which we should identify the theme that runs through the entire passage.) The passage opens with a reference to scholars contrasting slavery in the US and Brazil *in the light of racial patterns which developed in the two countries after emancipation* (or after the abolition of slavery by law). While the abolition of slavery was followed by *rigid racial segregation* in US based on color alone, the system was *fluid* in Brazil, where the definition of race was based *equally on color and economic status*. The passage then refers to the *traditional explanation* for the difference between US and Brazil in terms of the Roman catholic religion practiced by settlers in Brazil (who were mostly from Portugal), which recognized the *humanity of the Blacks*. The author disagrees with this explanation, and refers to 'recent studies' which attribute these difference to 'contrasting economic circumstances and demographic profiles' at significant periods in the histories of the two countries. Persons of *mixed race* soon appeared in both countries and, while they were considered to be on par with *Blacks* in USA, they formed an *intermediate race* in Brazil to which Blacks *could graduate* on the basis of newly acquired skills, economic or intellectual achievement or racial heritage. So, we can say that the passage is primarily concerned with 'describing the factor *currently thought to be responsible* for the differences in the racial patterns that evolved in Brazil and the US". Thus, (C) is the answer.

The passage is not about *contrasting the systems of slavery* in the two countries, but about *explaining the reasons* for the contrasts. So, (A) is not the answer.

Except stating in the first sentence of para 2 that the arguments of the earlier scholars 'seem untenable', the author *makes no other reference* to those arguments. Therefore, (B) cannot be considered to be the main concern of the author.

(D) is wrong, because there is no mention anywhere in the passage of the *need for further study* of the issue.

In the first paragraph, the author mentions the earlier theory of scholars regarding the factors that made the status of Blacks in the US lower than that of Blacks in Brazil, but *disagrees with this theory in the opening sentence of the second paragraph*. In subsequent sentences, he writes more about persons of *mixed race* in these two countries than about the Blacks. Thus, (E) is also not the main concern of the author.

2. (This is a 'specific fact' question, in which the key phrase is 'explanation by early scholars'.) Though the phrase 'early scholars' does not appear in the passage, lines 7-8 say, "*Until recently*, the most persuasive explanation for these differences was that Portuguese *institutions*, especially the Roman Catholic church and Roman civil law, promoted recognition of the slave's humanity". So, (A) is the answer.

3. (This is an 'inference' question, for which the question itself cites the location of the key phrase as line 11.) The phrase 'on the other hand' in lines 14-15 implies that what the English colonists did in US was exactly *opposite* that of what the Portuguese had done in Brazil, mentioned in the previous sentence. The previous sentence says that the Portuguese settlers in Brazil were influenced by their *religious and legal systems* and accorded recognition to the slave's *humanity*. It therefore follows that the English colonists in US were *not* influenced by their religious or legal systems as regards the way they treated *their slaves*, but *evolved a totally new social system which had no precedents or influences*. So, it is (D) which is meant by the idiomatic phrase 'constructed their system of slavery out of whole cloth'.

(A) is wrong, since there is no reference in the passage to the *veracity* of the English settlers.

(B) is too general a statement, not particularly supported in the passage.

In those days, *both* Brazil and United States had what may be described as 'frontier economies'. The statement that the policy of US settlers alone was tailored *to serve the needs of a frontier economy* is therefore incorrect.

(E) is the result of (D). So, (D) is the better answer to this question.

4. (This is an 'inference' question, in which the key phrase is 'explanation proposed by early scholars'.) In the second para, the author says that the explanation of early scholars was that the difference between the racial patterns in US and Brazil was *due to institutional reasons*. In the first two sentences of para 3, he says, "The assumption that institutions alone could so powerfully affect the history of the two countries seems, on reexamination, *untenable*". He then refers to 'recent studies' which give *more credible reasons* for the difference based on economic and demographic factors. So, what the author implies is that the explanation of the early scholars is 'questionable in the light of current scholarly work'. So, (E) is the answer.

5. (This is a 'specific fact' question, in which the key phrase is 'intermission, manumission, and the shortage of skilled workers in Brazil'.) The clue to the correct answer is found in the phrase 'The consequence was the development in Brazil of a large class of persons of mixed race, proficient in skilled trades and crafts'. This consequence was the result of intermarriage, manumission and the shortage of skilled workers among the Whites, *which are mentioned in the previous three sentences*. So, (C) is the answer.

(A) would have been the correct answer if the phrase in the question was '... primarily in order to describe which of the following?'. Since the word used is 'establish' and *not* 'describe', (A) is not the answer.

There is no description of 'the *life-style* of persons of mixed race' in the passage, though there is reference to their *economic conditions*. Thus, (B) is not the appropriate answer.

The second paragraph mostly talks of persons of *mixed race*, and not of *slaves*. So, (D) is also wrong.

Since the question talks of the author's mention of *workers of only Brazil* (and *not of United States*), (C) is a better answer than (E).

6. (This is a 'specific fact' question, in which the key phrase is 'ineffectiveness of Brazilian laws prohibiting intermarriage'.) The word 'intermarriage' occurs in line 20, and the full sentence is, "Though intermarriage was illegal in both countries, the laws were unenforceable in Brazil since *Whites formed a small minority in an overwhelmingly Black population*". So, (B) is the ready answer.

7. (This is an 'inference' question, in which the key phrase is 'quotation marks around the word 'place' ".) If the word 'place' had not been put *within quotation marks*, it would have simply referred to the *City of New Orleans*. The quotation marks here, and the reference to 'the economic and *social position*' of their counterparts in Brazil, show that the author has used the word 'place' to mean *both* a physical location and a social status. So, (D) is the answer.

## Passage 22

Answers: 1. A 2. D 3. B 4. A 5. E 6. C 7. D 8. B

{The difficult words in this passage are: *shogun* (the ruling family of Japan); *samurai* (a regional chieftain in Japan, similar to the Zamindars or Jagirdars of pre-independence India); *stimulus* (encouragement); *martial* (battle-like); *to keep pace with* (to equal); *laxity* (lack of commitment); *domain* (administrative unit); *constrained* (limited in activity); *unfeasible* (impractical); *solvency* (availability of funds for day-to-day expenses)}

(*Tokugawa Shogun is the name of the Japanese Emperor family. Samurai is the name of the local overlords, roughly equivalent to the zamindars or jagirdars of India before independence.*)

1. (This is a 'source' question which must be answered through a process of elimination of the wrong choices.) The very first sentence of the passage refers to the *financial stress* of Japanese feudal lords in the 'eighteenth century'. The subsequent sentences talk of a *stimulus to trade* during that period, the *state of agriculture* during that era, *cash profits from government-owned mines*, and a *new source of revenue* for the government. So, this passage is quite likely an extract from an *economic history* of Japan. So, (A) is the answer.

(B) is wrong, since any *memoirs* would have been narrated *in the first person*.

(C) is wrong, since *no fictitious characters* are mentioned in the passage.

Since there is no reference in the passage to *western feudalism*, (D) is also wrong.

Since there is no mention of *folk tales* in the passage, (E) is also wrong.

2. (This is an 'extrapolation' question which should be answered through a process of elimination of the inappropriate choices.) The Tokugawa Shoguns' main problem was '*solvency* for the government' (line 39) which

means that their *expenditure* exceeded their *revenue*. Among the choices, (D) is the aptest analogy to this problem.

(A) is an instance of a *prospering* business, and *cannot* be an apt analogy to the financial difficulties of the shoguns.

(B) refers to an *earlier prudent step* of taking insurance which salvaged a business that was ravaged by fire. This is not an apt analogy to this case.

In (C), the owners of the business are *helpless against the Bank*, whereas the shoguns had the *political power to compel a system of forced loans from the traders*. So, (C) is also *not* a suitable analogy to the situation of the shoguns.

In (E), the small business has been able to *limit its expenditure*, which the shoguns were *not* able to do. Thus, (E) should also be discarded.

3. (This is a 'tone' question, for which we should arrive at the answer through a process of elimination of the wrong choices.) What the samurai could be criticized for was their tastes and habits growing expensive (lines 7-10), but this was the result of years of *peace, scholarship, martial exercises and simplified administrative tasks* which, by themselves, were *desirable*. The *negative result* from such *positive developments* was thus a historical inevitability for which the samurai could not be blamed. Among the choices, 'mildly sympathetic', or (B), is the best phrase to describe the author's attitude towards them.

4. (This is a 'specific fact' question, in which the key phrase is 'financial problems experienced by Japan's feudal overlords'.) This is another version of Qn. 2, and the answer is (A).

5. (This is an 'inference' question, in which the key phrase is 'individual samurai did not find it easy to recover from debt'.) The last sentence of para 1 says, "Once in debt, neither the individual samurai nor the shogun himself found it *easy to recover*", and the next sentence says, "It was difficult for individual samurai overlords to increase their income because the amount of rice that farmers could be made to pay in taxes was not unlimited". Thus, (E) is the ready answer.

6. (This is an 'inference' question, in which the key phrase is 'tax collector'.) The phrase 'laxity among the tax collectors' occurs in line 13, and is followed by the information within brackets 'the nearly inevitable outcome of hereditary office holding'. This implies that the office of the tax collector was *hereditary*, and thus *remained within families*. So, (C) is the answer.

7. (This is an 'extrapolation' question, which should be answered through a process of elimination of the wrong choices.) Lines 24-30 talk of the shoguns' search for avenues for increasing their revenue, and describe how each of these alternatives posed difficulties. The word 'this' in line 30 can therefore best be replaced by 'the difficulty of increasing government income by other means'. So, (D) is the answer.

8. (This is an 'inference' question, in which the key phrase is 'city merchants'.) The phrase 'city merchants' occurs in the first sentence of the last para which reads, "Most of the country's wealth, or so it seemed, was finding its way into the hands of city merchants". Therefore (B) is the ready answer.

### Passage 23

Answers: 1. C 2. B 3. E 4. D 5. A 6. C 7. E

{The difficult words in this passage are *stimulus* (incentive); *medieval* (relating to the 15th and 16th centuries); *barely* (hardly); *subsistence* (the very minimum needs for living); *crusade* (holy war); *vassals* (subjects); *lay* (common people); *ecclesiastics* (churchmen); *sovereign* (king); *mushroomed* (multiplied); *inestimable* (precious); *intangible* (abstract, unseen) and *fragment* (portion)}

1. (This is a 'specific fact' question, in which the key phrase is 'agricultural revenues in excess of the amount needed for subsistence were used by medieval kings'.) Lines 10-11 say, ".... currency gained from the sale of food went into the royal treasury to be used in waging war". So, (C) is the answer.

2. (This is a 'specific fact' question, in which the key phrase is 'source of revenue in medieval France'.) Line 19-22 refer to 'vineyard expansion' as having a '.... a stronger immediate impact upon gross national product'. So, (B) is the answer.

None of the other choices is even mentioned in the passage.

3. (This is a 'Roman Numerals' question which should be answered by examining the validity of each of the numbered phrases.) 'Renovation of a large cathedral', or I, is implied in line 19.

The passage says that it was *only the food surplus* that was translated into commercial investment. So, if there had been a sharp increase in the birth rate in the country, it would have substantially *reduced the food surplus* and, consequently, the funds available for commercial investment would have *got reduced*. Thus, II is also implied in the passage.

III, or 'Invasion of France by Henry II', is implied in line 12.

So, the answer is (E).

4. (This is an 'inference' question, in which the key phrase is 'more people could enter the government and the church'.) The phrase 'more people for government' occurs in the last sentence of para 1, part of which reads, ".... when food surpluses increased, it became possible to release more people for *government*, commercial, religious, and cultural pursuits". So, (D) is the answer.

5. (This is an 'inference' question, in which the key phrases are 'new bell tower' and 'new water mill'.) These phrases occur in line 35. Earlier, in lines 31-32, the author has said that building of cathedrals produced '*intangible dividends* of material and moral satisfaction for the community'. A bell-tower is a part of a cathedral and so, according to the author, must be yielding an '*intangible dividend*'. A water-mill, on the contrary, would have yielded a *tangible, material dividend*. So, (A) is the answer.

6. (This is an 'inference' question, in which there is no particular key phrase.) The central theme of the author is found in lines 8-11, where he mentions that it is *agricultural surplus* that provides the capital required for *commercial investment*. This surplus can be generated either by *increasing production* or by *reducing consumption*. So, (C) is the answer.

None of the other choices is *mentioned in the passage*, though each one of them is a valid economic principle.

7. (This is an 'inference' question, for which the key phrase and the line number are given in the question itself.) In lines 35-37, the author says that medieval France had 'little room for investment over and above the preservation of life'. If, *in spite of this situation*, there was *commercial growth* in France, it must have been due to *sacrifices made by men and women* by keeping their consumption to the barest minimum, *thereby generating surpluses for commercial investment*. So, (E) is the answer.

## Passage 24

Answers: 1. D 2. B 3. A 4. B 5. C 6. C 7. B

{The difficult words in this passage are *historiographical considerations* (considerations of history and autobiography); *succumb* (fall victim to); *perception* (point of view); *complementary* (adding up to a whole); *juxtaposition* (being placed side by side). We can also infer that the author of this passage is a woman because of the use of pronoun *her* in Qn. 8.)}

1. (This is a 'primary purpose' question, to answer which we should try to identify the theme that runs through the entire passage, by getting the hint from the first sentence of each para.) From the first sentence of the passage, we learn that the author has written a history of Black women in the United States, and that she had *three historiographical considerations for attempting this work*. These three considerations are enumerated ("First", "Second", "Finally") and described in the three paragraphs in the passage. So, the primary purpose of the passage can be stated to be the description of *the author's views on three historiographical issues*. So, (D) is the most suitable answer.

Since no *dispute* is mentioned in the passage, (A) is wrong.

Since there are *three* issues, and not just *one*, mentioned in the passage, (B) is not the appropriate answer.

The three issues mentioned in the passage are *all valid* ones, and not *contradictory or alternative* to one another. So, (C) is wrong.

(E) is wrong because, again, the three considerations discussed in the passage are *all those of the author herself*, and *not of other historians*.

2. (This is a 'tone' question, and must be answered by evaluating each of the answer choices.) The historical perspective discussed in lines 3-6 is that "Black people and White people in the United States represent *two different cultures*, with *different traditions* and *often diametrically opposed past experiences*". Having said this,



the author points out, in lines 8-10, that the recognition of the existence of such large cultural subdivisions *does not mean succumbing to a narrow particularistic vision*. In other words, she does not consider the view stated by her in lines 3-6 as *particularistic*. So, the answer is (B).

3. (This is a 'source' question, which should be answered through a process of elimination of the inappropriate choices.) As we have seen in Qn. 1, the author has written a book on the history of Black women in the United States, and gives three reasons to explain what prompted her to attempt this difficult and studious task. The most appropriate place in which she would have stated these is the preface to that book. So, (A) is the most appropriate answer.

You can easily notice that none of the other choices is appropriate.

4. (This is an 'inference' question in which the key phrase is 'separate history of Black women'.) This phrase occurs in line 25. One of the reasons why the author considers that a separate history of Black women in the United States is necessary is that she "became convinced that standard histories of the United States *have tended to overlook the contributions and viewpoints of Black Americans and women*" (lines 19-21). So, if there had already existed a history of the United States *that included the contributions and viewpoints of Black women*, the author would have considered a separate history of Black women *unnecessary*. So, (B) is the answer.

(A) is wrong, because it talks *generally* of 'American women', and not of 'Black women'.

(C) will not satisfy the author because, according to her, Whites and Blacks in the United States have had *different experiences*, and *all these* must be chronicled.

(D) and (E) are wrong because, in the last ten lines, the author repeatedly emphasizes that the history of Blacks is likely to be *interpreted differently* by White and Black historians, and that, for a correct understanding of the real history, *both* must be encouraged.

5. (This is an 'inference' question for which both the key phrase and its location are mentioned in the question itself.) The first consideration that the author had for writing the history of Black women is explained in the first paragraph: it was her conviction that, even though the Black women also formed part of the population of the United States, and their history is also part of the US history, their traditions and past experiences were *very different from those of the Whites* and so, *needed to be chronicled separately*. She anticipates the criticism that this view may be considered by some to amount to 'succumbing to separatism'; so, in lines 13-16, she asserts that *it is not so*. It is in *this context* that she says that, in the same way that it is universally accepted that there can simultaneously be a *comprehensive* world history, and *also* a history of France or India *separately*, there should also be a *comprehensive* history of the people of the United States as a whole, and also *separate* histories of the *White* people and the *Black* people in the United States. So, the history of France or India has been used by her *as an analogy for the history of the Black Women in US*. So, the answer is (C).

6. (This is a 'tone' question, which should be answered by evaluating each of the answer choices.) The phrase used by the author in lines 21-22 is, "I *hope and expect* that the present generation of US historians will rectify this mistake.....". The tone of this statement is therefore one of *optimism*, and not 'arrogant', 'sentimental', 'ironic', 'apologetic'. So, (C) is the answer.

7. (This is an 'inference' question which should be answered through a process of elimination of the wrong choices.) In para 3, the author mentions her third reason for writing the history of the Black Women in US as "the role that a White historian can *legitimately* play in the writing of Black history". The obvious inference, therefore, is that the author is a *White* historian. (A) and (D) can therefore be straightaway eliminated.

(C) and (E) are wrong, because both talk of 'minority groups' *in general*, whereas the entire passage is *more specific* about *Black women* among the minorities.

So, (B) is the answer.

### Passage 25

Answers: 1. A 2. C 3. A 4. E 5. B 6. D

{The more difficult words in this passage are: founding (establishing); *refurbish* (renovate); *benefactions* (donations); *disparity* (difference); *contend* (argue); *monetarily* (financially); *appropriations* (budgetary allocations); *occupational requirement* (a requirement for getting employment); *overwhelming* (large) and *apparent* (clear)}

1. (This is a 'specific fact' question, in which the key phrase is 'establishment of many small private Black

colleges'.) The answer to this question is found in the very first sentence, "The years that saw the founding of Cornell and Stanford Universities were also the years when many small private (Black) colleges were established in the southern United States to serve the educational needs of *the newly freed slaves*". So, the timing of the establishment of these small private colleges *coincided with the emancipation of the slaves*. So, (A) is the answer.

2. (This is an 'inference' question, in which the key phrase is 'occupational requirement'.) The phrase 'occupational requirement' occurs in line 35, and we should look for the answer to this question in this neighbourhood. In lines 33-38, the author relates the non-occupational requirement of high school education upto 1910 to the fact that *only about fifteen percent of the age group 14-17 were enrolled in high schools at that time*. So, he implies that, if high school education had been an occupational requirement in 1910, the proportion of persons in the age group 14-17 enrolled in high schools would have been *greater than fifteen percent*. So, (C) is the answer.

3. (This is an 'extrapolation' question which should be answered by an evaluation of each of the answer choices.) In lines 33-38, the author points out that so long as the number of white youths going to school was itself very small (the *national* average for the youth consisting of *both white and black persons* being *only fifteen percent*), nobody noticed the great disparity that existed between the opportunities available to the White and the Black youths, but when, after the Second World War, school and college education *became common among White youths*, the disparity became very obvious.

(A) states that, till recently, *very few jobs required computer experience* and so, the disparity in the availability of computers in different schools went *unnoticed*, but now, with more job opportunities for computer specialists, *this disparity has become noticeable*. This is a close parallel to the situation described in lines 33-38, and (A) is the answer.

4. (This is an 'inference' question in which the key phrase is 'gifts to private Black institutions'.) The phrase 'benefactions for private Black higher educational institutions' occurs in line 10. The full sentence states, "While great nineteenth century industrial entrepreneurs like Cornell and Stanford gave amounts ranging from half a million to tens of millions of dollars to found great teaching and research universities,.....*there were no comparable benefactions for private Black higher educational institutions*". The next sentence says that, *only in twentieth century*, bodies like Rockefeller Foundation started giving support to struggling private Black institutions "single-gift amounts *larger than a few thousand dollars*". We can infer from these sentences that, in the nineteenth century, the only gifts to private Black institutions were in amounts "of *a*". So, (E) is the answer.

5. (This is a 'specific fact' question, in which the key phrase is 'Julius Rosenwald Fund'.) This phrase occurs in the last sentence of para 1, in which Julius Rosenwald Fund is coupled with Rockefeller Foundation as *two examples* of bodies which started giving substantial financial support to struggling private Black institutions in the twentieth century. So, (B) is the answer.

6. (This is a 'Roman Numerals' question, and should be answered by evaluating each of the numbered phrases.) The second sentence says that, in the nineteenth century, entrepreneurs like Cornell and Stanford donated huge amounts *to found great private teaching and research universities*, while less famous persons gave impressive sums *to expand and refurbish modest college establishments that had already taken root*. It also says that *there were no corresponding munificence for helping Black institutions*. So, only II and III are true, and the answer is (D).

## Chapter 3: 'Science' Passages

### Passage 1

Answers: 1. E 2. A 3. B 4. D

{The difficult words in this passage are *primates* (family of living beings consisting of apes, monkeys and human beings); *cerebral convolutions* (folds in the brain); *lineage* (ancestry) and *ecological niche* (place in nature)}

1. (This is a 'primary passage' question. In a short passage like this, we should look for the hint in the very first sentence or two.) The first sentence of the passage mentions *two sources of evidence* regarding the evolution of primates - *fossil endocasts* and *brains of living primates*, and the subsequent sentences describe the *strengths and the limitations* of each one of these sources. In other words, the author of the passage *evaluates* the two sources of evidence. So, (E) is the answer.

2. (This is a 'specific fact' question, in which the key word is 'endocasts'.) The fourth sentence says, "The fossil endocasts provide direct evidence of brain evolution, *but the information they provide is only external*". So, (A) is the answer.

3. (This is also a 'specific fact' question, in which the key phrase is 'evolutionary biologist must avoid ....') The last sentence *warns* the scientists *against drawing wrong inferences* about the *evolutionary sequence* merely from a study of the brains of the *living primates* because '*such a study can be misleading*'. So, (B) is the answer.

4. (This is an 'extrapolation' question which must be answered by evaluating each of the answer choices.) From the second and third sentences, we learn that the endocasts are in the nature of *molds of the surface of the brain*. Among the choices, deriving information about the brain from an endocast is similar to deriving information about a foot of a person from a mold of his footprint. So, (D) is the answer.

### Passage 2

Answers: 1. B 2. D 3. A 4. B

{The difficult words in this passage are *abrasion* (erosion by friction); *ion* (an electrically charged particle within an atom); *weathering* (exposed to the action of elements such as wind and water) and *synthesize* (create artificially)}

1. (This is a 'primary purpose' question in a different format, for which we should find the answer by spotting the single theme that runs through the entire passage.) The author first describes the properties of one of the *resistates* (namely *monazite*), particularly its capacity, when buried within the first two kilometers of the earth's crust, *to remain for billions of years* without dissolving or breaking down chemically or *giving out radiation*. He concludes this short passage with the statement that scientists have now developed the ability to create *artificial resistates out of nuclear waste*. The implication is that *these artificial resistates can be safely buried in the earth's crust, and there will be no radiation hazard from them to living beings on earth in the foreseeable future*. Thus, *a knowledge of the properties of resistates* has helped scientists to solve the problem of the disposal of waste from nuclear plants without any danger of radiation to human beings and other living creatures on earth.

Among the choices, "Artificial Resistates: A Solid Solution to the Nuclear Waste Problem" is the most appropriate title to this short passage. So, (B) is the answer.

You can easily see that none of the other suggested titles represents the main idea of the passage.

2. (This is an 'inference' question, in which the key phrase is 'conditions encountered only in the outer two kilometers of the Earth'.) As we have seen above, the author's purpose in describing the properties of the resistates, *when buried within the first two kilometers of the earth's crust*, is to show that, by artificially creating such resistates out of nuclear waste, *the problem of the disposal of nuclear waste can be solved*.

So, (D) is the most appropriate answer to this question, since it is *easier* to bury any material *within two kilometers* from the surface *than at a much greater depth*.

3. (This is an 'inference' question, in which the key phrase is 'monazite's properties'.) The first reference to monazite is made in the second sentence, which says that it *does not exhibit radiation damage* even after having been buried for *1.8 billion years*. It is on the basis of this information that the author says that nuclear waste can

be converted into an *artificial resistate similar to monazite* and *buried under the earth without any danger to living species for at least 1.8 billion years to come*. His argument will certainly be weakened if *fresh samples of monazite* are discovered, which, though they are *only one billion years old*, *do exhibit radiation damages*.

So, (A) is the answer.

4. (*This is a 'tone' question which has to be answered by evaluating each of the answer choices.*) The author advocates the use of artificial resistates made out of nuclear waste to solve the problem of disposal of such waste, and *his recommendation is based on the property of monazite to survive two weathering cycles*. Obviously, he is *impressed with this property of monazite*. So, the answer is (B).

Had he considered this property 'suspect', 'abnormal' or 'ironic', he *would not be recommending the conversion of nuclear wastes into substances similar to monazite*.

Had he considered this property 'miraculous', and therefore *very special to monazite*, he would not have been confident that *any other resistate*, either natural or artificial, would have *identical properties*. In this case, he would not have recommended the method of nuclear waste disposal *based on this property*. So, all the other choices are wrong.

### Passage 3

Answers: 1. D 2. E 3. C 4. A 5. E 6. D 7. B 8. A

{The difficult words in this passage are *cavern* (a large cave); *precipitation* (rain); *permeate* (seep); *impetus* (driving force); *elongated* (lengthy); *degraded* (oxidised); *residue* (remainder); *adsorb* (hold on to the surface); *pollutant* (something which fouls the air or water); *skewed* (distorted); *flora and fauna* (plants and animals) and *scanty* (very little)}

1. (*This is a 'primary purpose' question for which we should identify the theme that runs through the passage.*) The first sentence of the passage gives the definition of 'karst'; the second and the third sentences mention the *geological causes* of the *karstification process*; and the *entire rest of the passage enumerates the characteristics or features of the karst terrain*. So, 'describing the characteristics of the karst terrain' is the primary concern of the author. So, (D) is the answer.

Each of the other choices is referred to in the passage, but only in *one or two sentences* each.

2. (*This is a 'specific fact' question, in which the key phrase is 'combinations essential for the development of karst features'.*) The phrase 'development of the karst features' occurs in the last sentence of para 1, and this enumerates the requirements as (i) soluble rocks, (ii) carbonic acid, (iii) ample precipitation (or rain) and (iv) openings in the rocks. Of the five given choices, it is (E) which mentions *two of these required features*, and is the best answer.

3. (*This is an 'inference' question, in which the key phrase is 'role of the people in changing the conditions in karst regions'.*) The first four paragraphs mention the role played by *various natural forces* in the karstification of a region. It is only the last para that refers to *the role played by 'people'*. The first two sentences state that, unlike in other regions where it was the *people* who disturbed an existing ecological balance, the ecological conditions in karst regions were 'already skewed', and 'the flora and fauna were developed in special and sometimes *erratic ways*'. The next sentence adds, "People have *added to the already skewed situation by deforesting hilly karst*, which in turn has accelerated the *erosion* of the scanty soil, and by *polluting the groundwater* in many places". Among the choices, it is (C) which paraphrases this information in the last para, and is the answer.

4. (*This is a 'specific fact' question, in which the key phrase is 'soils in karst regions'.*) The karst soil is mentioned in the last three sentences of the fourth paragraph, which say, "The *poor capabilities* of karst regions *for waste disposal* are worsened by the *thinness of the soil*. While undergoing karstification, many carbonate rocks leave insoluble residue, and their soils are *regenerated more slowly* than those of nonsoluble rocks". This means that, *once removed*, such thin soils *are not rapidly replaced*. So, (A) is the answer.

(E) looks like a possible answer, but is not correct because the last sentence of para 4, which refers to the quality of *adsorption* of karst soil, *does not relate it to the growth of vegetation*.

5. (*This is a 'Roman Numerals' question, which should be answered by evaluating the validity of the numbered phrases.*) I follows from the latter half of the third sentence in para 4.

II follows from the first sentence in this paragraph.

III follows from the last sentence in the second paragraph.

So, (E) is the answer.

6. (This is a 'specific fact' question, in which the key phrase is 'geologic formation in the Southwestern United States'.) The phrase 'arid Southwest' occurs in the last sentence of para 3, and we should locate the answer to this question in this region. The previous sentence says that *differential erosion* is common where soluble carbonate rocks are adjacent to nonsoluble rocks. The next sentence says that both Appalachian ranges in Eastern United States and arid Southwest have carbonate rocks. So, we can infer that both areas exhibit *differential erosion*. So, (D) is the answer.

7. (This is an 'inference' question in which the key phrase is 'carbonate rock regions'.) Carbonate rock regions are mentioned in para 2 and 3, but the information in them does not support any of the answer choices. The third sentence of the last para says, "People have added to the already skewed situation by *deforesting hilly karst*". This implies that the karst region is *capable of supporting the growth of trees*. So, (B) is the answer.

8. (This is an 'exception' question, whose key phrase is 'poor capability of carbonate rock terrains to dispose of waste'.) The phrase 'unreliability for the disposal of waste' occurs in the second sentence of para 4, and we should look for the answer to this question in this para.

The third sentence of this para says that, if permeability is *low*, the rocks do not accept waste *at sufficient rates* and, if the permeability is *high*, they permit the waste to move downward quickly and to be transported rapidly to some point of discharge *without time for the waste to be degraded*. So, *both low and high permeability militate against disposal of waste*. So, (B) and (C) are not the answers.

The fourth sentence of para 4 says that the poor capabilities of karst regions for waste disposal are *worsened by the thinness of the soil*, and the next sentence talks of even this soil getting regenerated *much more slowly than those of nonsoluble rocks*. So, 'slow formation of overlying soil' is a factor mentioned here, and (D) is not the answer.

'Insufficiency of the time for the waste to be degraded' is mentioned in line 8 of para 4. So, (E) is not the answer.

In the last sentence of para 4, the author says, "*Thick but moderately permeable soils tend to adsorb (meaning retain on the surface) many pollutants and to slow the movement of polluted water so that oxidation or some decay mechanism can allow the pollutant to be weakened*". This implies that thick soil in fact *helps* the disposal of waste (by *weakening the pollutants*) and *does not hinder it*. So, (A) is the answer.

### Passage 4

Answers: 1. E 2. A 3. C 4. D 5. E 6. A 7. D

{The difficult words in this passage are *orientation* (recognition); *determinant* (something that decides); *predisposed* (mentally inclined); *intermittent* (discontinuous); *contour* (outline); *loci* (plural of locus, meaning location); *ganglion* (nerve centre); *retina* (the sensitive layer of the eye); *vertebrates* (creatures with backbones); *onset* (beginning); *offset* (ending); *elicits* (draws forth); *optimal* (ideal); *nonlinear* (not proportionate); *ambiguous* (undefined) and *bias* (partiality)}

1. (This is a 'specific fact' question, in which the key phrase is 'checkerboards as visual stimuli'.) The word 'checkerboards' occurs in line 31, and we must look for the answer to this question here. The last sentence of this para says that studies conducted with young infants suggest that the *longest fixations* are devoted to figures *with a moderate amount of edge*. It is (E) which says this, and is the answer.

2. (This is a 'specific fact' question, in which the key phrase is 'ganglion cells'.) The phrase 'ganglion cells' occurs in line 17, and we should look for the answer in this region. Lines 15-16 say, "The attraction to loci of *maximum contrast and movement* is in accord with available knowledge about *ganglion potentials* in the retinae of vertebrates". So, the author refers to ganglions *primarily* in order to explain why infants are *more attentive to stimuli with the greatest movement and contrast*. So, (A) is the answer.

3. (This is an 'inference' question, in which the key phrase is 'auditory stimuli' meaning 'responses pertaining to hearing'.) While the first three paragraphs of the passage relate to a child's reaction to *visual stimuli*, it is only in the first sentence in the last paragraph that *auditory stimuli* are first mentioned. *The answer to this question should therefore be found from this paragraph*. This paragraph says that, though a child's attention to *noise stimuli* is a little more complicated than its reaction to *visual stimuli*, there is one *similarity*: the child is more attentive to noise *when there are variations in tones* than *when the tone is continuous*, just as it is *visually* more

attentive (as described in the previous paragraphs) when there are *more of black and white contrasts* than when the object is of *homogeneous colour*. So, (C) is the answer.

4. (This is a 'specific fact' question, in which both the key phrase 'firing of ganglion cells' and the location (lines 23-24) are given.) It is the second paragraph that deals with ganglion cells. But nowhere in this paragraph is there mention of 'frequency' in relation to the stimuli felt by these cells. Therefore, (A), (B) and (C) which talk of 'frequency variation' of ganglion cells may be ruled out.

The third sentence in this paragraph says that 'an object moving across a visual field *stimulates a set of ganglion cells* for a short period'. It is this sentence that has been summarised in the single word 'firing' in the next sentence. So, (D) is the answer.

(E) is wrong since the *firing* (or *the stimulation of the ganglion cells*) is *caused by* the visual stimuli, and *does not cause* them.

5. (This is an 'inference' question, in which the key phrase 'preferential orientation to change' and its place of occurrence (line 41) are given in the question itself.) The only 'experiences' of an infant described in the passage relate to *visual and auditory stimuli*. If the stimuli are *steady*, then the infant feels that it is *secure*; if they are *intermittent* (such as movement of figures or intermittent tones), the child *feels a danger*, and reacts accordingly (generally with crying). This is the meaning of the second and third sentences of the last paragraph. The phrase 'preferential orientation to change', which follows in the last sentence, means *the child's different reactions to different types of stimuli, both visual and auditory*. So, (E) is the answer. (This is a rather difficult question.)

6. (This is a 'Roman Numerals' question in which the key phrase is 'infant's response to visual events'.) Lines 18-20 say that a *moving object* stimulates *onset and offset patterns* in the eye of an infant. So, I is true.

It is seen from the very first sentence in the passage that *fixation time* (or the infant's *length of orientation to an object*) is an *index* (or *measure*) of the infant's *attentiveness*. It cannot be one of the *causes* of the infant's attentiveness. So, II is *not* true.

Lines 39-40 state that a new-born infant has been *blessed by nature* to respond to stimuli, either visual or auditory. The infant does not have to be *taught* by its parents how to respond to a stimulus. So, III is also *not* true.

Thus, (A) is the answer.

7. (This is an 'inference' question, in which the key phrase is 'most attention paid by infant'.) (A) and (C) involve *movement of light*.

(B) involves *alternating light and shade*.

(E) involves *intermittent noise*.

The passage says that the infant's attentiveness is *attracted most by such stimuli*.

Now, a *white* bed sheet is a cloth with 'homogeneous colour', and lines 9-10 state that an infant will be *least attracted by such a surface*. Thus, if it is a white bed sheet that attracts infants most, it will *seriously undermine what is argued in the passage*.

So, (D) is the answer.

### Passage 5

Answers: 1. E 2. D 3. C 4. D

{There are no particularly difficult words in this passage. *The universe is presently known to be expanding. The scientists have been researching to find out whether the expansion will continue indefinitely ('in which case the universe will be said to be open') or the expansion will be arrested at some point of time (in which case the universe will be said to be 'closed')*}

1. (This is a 'main purpose' question, for answering which we should get a hint from the very first sentence.) The first sentence says, "The question of whether or not the universe will continue to expand forever *may never be resolved ...*" and the rest of the passage *gives reasons for this assertion*. So, the main purpose of the passage may be stated as 'to provide evidence to document the uncertainty of the ultimate fate of the universe'. So, (E) is the answer.

(A) is wrong, since the passage does not at all talk about the 'life expectancy' (the period it will continue to exist) of the universe.

The passage, of course, *defines omega* and *explains its theoretical significance*, but goes on to show that it is *practically of no use since different scientists have arrived at different values for omega*. (B) is therefore not the

main purpose of the passage.

An 'open' and a 'closed' universe are *defined* in the passage in terms of the different values of omega, but *no explanation of their differences is attempted*. So, (C) is wrong.

Since the passage only mentions the controversy over the values of omega among scientists and *does not attempt to resolve it*, (D) is also wrong.

2. (This is an 'inference' question, in which the key phrase is 'hypotheses concerning the fate of the universe'.) The second paragraph shows that two scientists had arrived at *widely varying values for omega* using the *same data*, and this is the reason why no definite conclusions can be arrived at about the fate of the universe. So, (D) is the answer. (If both of them had arrived at the value of omega as much greater than 1, then it can be concluded that the universe is closed; or if both had arrived at the value of omega as much less than 1, then it can be concluded that the universe is open.)

You can easily see that the other choices are not borne out by the passage.

3. (This is an 'inference' question which has to be answered by examining each of the choices.) The first sentence of para 2 says, "Both scientists used the motions of galaxies to deduce gravitational effects and *therefore actual density*". So (C) is answered here.

You can easily see that none of the other questions is answered in the passage.

4. (This is an 'inference' question, in which the key phrase is 'calculations of the value of omega by the two scientists'.) The first sentence of para 2 says that both sets of scientists used the motions of galaxies to first deduce gravitational effects and then their actual density, *but arrived at widely differing values for omega*. It is (D) which paraphrases this situation, and is the answer.

### Passage 6

Answers: 1. A 2. B 3. D 4. C

{The difficult words in this passage are *posit* (theorize) and *hamster* (a species of rat). The other difficult words *exogenous* and *endogenous* have been defined in the passage itself as meaning *intrinsic* and *extraneous*.}

1. (This is an 'exception' question, which must be answered after examining each of the choices. The key phrase is 'examples of exogenous influences'.) It is easy to see that (B), (C), (D) and (E) all refer to *external* (or *exogenous*) influences, and (A) is the only instance of *internal* influence on the behaviour of the animal concerned, and is the answer.

2. (This is a 'specific fact' question, which itself gives the line number near which the answer must be found.) Lines 9-12 state, "Brown concluded that a change in tide schedule is *one of several possible exogenous influences* on the oysters' rhythms". It is (B) which summarizes this, and is the answer.

(A) is the only other possible choice, but is wrong because lines 8-9 say that Brown 'could *not* posit an *unequivocal* (meaning *certain*) causal relationship between tide schedule and the oyster's rhythms." So her conclusion is *not* that tide schedule is *the primary influence* on an oyster's rhythm.

3. (This is a 'Roman Numerals' question, in which the key phrase is 'similarity between the studies of Brown and Hamner'.) I is not true since *it goes against Hamner's findings regarding the behavior of hamsters*.

II is true because *it is explicitly stated in the passage*.

III is also true, because the conclusions of both researchers were based on their observations of the behaviour of the hamsters in their *original* environment and comparing it with their subsequent behaviour in the *new* environment.

So, (D) is the answer.

4. (This is an 'inference' question, and should be answered by evaluating each of the answer choices.) Brown's conclusion was based on the fact that, after 14 days in Illinois, the oysters had adapted their rhythm to the tide conditions in their new place Illinois, and opened widest *during high tide there*. If, after sixteen days of being in Illinois, they *reverted* to their earlier habit of opening widest *at the time of the high tide in Connecticut*, her conclusion that *external influences* played an important part in the behaviour of organisms *will be weakened most*. So, (C) is the answer.

The other choices would *strengthen* her conclusion, and *not weaken* it.

## Passage 7

Answers: 1. E 2. A 3. B 4. D 5. A 6. B 7. E 8. B

(The difficult words in this passage are *synthesize* (produce by combining); *parasitic* (living on others); *livestock* (farm animals); *vertebrate* (having backbone); *emesis* (vomiting); *lethal* (capable of killing); *predators* (species which kill and eat other species); *assimilated* (digested); *mimic* (copy) and *naive* (unsuspecting))

1. (This is a 'specific fact' question, in which the key phrase is 'plants containing cardiac glycosides'.) The property of 'cardiac glycosides' is mentioned in para 3, and we should look for the answer here. The last two sentences of this para say, "Pharmacologists working with cats and pigeons have found that *the dosage necessary to cause emesis (vomiting) is just about half the amount required to cause death*. Hence an animal that eats a food containing cardiac glycosides will, provided that it is capable of vomiting, *rid itself of the poisons before a lethal amount can be absorbed*". So, the reason why cardiac glycosides rarely cause death among animals is that *half the lethal dose causes the animal to vomit*. So, (E) is the answer.

2. (This is an 'inference' question which should be answered through a process of elimination of the wrong choices.) It is quite obvious that the author is not a specialist in *psychology, agriculture, bacteriology or public health*. Since the passage contains a number of references to *plants, insects and animals*, the author must be a *biologist*. So, (A) is the answer.

3. (This is an 'inference' question in which the key phrases are 'Danaiidae butterflies' and 'bird predators'.) *Danaiidae butterfly* is described in para 4, and we must look for the answer to this question here. The third sentence in this para says that bird predators avoid *Danaiidae butterflies because the latter have assimilated cardiac glycosides (which are poisonous substances) from the milkweeds*. If, however, it is proved that these birds are *not at all affected by cardiac glycosides*, then the reason for their avoiding these butterflies must be *something different*. So, (B) is what will *seriously undermine* the author's hypothesis, and is the answer.

4. (This is a 'specific fact' question in which the key phrase is 'Danaiidae butterfly'.) The last sentence of the passage says, "After a bird has been made ill from eating an insect, it associates the flavor of that kind of insect with the illness, and *thereafter can reject an insect of the same species by tasting it*". The third and fourth sentences of para 3 says, "It has been observed that birds avoid eating *Danaiidae butterflies*. A widely accepted hypothesis has been that the predators avoid the butterflies because *the larvae have assimilated the poisonous substances from the milkweeds*". So, a bird which had recently eaten a *Danaiidae butterfly* and had fallen ill would avoid another *Danaiidae butterfly* later. So, (D) is the answer.

5. (This is a 'main purpose' question, and must be answered by spotting the common theme that runs through the entire passage.) After pointing out in the first sentence that many plants produce chemical compounds *which are apparently not needed for their metabolism*, the author goes on to point out that these compounds "promote its survival by repressing the growth of competing plants and parasitic microorganisms, or by repelling insects or other animals that would otherwise feed on them". He then gives instances of compounds which repel animals from eating the plant, and also instances of compounds which enable an insect to protect itself from being eaten by predators. So, among the choices, we can say that the main purpose of the passage is to point out that some substances produced by a plant *are part of a complex chain of events that affect various forms of life* such as *larvae, certain butterflies, cattle and birds*. So, (A) is the answer.

(B) is wrong because the instances given by the author are *harmful to birds but beneficial to some insects*.

Since DDT is *not mentioned at all* in the passage, (C) is wrong.

(D) *contradicts* the very first sentence in the passage, and cannot be the author's purpose.

(E) is wrong since the author, in fact, proves that these substances *do govern certain ecological relationships*.

(A) is the correct answer, since the production of these substances by the plants *affect the food habits of larvae, certain butterflies, cattle and birds*.

6. (This is an 'inference' question in which the key phrase is 'insects that seem immune to the effects of poisonous milkweeds'.) The first sentence of para 5 says that some insects, which do not feed on poisonous milkweeds, *mimic the appearance or flavor* of an insect that does, and are *thus avoided by predators*. So, it is (B) which can be inferred from this statement, and is the answer.

(A) is wrong since the eating of poisonous weeds is *for a defensive purpose* (last sentence of para 4).

(C) is wrong since *Danaiidae butterflies* eat *only milkweed* (second sentence of para 4).

(D) is wrong since *Danaiidae* are mentioned only as *one instance* of insects feeding on poisonous weeds, and



not as the only instance.

(E) is not mentioned in the passage, and would in any case be wrong since cattle are *herbivorous* and *do not eat insects at all*.

7. (This is a 'specific fact' question, in which the key phrase is 'asclepiad milkweeds'.) This phrase occurs in the first sentence of para 3, and we should look for the answer in its neighbourhood. The third sentence says that cardiac glycosides, the poisons found in the asclepiad milkweeds, *cause a weak and rapidly fluttering vertebrate heart beat more strongly and more slowly*. So, their interest to pharmacologists is based on *their having a stabilizing effect on vertebrate hearts*. So, (E) is the answer.

8. (This is a 'Roman Numerals' question, in which the key word is 'milkweed'.) The properties of the milkweed are enumerated in paras 2, 3 and 4, and we should look for the answer here. Para 2 talks of 'herds of cattle' and not 'insects' being repelled by milkweeds. So, I is *not* stated in the passage.

Para 3 states that the larvae of an entire group of tropical butterflies (which can be classified as *insects*) eat *only milkweed*. So, II is stated in the passage.

The passage does not state anywhere that the substances produced by milkweed suppress *other plant life*. So, III is *not* stated in the passage.

So, (B) is the answer.

### Passage 8

Answers: 1. D 2. E 3. E 4. B 5. C 6. E 4. D 5. D 6. E 7. D 8. D

{The difficult words in this passage are *crust* (surface); *lava* (molten rock poured out during volcanic activity); *chronological* (arranged according to time); *fissure* (a deep narrow opening) and *mutability* (instability)}

1. (This is a 'Main Idea' question, and you should answer it by identifying theme that flows throughout the entire passage.) In the first paragraph, *hot spots* are defined, and then are *distinguished from volcanoes*. The second paragraph describes an instance of what happens *when a continental plate moves past a hot spot*. The third paragraph describes how hot spots can be used to determine whether *two* continental plates are *both moving away from each other*, or *only one of them is moving while the other remains stationary*. The last paragraph explains the manner in which new oceans are formed *when a continental plate comes to rest over a hot spot*. It is easy to see that, of the five given choices, it is (D) that best describes the primary purpose of the author in writing the passage.

(A) is wrong since *extinction of volcanoes* is mentioned just once in the first sentence of the second para.

(B) is wrong since the *formation of continents* is *not* touched upon at all, and even the theory regarding the *formation of oceans* is *just suggested* in the last two sentences.

(C) is *not touched upon* in the passage at all.

(E) is *just mentioned* in the second para of the passage, and cannot be considered to be the main purpose of the passage.

2. (This is a 'specific fact' question, in which the key phrase is 'difference between hot spots and volcanoes'.) The last sentence of para 1 says, "Hot spots are also distinguished from other volcanoes by their lavas, which contain *greater amounts of alkali metals* than do those from volcanoes at plate margins". (E) says just this, and is the answer.

The other choices are *factually wrong* statements.

3. (This is an 'inference' question, in which the key phrase is 'apparent course of the Pacific plate'.) In the second paragraph, the author indicates that the fact that Hawaiian Islands, the Austral Ridge and Tuamotu ridge are *all parallelly aligned from the east toward the northwest* shows that the *Pacific plate had moved over a hot spot from east to northwest*. So, (E) is the answer.

4. (This is an 'inference' question in which the key phrase is 'spreading out of lavas of different ages at hot spots'.) In the middle of the third paragraph, the author says, 'the most compelling evidence that a continental plate is stationary is that, at some hot spots, *lavas of several ages are superimposed instead of being spread out in chronological sequence*'. The converse of this statement is that, if these lavas are found *spread out*, we could deduce that *the continental plate has been moving and has not remained stationary*. So, (B) is the answer.

5. (This is also an 'inference' question, in which the key phrase is 'Hawaiian Islands, Austral Ridge, and

Tuamotu Ridge'.) These names occur in para 2, and we should look for the answer to this question here. The second sentence of this para says, "It appears that the Hawaiian Islands were created by a single source of lava welling up from a hot spot over which the Pacific Ocean plate passed ..... Two other Pacific Island chains - the Austral Ridge and the Tuamotu Ridge - parallel the configuration of the Hawaiian chain". We can infer therefrom that all the three chain are *the result of the movement of the Pacific plate over different hot spots*. So, (C) is the answer.

None of the other choices is substantiated by the information in this paragraph.

6. (This is an 'inference' question, in which the key phrase is 'mutability of continental plates'.) The word 'mutability' occurs in the very last sentence, and we should look for the answer to this question in the last paragraph. The author suggests here that, when a continental plate comes to rest over a hot spot, *deep fissures develop and the plate breaks along the fissures*. Oceanic water from the surrounding area then fills the gap between the two parts of the plate and *a new ocean is created*. The two parts of the plate then *start drifting away from each other*, and *the ocean becomes larger and larger*. So, (E) is the answer to this question. (If you see the map of the world, you can notice that the east coast of South America can be neatly aligned along the west coast of Africa, leading to the inference that Africa and South America had formed a single continent once upon a time.)

7. (This is an 'inference' question, in which the key phrase is 'hot spots being used to reconstruct the movement of continental plates'.) In the penultimate sentence of the third para, the author says that the 'reconstruction of plate motion from the tracks of hot-spot volcanoes assumes that *hot spots are immobile*, or nearly so'. He goes on to add that 'several studies support such an *assumption*'. Because it continues to be *only an assumption*, and *not a proved fact*, there is still *some doubt* about the validity of the theory of immobility of hot spots, and that is the *weakness of this argument*. If future and more accurate studies prove that *hot spots are also mobile like continental plates*, hot spots *cannot be used as reference points* for studying the rate of mobility of continental plates. So, (D) is the answer.

8. (This is a 'tone' question which should be answered by examining each of the answer choices.) The author explains a possible theory but, simultaneously, points out its weakness also. Thus, he exhibits an open mind, and his style can therefore be described as being 'objective' or 'unbiased'. So, (D) is the answer.

### Passage 9

Answers: 1. E 2. C 3. B

{The difficult words in this passage are: *biosphere* (the region inside, on and above the earth where organisms survive); *homeostatic* (in which there is internal equilibrium); *synthesized* (combined together); *respiration* (breathing); *aerobic* (needing oxygen to survive); *anaerobic* (not needing oxygen to survive); *fungi* (plural of fungus, a minute plant)

1. (This is a 'Roman Numerals' question, which should be answered by evaluating the validity of each of the numbered questions.) In lines 9-15, cellulose, alkaloids, terpenes and flavonoids are mentioned as some of the compounds *which are broken down by bacteria* during the carbon cycle. I is thus answered in the passage.

In the fourth line from the bottom, *inert* (or least reactive) substances are mentioned, but *no* reason is given as to *why these substances are inert*. II is thus *not* answered in the passage.

III is *answered elaborately* in the last sentence of the passage.

So, (E) is the answer.

2. (This is an 'inference' question, in which the key phrase is 'degradation is as important as synthesis'.) This phrase occurs in the third sentence, and we should look for the answer to this question in its neighbourhood. The author says in the previous sentence that, through the *synthesis of carbon and other elements*, green plants produce certain substances *though they cannot use them*. This means that the carbon in these substances will be *fixed* and will *not be available for recycling*. It is through the *decomposing action of bacteria and fungi* on these synthesized substances that carbon is *recycled again* in order to *maintain the chemical equilibrium of the biosphere*. So, (C) is the answer.

3. (This is an 'inference' question in which the key phrase is 'importance of bacteria and fungi in the production of energy for life processes'.) In the penultimate sentence of the passage, the author says that the *release of carbon in these compounds for recycling* (by using them as sources of energy) depends '*almost entirely*' on bacteria and fungi. This contention will be *strengthened* if it is shown through further experiments that such recycling

depends *entirely* on bacteria and fungi. (B) states just this, and is the answer.

### Passage 10

Answers: 1. C 2. C 3. A

{The difficult words in this passage are *precipitation* (rain); *transpiration* (giving off of water by plants through leaves, and by animals through perspiration) and *isolated* (separated)}

1. (This is a 'primary purpose' question, and we should answer it by spotting the theme that runs through the entire passage.) The first para of the passage defines *hydrogeology* and describes the *hydrogeological cycle*. The second para defines and explains *geohydrology*, and points out *why it is erroneous to use hydrogeology and geohydrology as synonyms*. We can therefore say that the main purpose of the passage may be stated, among the choices, as 'to correct a misconception'. So, (C) is the answer.

2. (This is an 'inference' question in which the key phrase is 'study by a geohydrologist'.) Lines 11-14 say that geohydrology is concerned with water that has been *isolated underground* because of *geologic changes*. Among the choices, it is only (C) that describes such a phenomenon, and is the answer.

All the other choices relate to water *on the surface of the earth*, which would be studied by *hydrogeologists*, and *not by geohydrologists*.

3. (This is a 'specific fact' question, in which the key phrase and its place of occurrence are mentioned in the question itself.) The purpose of the second para is to point out the *distinction between hydrogeology and geohydrology*. It is in order to *clarify this distinction* that the author refers to *many formations of water* which, through geological changes, have been *isolated underground, losing all connections with water which forms the hydrogeological cycle*. So, (A) is the answer.

You can easily eliminate all the other choices as unsuitable.

### Passage 11

Answers: 1. A 2. D 3. B 4. C 5. E 6. C 7. E

{The difficult words in this passage are *grazer* (a living being which eats grass or weeds); *algae* (sea-weed); *hypothesized* (proposed as a theory); *amenable to* (subject to); *simulation* (copying); *empirically* (by numerical calculation); *postulated* (proposed as a basic assumption in the further examination of a problem); *bog lake* (a lake the water is which is rich in natural nutrients). In this passage, *phytoplanktons* refers to minute *sea plants*, while *zooplanktons* refers to minute *living organisms* in the sea *which feed on the minute sea plants*. *Zooplankton* are also referred to as *grazers*, because they graze on the phytoplanktons.)

1. (This is a 'specific fact' question, in which the key phrase is 'Hardy's principle of animal exclusion'.) This phrase occurs in the last sentence of para 1, and we must look for the answer to this question in this para. In the very first sentence of the passage, the author alludes to 'many theories' that have been formulated *to explain the grazer-phytoplankton relationship in lakes*. In the last two sentences of this paragraph, he specifically mentions *the principle of animal exclusion* proposed by Hardy. His purpose in mentioning Hardy's theory is therefore *to give one example of the various theories connecting grazers and phytoplanktons*. So, (A) is the answer.

Since the author only mentions Hardy's theory but *does not support or refute it*, (B), (C), (D) and (E), which start with the words *defend, support, demonstrate the superiority of* and *refute*, are all wrong.

2. (This is an 'inference' question, in which the key phrase is 'first theories of grazer control' in line 3.) In the second and third sentences of the passage, the author states, "The first theories of such grazer control were *merely based on observations of negative correlations between algal and zooplankton numbers*. A low number of algal cells in the presence of a high number of grazers *suggested, but did not prove*, that the grazers had removed most of the algae". We can therefore infer that, according to the author, these theories were *unconvincing*, because *they were based on mere observations, and not on further verification* of the cause and effect between the numbers of zooplankton and algae.

It is (D) which states this, and is the answer.

3. (This is an 'inference' question, in which the key word is 'Hardy's principle of animal exclusion'.) This principle (which occurs in the last sentence of para 1) states that phytoplankton produced a *repellent that excluded grazers* (such as zooplankton) from regions of high phytoplankton concentration. If this theory is true, it must

follow that, wherever phytoplankton population is high, zooplankton population will be low, and vice versa, and that, it is in places where the phytoplankton population is *very high*, that zooplankton would be *totally excluded*. This theory of Hardy will be called into question if it is found that zooplankton exclusion, or the absence of zooplankton, is *unrelated to phytoplankton density*. So, (B) is the answer.

4. (This is a 'Roman Numerals' question, in which the key phrase is 'pressure of grazers on phytoplankton numbers'.) From the last sentence, "Haney's thorough research provides the convincing field evidence that grazers can exert significant pressure on phytoplankton population", we can infer that *the author agrees with all the findings of Haney*. One of the findings of Haney (mentioned in the penultimate sentence of the passage) is, "Cladocerans had higher grazing rates than copepods". This implies that grazing pressure *can vary according to the individual type of zooplankton*. So, the author will agree with I.

The previous sentence says that the maximum community grazing rates recorded by Haney were 6.6% and 114% of the daily phytoplankton production in nutrient-poor lakes and in bog lakes respectively. So, the author will agree with II also.

Though the author says in the penultimate sentence that Haney also found that the grazing rates varied seasonally, he does *not* say that grazing pressure and temperature exert *equal influence* on zooplankton population. So, he will *not* agree with III.

So, (C) is the answer.

5. (This is an 'inference' question, in which the key phrase is 'Hargrave and Green's conclusion'.) The second and third sentences of para 3 state that Hargrave and Green estimated natural community grazing rates *through laboratory experiments* and *then empirically applied the results to field conditions*; but their estimates were not fully accepted *until the actual grazing rates of zooplankton were determined directly in the field by means of new experimental techniques*. This implies that the estimates of Hargrave and Green were fully accepted on the basis of these actual field tests or, in other words, the results obtained by Hargrave and Green in the laboratory *were quite similar to the results obtained in the subsequent field tests*. The next sentence says that *it was Haney who conducted these field tests*. So, (E) is the answer.

6. (This is an 'inference' question in which the key phrase is 'data of early researchers'.) In the first sentence of para 2, the author says that the early studies in this field were based *only on algae of a size that could be collected in a net*, and overlooked the smaller phytoplankton (which were too small to be collected in a net), though it has later been discovered that *these smaller phytoplankton are the more favourite food of the grazers*. It therefore follows that, if these researchers had collected phytoplankton *of all sizes instead of only those which could be caught in a net*, their conclusions would have been *more accurate*. So, (C) is the answer.

7. (This is a 'specific fact' question, in which the key phrase is 'Hargrave and Green'.) From the second half of the second sentence of the third paragraph, we can readily choose (E) is the answer.

### Passage 12

Answers: 1. C 2. C 3. A 4. C 5. E 6. C 7. A

1. (This is a 'primary purpose' question, which should be answered by spotting the theme that runs through the entire passage.) The very first sentence mentions that *the use of heat pumps has been held back* because of a seemingly false advertisement claim, and the subsequent paragraphs *describe the heat pumps and their use*. So, among the choices, (C) is the best answer.

2. (This is a 'specific fact' question, in which the key phrase is 'principle of energy conservation'.) In the first paragraph, the author points out that the claim that heat pumps can provide as many as two units of thermal energy for each unit of electrical energy consumed seems to contradict the 'principle of energy conservation'. Later, in the second sentence of para 4, he explains that it is *the additional input of thermal energy* into the circulating refrigerant via the evaporator *which accounts for the difference in the energy equation*. Thus, he gives *additional relevant facts for resolving the question whether heat pumps run counter to the principle of energy conservation*. So, (C) is the answer.

3. (This is an 'inference' question, in which the key phrase is 'greatest heating capacity of a heat pump'.) In lines 28-29, the author says that the *heating capacity* of a heat pump *decreases* as the *outdoor temperature falls*. In other words, the heating capacity of a heat pump is *maximum* when the *outdoor temperature is at its maximum*, or when the need for *artificial heating is the least*. So, (A) is the answer.

4. (This is an 'inference' question, for which the key phrase and its location are given in the passage itself.) In para 4, the author concedes that it is a fact that heat pumps can give out more *thermal* energy than the *electrical* energy consumed by them, but he gives a scientific explanation for this phenomenon *which is consistent with the law of conservation of energy*. Still, in para 1, he had stated that the use of heat pumps has been *held back* because *consumers are skeptical* about the claims of the advertisers that heat pumps can provide twice the amount of thermal energy for each unit of electrical energy consumed, *apparently contradicting the principle of energy conservation*. The inference to be drawn from this statement is that *advertisers should not emphasize statements which, even if they are true, strain the prospective client's ability to believe them*. So, (C) is the answer.

(A) looks like a possible answer, but is wrong because the advertisers in this case have only *stated facts*, and *not exaggerated* them.

5. (This is an 'inference' question, in which the key phrase is 'wider use of heat pump'.) The author says in the very first sentence that what is holding back the widespread use of heat pumps is that the prospective users do not believe that *heat pumps can give out more thermal energy than the electrical energy consumed by them*, because *such a claim seems to contradict the well-known law of conservation of energy*. He therefore implies that, if only the prospective users knew that the additional energy is indeed provided by the evaporator used in the system, and that *there is therefore no violation of the principle of conservation of energy*, more and more persons will *believe* in the capacity of the heat pump to give *more thermal energy* than the *electrical* energy consumed, and will *therefore start using heat pumps*. So, (E) is the answer.

6. (This is a 'specific fact' question, in which the key phrase and its location are also given.) Lines 9-15 state that the refrigerant leaves the compressor as a *hot, dense vapor* but, when flowing through the condenser, *becomes high-pressured and cooled*. It then faces a *flow restriction* which causes the pressure to drop. As the pressure drops, the refrigerant expands and partially vaporizes, *becoming chilled in the process*. So, the purpose of the *flow restriction* is to *cause the evaporation and cooling of the refrigerant*. So, (C) is the answer.

7. (This is a 'tone' question that should be answered by evaluating each of the answer choices.) From line 28, "Unfortunately there is one real problem" (which precedes the author's description of a genuine drawback of the heat pumps), we can say that he considers this drawback *as a cause for regret*. So, (A) is the answer. You can easily see that none of the other choices is appropriate.

### Passage 13

Answers: 1. B 2. E 3. D 4. A

{The difficult words in this passage are *thrive* (grow); *symbiotic* (mutually beneficial); *harnessed* (controlled; used) and *metabolic* (relating to chemical changes in living matter)}

1. (This is a 'primary purpose' question, and we must get the hint for the answer from the first sentence itself.) The author states in the first sentence that mycorrhizal fungi have *till recently escaped widespread investigation*. In the subsequent sentences, he describes *the results of recent experiments* made with them. Among the choices, "A summary report of new findings" is the best description of the passage. So, (B) is the answer.

You can easily see that none of the other choices can even remotely be considered as appropriate.

2. (This is an 'exception' question, and we should answer it by evaluating each of the answer choices.) Since the passage describes *the benefits that accrue from an investigation of mycorrhizal fungi*, the information in the passage will be useful to a researcher whose job is to *identify potentially profitable areas of research and product development*. So, (A) is *not* the answer.

Obviously, the passage will be useful for the government official described in (B).

For the same reason as in (A), the passage will be useful for a person described in (C) also.

It will also be useful for the biologist described in (D).

The only information in the passage regarding mycorrhizal infection and expected level of phosphate uptake is contained in the sentence, "Mycorrhizal benefits are *not limited to improved phosphate uptake* in host plants." This elementary level of information will certainly not be of any use to a botanist who is already conducting experiments in this field *because he would already be aware of such a general proposition*.

So, (E) is the answer.

3. (This is an 'inference' question, in which the key phrase is 'factor influencing the progress of research on

*mycorrhizal fungi*.) One of the reasons given in the passage for lack of investigation on mycorrhizal fungi is, “the fungi cannot as yet be cultivated *in the absence of a living root*.” This implies that it is *difficult* to produce *laboratory specimens* of these fungi. So, (D) is the answer.

4. (This is an ‘inference’ question, in which the key phrase is ‘increased resistance to harmful root fungi’.) This phrase occurs in the penultimate sentence, which is followed by the statement, “Whether this resistance results from *exclusion of harmful fungi* through competition for sites, *from metabolic change* involving antibiotic production, or *from increased vigor* is undetermined”. We can therefore infer that there are *at least three hypotheses* that might account for such increase in resistance. So, (A) is the answer.

### Passage 14

Answers: 1. E 2. C 3. D 4. A

{The difficult words in this passage are *antigen* (a substance which stimulates the production of antibodies which fight against bacteria); *lymphocytes* (white blood cells that act to remove bacteria and certain proteins from the tissues); *explicate* (explain; clarify)}

1. (This is a ‘primary purpose’ question, for which we must get the hint from the first sentence itself.) After stating a major problem which is normally encountered in organ transplantation (namely *rejection of the transplanted organ unless the transplantation antigens of both individuals are nearly identical*), the author presents a finding in a certain strain of rats *which do not reject liver transplants*. So, the purpose of the passage is to *present a finding that qualifies* (or *restricts*) an *accepted generalization*. So, (E) is the answer.

2. (This is an ‘inference’ question, in which the key phrase is ‘difference among strains of rats’.) Lines 12-13 say ‘*many strains of rats simply cannot mount a sufficiently vigorous destructive immune-response*’. This implies that *some strains of rats can mount such a vigorous response*, or that one difference among rats is the strength of their immune-response reactions. So, (C) is the answer.

3. (This is a ‘specific fact’ question, in which the key word is ‘hypothesis’.) In the very last sentence, the author explains his hypothesis in two sentences, and each of these two sentences prominently mentions *the role of the transplanted liver*. So, choices (A), (C) and (D), *which do not even mention the transplanted liver*, can first be eliminated.

Neither the first nor the second sentence in the hypothesis refers to the “weakening” of the lymphocytes by the activity of the transplanted liver. So, (B) is also wrong.

In the second of the hypothesis (lines 14-16), the author says that the systemic unresponsiveness observed (namely the *non-rejection of further transplants of other organs from the same donor*) is due to “concentration of the recipient’s donor-specific lymphocytes *at the site of the liver transplant*”. It is (D) which summarizes this, and is the answer.

4. (This is a ‘Roman Numerals’ question, which must be answered by evaluating each of the numbered phrases.) The ‘hypothesis’ referred to in this question is “the liver’s relatively great capacity to protect itself from immune-response damage, and the concentration of the recipient’s donor-specific lymphocytes at the site of the liver transplant” (lines 11-16). If the stomach transplants are also accepted by these recipients in all cases, it will mean that the liver has no “relatively greater capacity” vis-a-vis the stomach. This will therefore *weaken* the hypothesis of the author. So, I is *not* true.

The first sentence of the hypothesis says that some species of rats “cannot mount a sufficiently vigorous destructive immune-response to outstrip the liver’s relatively great capacity to protect itself from immune-response damage.” This implies that if the immune-response reaction of the recipient rat is *sufficiently strengthened so as to outstrip the liver’s capacity*, then the transplanted liver *could be rejected*. So, II is true.

The hypothesis mentioned in the passage is only about the non-rejection of other organs *from the same donor who had first donated the liver*. So, III, which talks of the rejection or retention of organs from *other donors*, neither supports nor weakens the hypothesis of the author. So, III is *not* true.

The author’s hypothesis in the second sentence is that the *concentration of donor-specific lymphocytes at the site of the liver transplant* is responsible for the *non-rejection of the other organs of the same donor*. If such concentration is *prevented*, then the logical consequence will be that any other organ transplanted from the same donor will be *rejected* by the recipient’s body. On the contrary, IV says that, even after the prevention of such concentration, the skin transplants were *accepted* by the recipient’s body. If so, it is (IV) that will weaken the author’s hypothesis, and not support it.

So, (A) is the answer.

### Passage 15

Answers: 1. A 2. C 3. B 4. C 5. E 6. D 7. B

{The difficult words in this passage are *specimens* (examples); *spherules* (small stones in the form of spheres); *impact* (collision); *anomalous* (strange, nontypical); *enigma* (puzzle, problem); conceivably (probably); *lunar* (from the moon); and *permafrost* (permanently frozen). The words *igneous*, *achondrites* and *shergottites* are defined in the passage itself.)

1. (This is a 'Roman Numerals' question, in which the key word is 'shergottites'.) The first sentence of the passage says that *only about one hundred* out of the *thousands of meteorites* found on Earth are *igneous*, that is, *they have undergone melting by volcanic action*, and that these are known as *achondrites*.

The first sentence of para 2 says that *shergottite* is the name given to *just three of these achondrites*, and these *differ* in certain characteristics from *all other achondrites*.

The next sentence says that *shergottites* had *crystallized from molten rock*. We can therefore infer that the shergottites are *also igneous in nature*, and are *products of volcanic activity*. So, I is true.

Lines 15-17 state that shergottites were "presumably ejected into space when an object impacted on a body *similar in chemical composition to Earth*". The passage does not say that this body must have been *larger than Earth in size*. In fact, the author speculates that the origin of shergottites was either Io (which is a satellite of Jupiter) or Mars, both of which are *much smaller in size than the Earth*. So, II is *not true*.

As stated above, the passage specifically says that shergottites emanated from a body *similar in chemical composition to Earth*. The first sentence of para 4 says that recent measurements suggest that the surface of Io is *rich in sulphur and sodium*, and therefore the chemical composition of its volcanic products is *unlike* that of the shergottites. So, III is, in fact, *contradicted* in the passage.

So, it is only I that can be inferred from the passage, and (A) is the answer.

2. (This is a 'specific fact' question, in which the key phrase is 'the reason why a meteorite on Earth is unlikely to have come from a large planet'.) Lines 21-24 state, "the impact needed to accelerate a fragment of rock to escape the gravitational field of a body even as small as the Moon is so great that *no meteorites of lunar origin have been discovered on Earth*." The subsequent lines 35-37 state that "any fragments dislodged from Io by interbody impact would be *unlikely to escape the gravitational pull of Jupiter*." Therefore, the reason why a meteorite discovered on Earth is *unlikely* to have come from a large planet is that *the gravitational pull of the large planet would probably prohibit fragments from escaping its orbit*. So, (C) is the answer.

(A), by itself, can only imply that a *larger proportion* of the meteorites found on Earth would have come from *asteroids* than from *large planets*. (A) cannot, therefore, totally rule out a large planet from being the source of *at least a few of the meteorites*. So, (A) is *not* the answer.

Lines 14-18 state that, "Shergottites crystallized from molten rock less than 1.1 billions ago (some 3.5 *billion years later* than typical achondrites)". This implies that some of the typical achondrites had crystallized *as early as 4.6 billion years ago*. Therefore, the fact that most large planets have been volcanically *inactive* for *over a billion years* will not, by itself, rule out the possibility of these meteorites having had their origin in them *some 4.6 billion years ago*. So, (B) is *not* the answer.

(D) is *factually wrong* because lines 4-7 state that thousands of meteorites found on Earth, and classified as *chondrites*, are composed primarily of *chondrules*, which are *unaltered minerals* that condensed from dust and gas at the origin of the solar system, implying that chondrites had been *naturally formed on Earth* (and probably elsewhere in the solar system too) *at the time of the formation of the solar system itself*.

If (E) is true, it can only imply that it is *only in rare cases* that the origin of a meteorite found on Earth *can be traced to a large planet*. (E) will *not* imply that *no meteorites* is likely to have come from a large planet. So, (E) is *not* the answer.

3. (This is an 'inference' question, in which the key phrase is 'age of shergottites'.) Line 15 specifically states that the age of the shergottites is about 3.5 *billion years less* than that of typical achondrites. So, (B) is the ready answer.

4. (This is a 'specific fact' question, in which the key phrase is 'chondrules in a meteorite'.) We learn from lines 5-7 that chondrules are *unaltered minerals* that condensed from dust and gas *at the origin of solar system itself*. This means that the chondrules in a meteorite have not been melted *after the solar system had formed*. So, (C) is the answer.

5. (This is a 'specific fact' question, which must be answered through a process of elimination of the wrong choices.) The only references in the passage to "age" are those of *shergottites* (1.1 billion years) and those of other typical *achondrites* (4.6 billion years). The passage differentiates these from *chondrites* which had condensed *at the time of the origin of the solar system itself*. So, the only information that we can infer from the passage is that *the solar system is more than 4.6 billion years old*. It could be 5 billion years old, or 10 billion years old, or 100 billion years old. So, (A) cannot be answered *precisely* from the information given in the passage, and is *not* the answer.

While the passage explains how *achondrites* got their name "(because they are *not chondrites*") , it does not give an explanation for the origin of the name *shergottites*. So, (A) *cannot* be answered from the information given in the passage, and is *not* the answer.

While the last sentence of the passage says that there is a *remarkable chemical similarity* between Martian soil and the *shergottites*, it does *not* say *what these similarities are*. So, (C) *cannot* be answered from the information given in the passage, and is *not* the answer.

The fourth paragraph refers only to volcanic activity *on Io, the moon of Jupiter*, and does not give any information about volcanic activity *on the surface of Jupiter itself*. So, (D) also *cannot* be answered from the information given in the passage, and is *not* the answer.

From the first sentence of the last paragraph, we can say that a major feature of the Martian surface is *the existence of giant volcanoes*. So, it is (E) that can be answered from the information available in the given passage, and is the answer.

6. (This is an 'exception' question, which should be answered through a process of elimination.) The third paragraph implies that one of the arguments against the theory that the source of *shergottites* is a large planet is that "the impact needed to accelerate a fragment of rock to escape the gravitational field of a body even as small as the Moon is so great that *no meteorites of lunar origin have been discovered on Earth*." This implies that the *planet's size* is a *valid consideration* in determining *whether a particular planet is a possible source of shergottites*. So, (A) is *not* the answer.

From lines 37-40, "An impact capable of ejecting a fragment of the Martian surface into an Earth-intersecting orbit is *even less probable* than such an event on the Moon, in view of the Moon's *smaller size and closer proximity to Earth*", we can infer that the *planet's distance from Earth* is also a *valid consideration* in determining *whether a particular planet is a possible source of shergottites*. So, (B) is *not* the answer.

From the lines quoted while discussing choice (A) above, we can infer that the *strength of the planet's field of gravity* is also a *valid consideration* in determining *whether a particular planet is a possible source of shergottites*. So, (C) is *not* the answer.

"The only planet and its moon referred to in the passage are Jupiter and Io. The third paragraph that discusses the possibility of *shergottites* having their origin in the moon Io, and *not in the planet Jupiter*. It also does not make any reference to the *distance between Jupiter and Io*. So, 'the proximity of the planet to its moons' is *not a relevant consideration* in determining *whether a particular planet is a possible source of shergottites*. So, (D) is the answer.

Since one of the arguments against the theory that *shergottites* had their origin in Io is that the chemical composition of *shergottites* is different from the chemical composition of Io's surface, we can infer that the planet's *chemical composition* is also a *valid consideration* in determining *whether a particular planet is a possible source of shergottites*. So, (E) is *not* the answer.

7. (This is an 'inference' question which must be answered through a process of elimination.) The passage says that *only 3* known meteorites are *shergottites*, while *about 100* are *achondrites* and "thousands" are *chondrites* which contain *chondrules*. So, we can infer that *most* meteorites found on Earth contain *chondrules*. So, (B) is the ready answer.

### Passage 16

Answers: 1. D 2. E 3. C

{The difficult words in this passage are *paleontology* (the study of the forms of lives that existed in prehistoric periods); *Pleistocene age* (the ice age); *calcareous* (containing calcium carbonate or limestone); *unequivocally* (uniquely); *isotopic* (having the same atomic number) and *racemization* (production of an optically inactive compound). *Though this passage contains a number of technical words, you need not know their meanings for answering the questions.*}

1. (This is an 'inference' question, in which the key phrase is "temperature mentioned in line 12".) The temperatures, mentioned in line 12, are those 'that occurred during *Pleistocene glacial cycles*'. (line 13). The first



sentence in the passage says that, for estimating *climatic changes* (meaning the *changes in temperatures*) through Oxygen ratios, paleontologists required *the fossils of the period*. Lines 15-16 imply that recemization reaction experiment also requires *the remnants of living organisms of this period*. So, (D) is the answer.

2. (This is an 'inference' question, in which the key phrase is 'oxygen ration as a means of measurement'.) The answer (E) is directly got from lines 6-10.

3. (This is a 'Roman Numeral' question, which should be answered by evaluating each of the numbered questions.) I can be answered in the affirmative from lines 8-9.

III can also be answered in the affirmative from the last three lines.

But, though the utility of the Oxygen ratio in the determination of climatic changes is mentioned in the first para, the *methods of determining this ratio* are not mentioned. So, II cannot be answered from the passage.

Thus, the answer is (C).

### Passage 17

Answers: 1. C 2. A 3. B 4. E

{The difficult words in this passage are: *therapeutically* (curatively), *forbid* (ban), *congressional* (in the US Congress) and *deleterious* (harmful)}

1. (This is a 'primary purpose' question, for which the hint must be got from the first sentence itself.) Starting with the first sentence and ending with the last, the author *warns* against the practice of feeding and treating meat animals with antibiotics, because this practice may give rise to strains of bacteria which, *when they subsequently infect human beings*, will be *immune* to these antibiotics, and *cannot* therefore be *destroyed*. It is (C) which states this, and is the answer.

(A) is wrong because the author is *not proposing any alternative method* of curing the illnesses of animals.

The statement in (B) is *factually incorrect* because, in the last sentence, the author says that the Congress *takes a lot of interest in the regulation of gene transplant experiments*.

Though the author warns of the danger of anti-infective drugs becoming ineffective, he *does not propose any method of verification of such ineffectiveness*. Therefore, (D) is wrong.

(E) is *not mentioned* in the passage at all, and cannot be the answers.

2. (This is a 'specific fact' question, in which the key phrase is 'exchange of plasmids between different bacteria'.) The answer (A) is readily got from the last sentence of para 1.

3. (This is an 'inference' question, in which the key phrase is 'in favor of stiffening the restrictions on gene transplant research'.) The phrase 'toughen the restrictions' occurs in the last sentence. The ill-advised agricultural practice referred to by the author in this sentence is the *use of antibiotics* to promote the health and growth of meat animals by *adding them to their food*. It is the author's contention that *Congress must restrict this practice*. So, (B) is the answer.

4. (This is a 'tone' question which should be answered by elimination of the inappropriate choices.) In the very last line, the author terms the development of drug-resistant bacterial strains as 'deleterious' or 'harmful'. His attitude to such development can therefore be termed as 'fearful'. Among the choices, it is only 'apprehensive' which has this meaning, and (E) is the answer.

### Passage 18

Answers: 1. D 2. E 3. C 4. D 5. A 6. D 7. E

{The difficult words in this passage are *conceptual* (theoretical); *non-lethal* (not causing death); *inhibit* (restrict); *amnesia* (loss of memory) and *paradigm* (model)}

1. (This is a 'source' question which should be answered through an evaluation of each of the answer choices.) The passage is obviously not an extract from a *personal diary*, because it starts with a period of early sixties and recounts the *progress in a particular field of research upto now*. A diary, on the contrary, would concern itself in describing in detail *a present and a personal activity*. So, (A) is wrong.

Though the passage could very well have been from a newspaper article, the phrase '*on recent advances in the biochemistry of learning*' does not truthfully describe the passage. In fact, the passage explains *a setback* in

the research that had been pursued since 1960's. So, (B) is wrong.

No experimental '*techniques*' are described in the passage and therefore, (C) is also not correct.

Since *no book* by name has been mentioned in the entire passage, this cannot be from a *book review* either. So, (E) is wrong.

(D) is the correct answer, because the passage first *describes certain assumptions*, then states *why these assumptions were made*, then recounts *the research steps that were taken in pursuance of these assumptions*, and concludes by describing *how the assumptions were proved to be untrue* in the course of the research.

2. (This is a 'primary purpose' question which should be answered by spotting the common theme that runs through the entire passage.) The first sentence of the passage mentions the investigation of the relationship between 'protein synthesis' and 'learning' which was started with great hopes in the early sixties. Para 2 mentions the fortunate discovery of puromycin which could aid in this investigation by *inhibiting brain protein synthesis and causing amnesia*. Para 3 and para 4 explain how puromycin 'turned out to be a disappointment'. The first sentence of the last para says, "the notion that the interruption or intensification of protein production in the brain can be related in *cause-and-effect fashion to learning* seems *simplistic and unproductive*". So, among the choices, the main purpose of the passage can be stated as "to show that extensive experimentation has *not yet* supported the hypothesis that *learning is directly dependent on protein synthesis*". So, (E) is the answer.

3. (This is a 'specific fact' question, in which the key phrase is "neurobehaviorists' belief".) The first sentence itself talks of 'neurobehavioral research', and the second sentence says, "The conceptual framework for this research was *derived directly from molecular biology*". So, (C) is the ready answer.

4. (This is an 'exception' question in which the key phrase is 'effects of puromycin', and we should evaluate the validity of each of the answer choices for choosing the answer.) Line 23 mentions 'brain seizures' as an effect of puromycin. So, (A) is *not* the answer.

Line 7 gives the meaning of 'amnesia' as 'blocking memory', and line 11 mentions that *puromycin could cause amnesia*. So, (B) is *not* the answer.

Lines 10-11 mention that *puromycin inhibits protein synthesis*. So, (C) is *not* the answer.

Line 20 mentions that *puromycin 'breaks certain amino-acid chains'*. So, (E) is *not* the answer.

It is the 'destruction of genetic information' that is *not attributed to puromycin* anywhere in the passage. So, (D) is the answer.

5. (This is an 'inference' question, in which the key phrase is 'puromycin was perceived to be a disappointment'.) This phrase occurs in line 26, and we should look for the answer in this neighbourhood. Lines 29-30 state, "In our frustration, our initial response was *simply to change drugs*". It is (A) which states this in different words, and is the answer.

6. (This is an 'inference' question, in which the key phrase ("battery in a car") and its location are also mentioned.) The experiment referred to in the very first sentence of the passage is to prove the possible *cause and effect relationship* between *protein synthesis* and *learning*. The conclusion of the experiment was that though *learning may require protein synthesis for its development*, it is *not protein synthesis that causes learning*. It is in this connection that the author says that though a car *needs a battery for running*, it is not the battery that *makes a car run*. So, in this analogy, *protein synthesis* is equated to the *battery*, and *learning* is equated to the *car*. So, (D) is the answer.

7. (This is a 'next sentence' question, and must be answered on the basis of the logical continuity of each choice with the last two sentences of the passage.) The last sentence of the passage says that only a study of the *overall system of the car* can fully explain the *role of the battery in that system*. The next sentence could possibly state that, similarly, it is only a study of the *total system of learning* that can reveal the *role of protein synthesis in the learning system*. Among the choices, it is (E) which is nearest to this statement, and is most likely to follow the last sentence of the passage.

### Passage 19

Answers: 1. D 2. C 3. A 4. E 5. D 6. C 7. D

{The difficult words in this passage are *diminish* (become less) and *oscillation* (symmetrical to and fro movement between two points)}

1. (This is a 'specific fact' question, which must be answered through a process of elimination of the wrong

choices by identifying the key phrase in each of them and spotting its location.) The 'water vapour level' in the atmosphere is mentioned only in the first para, but there is no mention here of the accuracy or inaccuracy of the data relating to it. So, (A) cannot be answered from the passage.

The phrase 'long-length wavelength radiation' occurs in line 4 of para 2. This sentence merely says that CO<sub>2</sub> absorbs the long-wavelength radiation from the earth and remits it back. We are not told of the various 'steps' in the process of such absorption. So, (B) is not the answer.

The last five lines of para 2 talk of two 'equally respectable theories' predicting two widely differing results when the CO<sub>2</sub> concentration in the atmosphere is halved through a reduction in the burning of fossil fuels. So, the passage has no further information which can improve our understanding of the greenhouse effect. So, (C) is not the answer.

The last sentence merely mentions the fact that there are fewer meteorological stations in the southern hemisphere oceanic zone, but gives no reason for this fewer number. Thus, (E) also cannot be answered from the passage.

The third para describes in detail how an increase in forest fires or volcanic activity can result in a long-term oscillation of CO<sub>2</sub> content in the atmosphere resulting in regular temperature increases and decreases within a set range. Thus, it is (D) for which an answer is available in the third para of the passage, and is the answer to this question.

2. (This is a 'primary purpose' question, for which we should spot the single theme that runs through the entire passage.) The passage starts with the statement that a change in the composition of the earth's atmosphere will result in climatic changes. Then, after giving an illustration relating to the content of water vapour in the atmosphere, the author proceeds in the next three paragraphs to discuss the effects on global climate due to the variations in the content of CO<sub>2</sub> in the atmosphere. So, (C) is what the author is primarily concerned with in the passage, and is the answer.

(A) is incorrect since the author mentions this theory just in the last paragraph, and that too to refute it.

(B) is mentioned in just two sentences in para 2, and cannot be considered to be the primary purpose of the author.

(D) is factually wrong, since the author supports the theory and does not challenge it.

In the last paragraph, the author refutes just a single hypothesis held by some climatologists. So, it cannot be stated that his main purpose is to refute hypotheses (in plural) by all climatologists. Thus, (E) is also wrong.

3. (This is an 'inference' question, in which the key phrase is 'a large decrease in atmospheric CO<sub>2</sub>'.) The author quotes two 'equally respectable theories' in the last two sentences of para 2 regarding the effect of the halving of atmospheric CO<sub>2</sub>. The first predicts that the earth would be completely covered with ice, while the second predicts that the global temperature would get reduced by 3°C. We can therefore infer that, if there is a large decrease in the amount of CO<sub>2</sub> in the atmosphere, there will be a decrease of at least 3°C in global temperatures. It is (A) which indicates this, and is the answer.

4. (This is a 'specific fact' question, in which the key word is 'Venus'.) 'Venus' is mentioned in the middle of the second para, and we should look for the answer in this region. The author first explains that, if the level of CO<sub>2</sub> in the atmosphere increases, the temperature of the earth would also increase and that, if the level of CO<sub>2</sub> decreases, the temperature would also decrease. It is in this connection that he cites the example of Venus, in which the very large proportion of CO<sub>2</sub> in the atmosphere has led to surface temperatures as high as 400°C. So (E) is the obvious purpose of citing Venus as an example, and is the answer.

5. (This is an 'inference' question, in which the key phrase is 'slight global warming at the present time'.) The phrase 'slight global warming at the present time' is not available anywhere, but the first sentence of the last para mentions 'a global temperature increase of at least 1° C'. We should therefore look for the answer to this question here. The author says here that, though 'some climatologists argue' that this rise is due to the burning of fossil fuels, this rise may, in reality, be only several regional temperature increases, ....., caused simply by shifts in the pattern of atmospheric circulation". We can therefore infer that if there is a slight global warming now, it is difficult to prove that it has been caused by the burning of fossil fuels. So, (D) is the answer.

6. (This is a 'Roman Numerals' question which should be answered by evaluating each of the numbered statements.) As stated above, the author holds the view that regional temperature variations can be caused 'simply by shifts in the pattern of atmospheric circulation'. So, I is a conclusion that is suggested by the passage.

In the last two sentences, the author also suggests that, because of a lack of sufficient number of recording stations in the southern hemisphere, it is not possible presently to precisely monitor global temperature changes.

Thus, II is also a conclusion which is suggested by the passage.

III is in fact *refuted* by the author, since he holds that the local (or regional) climatic fluctuations are caused more by *shifts in the pattern* of atmospheric circulation than by *changes in CO<sub>2</sub> content in the atmosphere*.

So, (C) is the answer.

7. (This is an 'exception' question, which must be answered by trying to evaluating each of the answer choices by locating the key phrase in each of them.) (A) is mentioned in the first sentence of para 3.

(B) is mentioned in the third sentence of para 1.

The last two sentences of para 2 mention (C).

(E) is mentioned in the second sentence of para 1.

There is no *generalization* in the passage about the 'efficiency' of meteorological stations. In the last two sentences, the author only talks of *shortage* in the *number* of such stations, and not of their efficiency or inefficiency. Thus, it is (D) which is *not* mentioned in the passage, and is the answer.

### Passage 20

Answers: 1. C 2. D 3. C 4. B

{This passage contains quite a few technical words whose meanings will not be known to you. But still you can answer all the questions correctly just with reference to the context. Pathogenic (disease-producing); arid (dry); metabolism (the constant active processes happening in every living being); lipid, sebum (fatty substances secreted by the skin); and cutaneous (relating to the skin)}

1. (This is a 'primary passage' question for which, in a short passage like this, we must get the hint from the first sentence itself.) It is obvious that the passage is mainly about the skin, and how it protects itself against pathogenic organisms. Only choices (C) and (E) mention 'skin', and therefore the answer must be either of these. We have only to find out whether the passage describes a number of mechanisms by which the skin protects itself as mentioned in (C), or it gives only one specific example as mentioned in (E).

You can easily see that different protective mechanisms of the skin (acidity and aridity; constant shedding of surface skin layers; metabolic activities of the resident flora; and unsaturated fatty acids) are mentioned in the second paragraph.

Therefore, (C) is the correct answer.

2. (This is a 'specific fact' question, in which the key phrase is 'resident flora'.) 'Flora' means living plants. Therefore, (A), (B) and (E) can be ruled out.

Since 'the resident flora' is mentioned as one of the defense mechanisms against bacterial and fungal pathogens, (C) is also incorrect.

So, by elimination, (D) is the answer.

3. (This is an 'exception' question in which the key phrase is 'natural defenses of the skin against pathogenic organisms'.) 'Aridity' (meaning dryness) and 'acidity' are mentioned in line 8. So, (A) and (B) are not the answers.

'Shedding of surface layers' is mentioned in lines 8-9. So, (D) is not the answer.

The last two sentences mention 'metabolic breakdown of lipids'. So, (E) is not the answer.

Homeostasis, as defined in the passage, is the tendency of the human body, and not of the invading pathogens. So, it is (C) which is *not mentioned* as one of the natural defenses of the skin against pathogenic organisms, and is the answer.

4. (This is a 'technique' question and must be answered by evaluating each of the answer choices.) The author states in the very first sentence the phenomenon that pathogenic organisms do not survive or multiply on the skin. She later explains the scientific reasons for it. So, (B) is the best description of the technique employed by the author of the passage.

(A) is not correct since the inability of disease-producing bacteria to survive on our skin is *not a problem*, at least *not for us*! Though this may be a problem for the bacteria, the author does not provide a solution for it!

(C) is wrong since what the author does is *giving an explanation*, and *not drawing a conclusion*.

Since *no analogy* is mentioned anywhere in the passage, (D) is also wrong.

The first sentence is a *factual statement based on experience*, and is *not an inference*.

Therefore, (E) is also inappropriate.

**Passage 21**

Answer: 1. D 2. C 3. A 4. D

{The difficult words in this passage are *misconception* (misunderstanding); *zeal* (enthusiasm); *crust* (outer shell); *premised on* (based on) and *fossil fuels* (fuels like coal, shale and petroleum)}

1. (This is a 'primary purpose' question for which we should look for the theme that runs through the passage.) In the first sentence, the author refers to the 'popular misconception' that nuclear fusion power is *free of radioactivity*, and then gives reasons for correcting that misconception. In the first sentence of para 2, he refers to *another* common misconception that nuclear fusion power is *a virtually unlimited source of energy*, and gives reasons for correcting that misconception also. In the last part of the passage, he warns against *considering nuclear fusion power a major energy source for the immediate future*. So, among the choices, (D) is the best answer.

The misconceptions referred to by the author are termed as 'popular misconception' and 'common misconception'. So, the author means that these wrong ideas are in the 'popular' minds, or in the minds of *non-scientists*. His purpose, therefore, is not to criticise scientists. So, (A) and (B) are wrong.

(C) cannot be considered to be the primary purpose of the passage because a reference to the fossil fuels is made *along with equally valid references to hydroelectric power and nuclear fission*.

(E) is referred to *only in the first para*, while the second para gives equal importance to *another equally popular misconception*, namely that *the source for fusion power is virtually unlimited*. So, (E) cannot be considered to be the 'primary purpose' of the passage.

2. (This is an 'inference' question, in which the key phrase is 'current state of public awareness about nuclear fusion power'.) While the author says that the public has misconceptions about nuclear fusion power, he does not even suggest that anyone has *deliberately misled* them. So, (A) is wrong.

(B) and (E) in fact *contradict* the author's main theme that the public seem to think that nuclear *fusion* has great advantages over nuclear *fission*.

(D) is *not substantiated* in the passage.

(C) is the correct answer, because the author twice says that *the public have misconceptions about facts relating to nuclear fusion as an energy source*.

3. (This is a 'specific fact' question which should be answered by evaluating each of the answer choices.) By stating that an *enormous quantity of deuterium is available in the sea*, the passage enables us to answer (A).

You can easily see that none of the other questions can be answered with the information in the passage.

4. (This is an 'inference' question, in which the key phrase is 'nuclear scientists'.) In lines 2-5, the author says that "nuclear scientists are currently exploring *with such zeal* the deuterium-tritium reaction". The tone of this sentence is *one of deprecation*, and so the author implies that the zeal is *unwarranted* in scientists who must be *dispassionate and objective in their research*. So, (D) is the answer.

The other choices are critical of nuclear scientists based on their *lack of knowledge*, which is not suggested by the passage at all. (The passage refers to 'popular misconceptions' and not 'misconceptions in the minds of nuclear scientists'.)

**Passage 22**

Answers: 1. D 2. B 3. C 4. D 5. C 6. A

{The difficult words in this passage are *stratosphere* (upper layers of the atmosphere); *stratum* (layer); *tropics* (regions on the earth which fall between the equator and 23° latitude); *replenished* (refilled) and *depleted* (reduced)}

1. (This is a 'Roman Numerals' question, the key phrase in which is 'variation in the amount of ozone above different areas of the earth's surface'.) From the first six lines of para 2, we understand that, though the *production* of ozone is highest at the equator, its *destruction* also is highest there. Also, ozone produced at the equator is *carried away to higher latitudes* by circulating wind patterns. Thus, some of the ozone *found at the higher latitudes* must have been *produced at the tropics or near the equator*. Thus, I is mentioned in the passage.

From lines 2-3 of para 2, we can infer III also.

The reference to *naturally occurring nitrogen oxide* is in the penultimate sentence of para 1. But this sentence does not say that *nitrogen oxide occurs more in the tropics than in the higher latitudes*. Thus, II does not

follow from the passage.

So, the answer is (D).

2. (This is a 'primary purpose' question, for which we should identify the single theme that runs through the entire passage.) In the third sentence, the author says that 'Ozone is continuously being made and destroyed in the stratosphere by natural processes'. In the last sentence of para 2, the author also says that 'the long-term average maintained by natural processes are believed to be reasonably constant'. The entire passage revolves round these two ideas and explains them. Thus, (B) is the answer.

3. (This is an 'extrapolation' question which should be answered by evaluating each of the answer choices.) The passage says that ozone is continuously being created and is also being destroyed simultaneously, but in such a way that the long term average of its amount at any place is reasonably constant. The best analogy to this among the choices is a bank account in which amounts are deposited and withdrawn regularly while keeping the average balance constant. So, (C) is the answer.

Since planting and harvesting are seasonal, (B) is not an appropriate analogy because, between one harvesting and the next planting, there will be no crop at all on the land.

(D) is not appropriate, since the assets of a corporation are static over a long time, and do not change continuously.

(E) is inappropriate, since the marks scored by a candidate in consecutive tests cannot be considered to be on a par with addition and subtraction.

(A) is obviously far off the mark.

4. (This is a 'specific fact' question, in which the key phrase is 'amount of ozone at a given location in the upper atmosphere'.) The effects of latitude and solar activity on ozone formation are mentioned in the first sentence of para 2. So, neither (A) nor (E) is the answer.

The effects of weather and seasons on ozone formation are mentioned in penultimate sentence of this para. So, neither (B) nor (C) is the answer.

In the second sentence of para 3, the author says that very little of the ground level ozone can travel to the upper atmosphere. Thus, it is (D) that will have the least effect on the amount of ozone in the upper atmosphere, and is the answer.

5. (This is a 'Roman Numerals' question, which should be answered by evaluating each of the numbered questions.) The 'thickness' of the ozone layer is not quantified anywhere in the passage. So, I is not answered here.

In the last sentence, the author merely says that the penetration of more ultra-violet radiation will damage many living organisms. He does not explain why this should be so. So, II is not answered in the passage.

In the second half of the first paragraph, the author explains the role of oxygen as the basic raw material from which ozone is created because of solar radiation. Thus, III alone is answered in the passage.

So, the answer is (C).

6. (This is an 'inference' question, in which the key phrase is 'natural processes'.) This phrase occurs in line 4, and we should look for the answer to this question here. The third and fourth sentences of para 1 mention that the Sun, oxygen and nitrogen oxides play a mutually interdependent role in the production of ozone. Among the choices, it is 'interactive relationship' among natural processes that best describes this phenomenon. Thus, (A) is the obvious answer.

(B) is wrong, since the reactions are both additive and reductive.

(C) is factually wrong because, quantitywise, there is both progression and regression in the creation of ozone.

(D) and (E) are wrong, since the reactions are very regular and not sporadic.

### Passage 23

Answers: 1. B 2. C 3. A 4. D 5. E 6. C 7. A 8. E

{The difficult phrases/words in this passage are *ecologically synchronized* (living together in nature); *carnivores* (meat-eating animals); *herbivores* (grass eating animals); *predator* (hunter); *prey* (victim); *wariness* (caution) and *tranquillity* (peacefulness)}

1. (This is a 'primary purpose' question, for answering which we should identify the single theme that runs

throughout the passage.) In the very first sentence, the author says that intelligence among early large animals evolved as was appropriate to *two ecologically synchronized groups* - the *hunting* animals and the *hunted* animals. The entire subsequent part of the passage *describes these two types of intelligences*. So, among the choices, 'describing a relationship between *animals' intelligence* and *their ecological roles*', or (B), is the most appropriate answer.

The author does *not* state anywhere, even as other people's theory, that herbivores are *less intelligent* than carnivores. So, (A) is wrong.

(C) and (D) are obviously wrong.

(E) *does not even mention animals* (and so can apply to human beings also), and *is deficient for that reason alone*.

2. *{This is a 'specific fact' question which itself mentions the key phrase (hungry lizard) and where it occurs (line 38)}* In describing a predator, the author says in lines 34-35, "perhaps it does not experience *forethought* as we (human beings) know it, but the animal does experience *something like it*". In lines 37-38, he goes on to say that the animal is 'aware, *in a sense closer to human consciousness than a hungry lizard's instinctive snap at a passing beetle*'. He thus implies that the reaction of a hungry lizard is *instinctive* (meaning *devoid of forethought*) and therefore is *of a lower level of consciousness* than that of a human being or a mammal. So, (C) is the appropriate answer.

3. *(This is an 'inference' question, in which the key phrase is 'animals less intelligent than the mammals')* The only reference in the passage that refers to an animal *less intelligent than the mammals* is the 'lizard' in line 38, whose behavior is 'instinctive'. The next two sentences state that large mammals (both predators and prey) use 'past events as a framework' in their search for food and in their attempts to escape respectively. We can therefore infer that, for animals which are less intelligent than mammals, *past experience is less helpful in ensuring survival* than instinct. So, (A) is the answer.

4. *(This is a 'specific fact' question in which the key word is 'sensitivity' which is described in lines 40-45.)* The word 'sensitive' is used here in relation to 'yesterday's unforgotten lessons', meaning 'previous experience'. So the related lines are 25-26 ("*linking past attention to the present*"), and (D) is the answer.

5. *(This is a 'tone' question which you must answer by evaluating each of the answer choices.)* Apart from stating the obvious fact that human consciousness is superior to that of animals, the author does not use *any superior or condescending tone in the passage*. So, (A) is inappropriate.

(B), (C) and (D) are obviously wrong.

By elimination, we have to choose (E) ('respectful and admiring') as the answer.

6. *(This is a 'Roman Numerals' question which should be answered by evaluating each of the numbered questions.)* The passage states that an aroused herbivore is usually fearful *because of past experience*. So, I is answered in the page.

II is *answered elaborately* in lines 15-22.

It is III which is *not even mentioned* anywhere in the passage.

So, (C) is the answer.

7. *(This is a 'specific fact' question in which the key phrase is 'improvement in brain function among early large mammals')* The phrase 'improvement in brain function' appears in line 6. The full sentence is, "*The interaction resulting from the differences between predator and prey* led to a general improvement in brain functions'. So, 'interplay of predator and prey', or (A), is the answer.

8. *(This is an 'exception' question, in which the key phrase is 'as the process of arousal in an organism continues')* (A) and (B) are mentioned in line 31.

(C) and (D) are mentioned in lines 15-26.

It is (E) which is not mentioned in the passage, and is the answer.

### Passage 24

Answers: 1. E 2. E 3. B 4. D 5. A 6. E 7. A 8. A

{The difficult words in the passage are *profound* (important); *sustained* (long); *sporadic* (discontinuous); *prey on* (kill and eat); *vertebrates* (species with backbones); *predators* (preying animals); *torpid* (lazy); *vulnerable*

(exposed to danger); *shrew* (a small mouse-like animal) and *mortal combat* (fight for survival). The term *anaerobic glycolysis* is defined in the first sentence of para 2)

1. (This is a 'primary purpose' question, for answering which we should spot the single theme that runs through the entire passage.) Nearly two-thirds of the passage is about 'anaerobic glycolysis'. The first para *lays the ground for introducing* this subject, the second para *defines and explains* it, and the third para *describes its effect on the survival of the species*. So, (E) is the answer.

There is no mention in the passage of any *misconception* about anaerobic glycolysis, nor is there a *refutation of such a misconception*. (A) is therefore wrong.

Since there is no indication in the passage that what is described in the second and third para is a *new hypothesis* on anaerobic glycolysis which *contrasts* with an *existing hypothesis*, (B) is also wrong.

(D) is wrong because there is *no similarity* between *anaerobic glycolysis* and *oxidative metabolism*, because the former is a process that needs *no oxygen* while the latter *basically requires oxygen*.

(C) is wrong, because the last para explains that it is only in respect of large animals such as *dinosaurs* (and not in respect of small animals such as *shrews*) that anaerobic glycolysis has *limitations*.

2. (This is a 'specific fact' question, for which the key phrase is 'process of anaerobic glycolysis'.) This phrase is found in the first sentence of para 2, which reads, "Anaerobic glycolysis is a process in which energy is produced without oxygen *through the breakdown of muscle glycogen into lactic acid and ATP*, the energy provider". This means that *glycogen is the material from which ATP is derived*. It is (E) which states this, and is the answer.

3. (This is a 'specific fact' question, in which the key phrase is 'limitation of anaerobic glycolysis'.) The word 'limitation' occurs in the first sentence of para 3, and we must look for the answer to this question in this region. The third sentence of this para says, "With the conclusion of a burst of activity, the lactic acid level is high in the body fluids, *leaving the large animal vulnerable to attack* until the acid is reconverted". The fifth sentence says, "Whereas the tiny shrew can replace in minutes the glycogen used for maximum effort, *the gigantic dinosaur would have required more than three weeks*". This means that *a major limitation of anaerobic glycolysis is that it 'necessitates a dangerously long recovery period in large animals'*. So, (B) is the answer.

(A) is wrong because, though the lactic acid level will be high after the available glycolysis is used up in one defence activity, and will require a fairly long recovery period for conversion into glucose by the liver, it does not pose any danger to the *liver* itself. (The third sentence in para 3).

(C) is wrong because energy from anaerobic glycolysis is *produced very quickly* (in about two minutes) and can also be *utilised* by the large animals *at the same speed* (second sentence of para 3).

(D) is wrong because glycogen is used up only in the case of a *dire need such as a surprise attack by predators*.

(E) is wrong because oxidative metabolism and anaerobic glycolysis are two *independent* processes, and the passage does not say that *either one of them affects the rate of energy production by the other*.

4. (This is an 'inference' question, in which the key phrase is 'ratio of anaerobic energy to an animal's size'.) The second sentence of para 2 says that the anaerobic energy that can be produced by an animal is proportionate to the amount of glycogen present in its body, *which is about 0.5% of the weight of its muscles*. Obviously, a large vertebrate has *more muscles in its body* and therefore *more glycogen will be available to it*, and this enables it to produce *more anaerobic energy than smaller vertebrates can*. This is the reason why 'the anaerobic energy reserves of a vertebrate are *proportionate to the size of the animal*' (third sentence of para 2). So, the answer is (D).

5. (This is a 'Roman Numerals' question which should be answered by evaluating each of the numbered phrases.) Since, when attacked, a 100-ton dinosaur can generate the energy of 3000 humans, a smaller (even if more active) adversary will get killed or disabled by the dinosaur *during the first battle itself*. So, I will *not* be possible at all.

In the case of II, some of the adversaries, which survive the first battle, will be in a stronger position than the dinosaur *during the second and subsequent attacks*, because the dinosaur would need more than three weeks to replenish the energy which it lost during the first battle, whereas *the smaller animals will need much less time for such replenishment*.

In the case of III, all animals will have the *same* advantages and disadvantages, and *none of them will be markedly vulnerable in a fight*.

So, (A) is the answer.

6. (This is also a 'Roman Numerals' question which should be answered by evaluating each of the answer



choices.) From the third sentence of para 3, we can see that *all three* of I, II and III determine *the rate at which muscle glycogen is replaced in the body of a vertebrate*. So, (E) is the answer.

7. (This is an 'audience' question, which should be answered after an evaluation of each of the answer choices.) Two processes in animals 'which have a profound effect on their living patterns' (namely oxidative metabolism and anaerobic glycolysis) are each *defined* first and then *explained* in the passage. The passage is therefore likely to be from *an introductory course on animal physiology*. So, (A) is the answer.

Since nothing is mentioned about the 'discovery' of anaerobic glycolysis, or its history, (B) is wrong.

Apart from the mention of the 'sizes' of smaller animals and of dinosaurs, there is no information in the passage about *other differences* between their anatomies. So, this passage cannot form a lecture to *graduate students with specialized training in comparative anatomy*. So, (C) is wrong.

(D) is wrong because, in a lecture to *trained zoologists*, the speaker would not have *defined* even *fundamental* terms such as oxidative metabolism and anaerobic glycolysis.

(E) is wrong because as much as *two-thirds of the passage* does not relate to oxidative metabolism, but relates to anaerobic glycolysis.

8. (This is a 'primary purpose' question, and should be answered by identifying the single theme that runs through the entire passage.) The first para states that small animals have *high oxidative metabolic rates* compared to large animals and that, if *only oxidative metabolic rate* is considered, the smaller and *more active animals could prey on larger ones*, at least if they attacked in groups. It then states that this *does not happen* because the large animals *get a much higher energy*, though for short periods, *through another process*, namely, *anaerobic glycolysis*. The next two paragraphs *explain this process in detail*. So, (A) is the central idea of the passage, and is the answer.

(B) is a problem *only for very large animals*, and *not* for small animals (as can be seen from the phrase '...the tiny shrew can replace in minutes the glycogen used for maximum effort' - line 10 from the bottom).

(C) is also wrong for the same reason, because smaller animals do not have to pay 'an enormous price' for glycolysis.

The last sentence of para 2 says that 'many large species have managed to compete with their more active neighbours' because of glycolysis; it does not say that glycolysis by itself can 'ensure' that a larger animal will *always* triumph over a smaller animal. (For example, a cow *which is a larger animal in size* cannot triumph over a tiger *which is a smaller animal*). So, (D) is wrong

Since 'patterns of activities' of animals are not mentioned or described in the passage, (E) is also wrong.

### Passage 25

Answers: 1. A 2. E 3. C

{The difficult words in this passage are *devoid of* (without); *interstellar* (the space between stars); *constituent* (component); *terrestrial* (of the earth) and *optical* (visual)}

1. (This is a 'specific fact' question, in which the key phrase is 'interstellar dust'.) The second sentence says that 'interstellar dust *hides the stars behind it*', and that is the reason why stars are *not visible in some regions in the night sky*. So, (A) is the answer.

(B) and (C) are obviously wrong.

(D) is wrong because it is only *some* regions in the sky which appear dark, and it is therefore not correct to say that the night sky is dusty *at all times* and to *all observers* on earth.

(E) is wrong because the dust is dark, and is not 'conspicuously visible'.

2. (This is an 'inference' question, in which the key phrase is 'interstellar material'.) Lines 7-8 say, "The interstellar material, rather like terrestrial clouds, comes in all shapes and sizes". In other words, it is *not homogeneous* throughout the universe. So, (E) is the answer.

(A) is *not substantiated* in the passage.

(B) is a *wrong* statement because the third sentence says that *dust* is '*only a minor constituent* of interstellar material', and therefore, the density of *interstellar material* must be greater than the density of *interstellar dust*.

(C) is wrong because the passage compares the average density of interstellar material *in the vicinity of the sun* with the *vacuum that can be created in a laboratory on earth*, and not with the *density of interstellar material in other parts of the universe*.

Since most of interstellar material is in the form of gases like hydrogen and helium, its density depends on them. So, (D) is not a factual statement either.

3. (This is an 'inference' question, in which the key phrase is 'space is so vast'.) The phrase 'enormous interstellar distances' (which implies that *space is very vast*) occurs in the penultimate sentence, and we should look for the answer here. The previous sentence says, "The average density of interstellar material in the vicinity of our sun is 1,000 to 10,000 times less than the best terrestrial laboratory vacuum". The next sentence says, "Optical astronomy is directly affected, for although interstellar gas is perfectly transparent, the dust is not". This means that it is because of the *vastness of the space* is that stars at a great distance from the earth can be *obscured even by very sparsely distributed matter*. So, (C) is the answer.

(B) is not even indirectly mentioned in the passage.

The last sentence says that 'interstellar gas is perfectly transparent', and so (D), which implies that it is *not really transparent* but may only be *supposed to be so*, is incorrect.

From the first two sentences of the passage, we learn that it is only where there is *interstellar dust* that stars behind it *cannot be seen*; in regions where there is *no such dust*, the sky is in fact *starry*. So, (E) is also wrong.

### Passage 26

Answers: 1. A 2. C 3. B

{The difficult words in this passage are *paramount* (most important); *deceased* (dead); *polymer* (plastic); *nontoxic* (non-poisonous); *adhere* (stick to); and *woefully* (regrettably)}

1. (This is a 'specific fact' question, the key phrase in which is 'problem in the field of bio-materials'.) The first sentence says that the paramount problem in the field of biomaterials is "control over the interface between implanted bio-materials and living tissues". The last sentence says that "our fundamental understanding of how implant devices adhere to tissues remains woefully incomplete". So, the major problem currently facing scientists in the field of biomaterials is *the understanding of the process of bonding between host tissues and implants*, and then *control such bonding*. It is (A) which states this, and is the answer.

(B) and (C) are stated in the passage as problems for which *solutions have already been found*.

(D) is *not* mentioned in the passage as a problem at all.

Since line 13 says that the problem of toxicity of biomaterials *can be solved* through a study of "short-term implants", (E) is not a problem at all.

2. (This is an 'inference' question in which the key phrase is 'recent research'.) The last sentence says that recent research has allowed scientists to stabilize the tissue-biomaterial interface by controlling either the chemical reactions or the microstructure of the biomaterials, but it has *not yet led to a complete understanding of how the implant devices adhere to the tissues*. We cannot infer from this sentence that recent research has *created a new set of problems*. So, (A) is wrong.

The last sentence does not imply that recent research had completely *ignored* the aspect of understanding of the bonding between tissues and implant devices. So (E) is wrong.

(C) *neatly summarizes* what is stated in the last sentence, and is the answer.

Since the last sentence does not talk of, or distinguish between, short-term implant technology and long-term implant technology, (E) is wrong.

3. (This is a 'primary purpose' question, which should be answered by spotting the single theme that runs through the passage.) The passage starts with, "Currently, the paramount problem in the field of biomaterials is control over the interface between implanted biomaterials and living tissues", and then describes this problem further. So, the primary purpose of the passage can be stated as: "to discuss the current state of technology in the field of biomaterials". So, (B) is the answer.

Since the author himself says in the last sentence that the fundamental theoretical question on how implant devices adhere to tissues *remains unanswered*, (A) is not correct.

Since the passage does not even mention *any dispute* in the field of research relating to biomaterial implants, (C) is wrong.

(D) and (E) are also not touched upon in the passage, and are wrong.

### Passage 27

Answers: 1. A 2. E 3. D 4. A 5. D 6. B 7. B

{The difficult words in this passage are *perception* (the capacity to see); *perceive* (see); *precision* (accuracy); *quantum* (the basic unit of energy); *quanta* (plural of quantum); *distinct* (separate) and *coupling* (link)

1. (*This is a 'primary purpose' question, and must be answered by spotting the single theme that runs through the entire passage.*) In the first sentence, the author defines perception as the process of reception by the human eye of the energy reflected by, or radiating from, the perceived object. In the remaining sentences of the first paragraph, he points out that our *inability to receive sense data* smaller than those conveyed by an individual quantum of energy *limits the precision with which we can perceive the world*. In the next two paragraphs, he discusses the *possibility of overcoming this limitation*, and points out that, at the present stage of scientific development, *it does not appear possible to do so*. We can therefore say that the primary purpose of the passage is to *discuss a problem that hinders a precise perception of the world*. So, (A) itself is the answer.

While the passage is mainly about the problem of *accurate perception* of the world, choice (B) does not even mention the word "perception", and can be rejected for that reason alone.

In lines 32-36, the author says that, till the quantum theory was developed, it used to be generally supposed that *perceiving subjects* and *perceived objects* were *different and independent of each other*. So, no one is *now attempting for the first time* to distinguish between these two. So the question of the author *criticizing such a person* does not arise at all. So, (C) is wrong.

Since no *rival scientific hypotheses* are mentioned in the passage, (D) is wrong.

The passage *clearly points out* that sensory observation is *limited in terms of accuracy*; the purpose of the passage is therefore not to *merely suggest* the limited function of sensory observation. So, (E) is wrong.

2. (*This is a 'specific fact' question, in which the key phrase is 'quanta with extremely long wavelength'.*) It is the second paragraph which talks of the properties of quanta with extremely long wavelengths, and we must therefore look for the answer to this question here. The second sentence in this para states that, while such quanta would be useful for measuring *energy*, a completely accurate *perception of the world* will depend also on the exact measurement of the *lengths and positions* of *what we wish to perceive* and, for this, quanta of *extremely long wavelengths* are useless. We can therefore infer that quanta with an extremely long wavelength *cannot provide a sufficiently precise means of measuring length and position*. It is (E) which states this, and is the answer.

3. (*This is an 'extrapolation' question which should be answered by evaluating each answer choice and discarding the incorrect ones.*) In lines 6-11, the author says that the power of the human eye to receive energy is *limited* by its inability to receive sense-data *smaller than those conveyed by an individual quantum of energy*. While examining the various choices for the closest analogy to this statement, we should look for that choice *which also deals with the recording of light or image*, and describes an *inherent limitation in the receiving medium* which is *incapable of correction*.

The first two choices, (A) and (B), *do not relate to light or image at all*, and the limitations mentioned in them deal with *past knowledge* which is capable of *being corrected with new knowledge or experience*. These two choices can therefore be readily eliminated.

(C), though it deals with vision, describes a limitation related to *lack of knowledge*, which can *also be corrected*. So, (C) is wrong.

The limitation described in (E) does not arise due to *any inherent limitation in the receiving medium*, namely the *screen*, and is *capable of being corrected* either by reducing the size of the light source or by increasing its distance from the screen. So, (E) is also wrong.

(D) is the *closest analogy* to the situation described in lines 6-11, because *it also relates to the recording of image*, and refers to an *inherent limitation in the receiving medium*, namely, *the sensitized film*.

4. (*This is an 'inference' question, in which the key phrase is 'child's drawing'.*) To understand why the author uses the analogy of the child's drawing in lines 12-13, we should refer to the immediately preceding sentence. This sentence says, "Since these quanta are believed to be indivisible packages of energy and so *cannot be further refined*, we reach a point beyond which *further resolution of the world is not possible*". This sentence talks objectively of a problem faced by *all of us* in nature, and *does not talk about scientists at all*. So, (B), (C) and (E) can straightaway be eliminated.

(D) is wrong, because the phrase "discs of colour" in line 12 does *not* necessarily mean that the *discs are of different colours*.

It is the phrase "ultimate limitation in the precision of sense-data conveyed by quanta" in (A) that neatly paraphrases what is stated in the immediately preceding sentence.

So, (A) is the answer.

5. (*This is an 'inference' question, in which the key phrase is 'sharp division between subject and object'.*) The reference to "a sharp division" between the observer and the observed is available in line 36, and we should

look for the answer to this question in its neighbourhood. The sentence, "We can *no longer make a sharp division* between the two in an effort to observe nature objectively" means that making such a sharp division is *no longer an accurate way* of describing the observation of the universe. So, (D) is the answer.

A reference to the 'measurement of an object's *length and position*' and 'measurement of *energy*' occurs many sentences earlier in the second paragraph (*lines 16-18*), and what is stated here is *exactly the opposite* of what is stated in choice (A): while an accurate measurement of an object's *energy* is possible, *its length and position cannot be measured precisely*. So, (A) is wrong.

(B) is wrong, because it *contradicts* the specific statement in the last sentence that, it is in the world of atoms that the new theory of interrelationship between the observer and the observed makes an appreciable difference in the explanation of observations.

(C) also *contradicts* the statement in lines 33-34 that the passage of a complete quantum from the object to the subject constitutes a link between them, *thereby falsifying the erstwhile belief that there was a sharp division between them*.

In lines 37-39, the author says that an attempt to make a sharp division between the two would "distort the crucial interrelationship of observer and observed as parts of a single whole". Since it is never the aim of scientists to "distort" relationships in nature, (E) is wrong.

6. (*This is an 'inference' question, in which the key phrase and its location are given in the question itself.*) If quanta with a wavelength of one inch were *precisely analogous* to yardsticks that are graduated in inches, the author would have merely said, "Quanta with a wavelength of one inch would be like measures that are graduated in inches". The introduction of the phrase "*in a sense*" in this sentence implies that the analogy is *not fully precise*, but *is made for a limited purpose*. It is (B) which states this, and is the answer.

7. (*This is a 'specific fact' question, in which the key phrase is 'distinction between quantum theory and previous theories of physics'.*) The second and third sentence of the third para state the *conventional* view of physics that the observer and the observed were *totally independent* entities. The next sentence says, "The quantum theory, however, *suggests otherwise*", and adds that every observation involves the *passage of a complete quantum from the object to the subject*, and that *this passage constitutes an important coupling (or link) between the observer and the observed*, meaning that *they are no longer totally independent entities*. So, we can infer that, unlike previous theories, the quantum theory *recognizes the inherent interrelationship between the perceiver and the perceived*. (B) states just this, and is the answer.

### Passage 28

Answers: 1. E 2. B 3. C 4. A 5. B 6. B 7. A 8. C

{The difficult words in this passage are *ceramics* (fired clay); *prerequisites* (essentials); *brittle* (easily breakable); *thermal* (relating to heat); *abundant* (plenty); *panacea* (universal remedy); *trade-off* (compromise) and *payoff* (benefit))

1. (*This is a 'primary purpose' passage, and must be answered by spotting the single theme that runs through the entire passage.*) *Metals* have traditionally been used in heat engines, and the passage discusses the possibility of *ceramics substituting them* in future for this purpose. So, the primary purpose of the passage can be said to be *the discussion of an alternative*. So, (E) is the answer.

(A) is wrong because *no question is posed* in this passage but, on the contrary, *a definite statement*, namely 'the materials-design trade-offs will soon favour ceramics' is made in the last sentence.

Since, no 'decision' has been taken, but only a strong *forecast* is made, (B) is also wrong.

(C) is also wrong for a similar reason.

No *controversy* has been mentioned in the passage, and therefore (D) is also wrong.

2. (*This is an 'inference' question, in which the key phrase is 'engineering design'.*) (*The word 'trade-off' means a 'compromise', in which the 'minus points' of an alternative have to be overlooked because of other 'plus points' in its favour*) For use in heat engines, the *plus point* of *metals* is that they are not brittle (meaning that they *do not develop cracks when subjected to stress, but only bend*). The *minus point* of *metals* is that they are *not heat resistant*, and therefore *require an elaborate and costly system of cooling*. The *plus point* of *ceramics* is that *they are heat resistant*, and therefore *do not require elaborate cooling systems*. But *their minus point* is that *they are extremely brittle*. The author says that, till now, *the trade-offs have been in favour of metals*, but, in future developments of heat engines *requiring much higher temperatures than at present*, the use of metals *cannot be at acceptable costs*. (*The penultimate two sentences.*). This, together with the fact that development of computer

capability has *simplified designing of engines with brittle materials* (lines 5-7), means that ceramics are very likely to be used in future engines. So, it is with (B) that the author will readily agree. So, (B) is the answer.

(A) is wrong, since 'damage to environment' is not mentioned anywhere in the passage.

(C) is wrong since, even when the technical capability of the use of a particular material in a machine is established, the adoption of the material for the purpose will follow *only if it is also cost-effective*, which may not be the case with every such material.

(D) is wrong, since the very fact that there has been a trade-off or compromise means that 'ideal use' has not been achieved.

(E) is wrong because, in the case of every material, only *some* physical properties can be taken advantage of, while some other physical properties have to be either just *tolerated* or even *fought against*.

3. (This is a 'specific fact' question, in which the key phrase is 'advantage of metals in engines'.) The fifth sentence of para 3 says, "The practice in engineering design to date has been to take advantage of the fact that metals *relieve local overstresses by local yielding, simplifying the design process*". It is (C) which states this, and is the answer.

{(A), (B), (D) and (E) are the properties of ceramics, and not of metals.}

4. (This is an 'inference' question, in which the key phrase is given in the question itself.) In a major part of the second para, the author enumerates a number of properties of ceramics which make them attractive for use in heat-engines, and then adds that such use 'will also result in an annual saving of \$17.5 billion in use of oil'. So, the reason why he quotes this figure is 'to *support* the arguments that ceramics have a combination of properties that makes them very attractive'. So, (A) is the answer.

(B) is wrong, because the author in fact *supports* the use of low-density materials in conventional engines (middle of para 2)

(C) is wrong because the use of ceramics in engines will *decrease* and *not increase* fuel consumption.

(D) is wrong, because the author's argument is that, by using ceramics in engines, both *performance improvement* and *saving of fuel* can be *simultaneously* achieved.

Since the author does not mention the possibility of fuel prices *decreasing* in future, (E) is also wrong.

5. (This is an 'inference' question, in which the key phrase is 'impediments in using ceramics in heat engines'.) From lines 5-8, we learn that computer capability to *detail stresses in a very precise manner* has been developed only recently, and it is this development which would now enable *the designing of engines using brittle materials such as ceramics*. So, what stood in the way of ceramics being used in heat engines *till now* was the inability of designers to *detail stresses in a very precise manner*. It is (B) which states this, and is the answer.

(A) is factually incorrect, since the elements of silicon, carbon and nitrogen are available *in abundance* on the earth (*The last sentence of para 2.*).

(C) is an *advantage* and not a disadvantage (*middle of para 2*).

(D) is also an *advantage* of ceramics since 'ceramics get high strength at high temperatures' (line 4 of para 2). It is the case of metals (lines 55-59) that design complexities arise for reducing engine-heat, whereas ceramics are highly heat resistant (lines 15-22). So, (E) is also wrong.

6. (This is a 'specific fact' question, in which the key phrase is 'brittleness of ceramics'.) After posing the question why ceramics have not so far been used in heat engines, the author himself mentions an answer: ceramic materials are *too brittle* (line 5 of para 3), and adds that 'this alone is *too simplistic* an answer'. This explanation can therefore be considered 'insufficient', but not 'illogical' or 'erroneous' or 'irrelevant'. Nor is it 'fully appropriate'.

Thus, (B) is the best answer.

7. (This is an 'inference' question, the key phrase being 'comparison of metal and ceramic engines'.) 'The latter part of para 3 says, "The trade-off is that metals soften or melt, and *must be cooled for high-temperature use. Management of the cooling fluid adds design complexity and weight, and drains power*". We can therefore infer that, compared to engines made of metal, the *ceramic engines will require less cooling*. So, (A) is the answer.

(B), (C) and (D) are factually wrong as can be seen from lines 16-40.

What the passage says is that ceramics can *resist* very high temperatures and are therefore more suited than metals for *high heat* engines. This does *not* mean that ceramics require *higher operating temperatures*. So, (E) is also wrong.

8. (This is a 'specific fact' question, which should be answered by evaluating each of the answer choices.) In the

middle of the second para, the value of fuel that might be saved by switching over to ceramic engines has been *estimated as \$17.5 billion*. So, (C) is answered in the passage, and is the answer.

There are no answer in the passage to any of the other questions. So, (C) is the answer.

### Passage 29

Answers: 1. B 2. A 3. E 4. A

{The difficult words in this passage are *disequilibrium* (instability); *turbulence* (upheaval); and *momentum* (force)}

1. (This is a 'primary purpose' question, for which the hint must be got from the first sentence.) The first sentence says, "The transfer of heat and water vapor from the ocean to the air above it *depends on a disequilibrium at the interface of the water and the air*", which is a statement about a natural phenomenon. The subsequent sentences *explain this phenomenon further*. So, among the choices, 'describe a phenomenon', or (B), is the answer.

(A) is wrong because no 'controversy' is mentioned in the passage.

What is described is a *well-known meteorological phenomenon*, and we cannot name it just a *theory*. So, (C) is also wrong.

Since *no research* is alluded to in the passage, (D) is wrong.

Since the passage talks of a *general phenomenon* and does *not* refer to any *specific observations* by the author, (E) is also wrong.

2. (This is a 'Roman Numerals' question, in which the key phrase is 'wind over the ocean', and we should answer it by evaluating each of the numbered sentences.) In lines 5-8 it is stated, "the disequilibrium is maintained by air near the ocean surface mixing with the air higher up, which is typically appreciably cooler and lower in water-vapour content. The *air is mixed by means of turbulence that depends on the wind for its energy*". So, the role of the wind is *to cause turbulence and thereby facilitate the cool, dry air from the upper regions to come closer to the ocean surface in exchange for the hot, humid air*. So, I is true.

The very next sentence says that the rate of heat and moisture exchange depends on the *strength of the turbulence*, which, in turn, *depends on the wind speed*. So, the *rate of exchange* of heat and moisture between the ocean and the air is *not steady*, but is *varying*. So, II is *not true*.

While the passage says that the wind causes changes in the temperature of *the air which is in proximity to the ocean surface*, it does not say that it causes frequent changes *in the temperature of the ocean water itself*. So, III is not true.

So, the answer is (A).

3. (This is an 'inference' question, in which the key phrase is 'current knowledge about heat and moisture transfer from ocean to air'.) The sentence, "Detailed understanding of this phenomenon *awaits further study*", shows that the author considers *current knowledge* about it as 'incomplete'. So, the answer is (E).

4. (This is an 'inference' question, in which the key phrase is 'decrease in wind'.) In the second sentence, the author says, "The air closest to the ocean surface is *nearly saturated with water vapour*". Subsequently he explains that, because of wind action, this air gets interchanged with the air at higher levels *which has much less vapour content*. Since such interchange goes on *continuously* because of wind action, the air closest to the ocean surface *does not have the chance to become fully saturated with water vapour*. But, *if there is no wind at all*, there will be *no turbulence and no exchange of air*, and so *the air adjacent to the ocean surface will become fully saturated with water vapour*. So, the answer is (A).

None of the other choices can be substantiated from the information in the passage.

### Passage 30

Answers: 1. B 2. A 3. B 4. A

{The only difficult phrase in this passage is *on course* (without losing one's way); celestial (of heavenly bodies such as sun, moon and the stars)}

1. (This is a 'primary purpose' question, for which we should get the hint from the first sentence itself.) After stating in the first sentence, "A *mysterious* phenomenon is the ability of overwater migrants to travel on course", the author says that the mystery *has not been solved*. So, among the choices, it is (B) which is the apt answer.

2. (This is an 'inference' question, in which the key phrase is 'navigating by compass sense alone'.) If the flock

flying east had *only compass sense* (meaning that they know only the direction), they would *resume flying east* even after the abatement of the storm which had blown them down south. So, (A) is the answer.

3. (This is an 'inference' question, for which the key phrase and its location are given in the question itself.) The full sentence in which the quoted phrase occurs is, "Some scientists thought migrants determine their geographic position on earth by celestial navigation, almost as human navigators use stars and planets, *but this would demand of the animals a fantastic map sense*". This implies that the author thinks that birds are *not capable* of having such map sense. In other words, he is *skeptic* about the theory that birds determine their migratory routes *using the position of the sun and the stars*. So, (B) is the answer.

4. (This is an 'inference' question, in which the key phrase is 'magnetic cues'.) In lines 9-12, the author implies that, if *only compass sense* is being used by them for navigation over the ocean, a flock of birds travelling east will *resume travelling east* even after they have been blown far south by a storm, and not assume a *northeasterly course* to compensate, *as they actually do*. It is on this basis that he suggests that their navigation is based not on *compass sense*, but on *magnetic sense*. We should therefore look for that statement among the choices which describes a situation in which *a migrating animal readjusts its course after having been deflected from it through extraneous circumstances*.

(A) itself describes such a situation. If pigeons depend *only on a compass sense*, and determine their migratory course with reference to *only the sun and the stars*, they would lose their way when passing through exceedingly dense fogs, *because they will not be able to see the sun and the stars through such a fog*. So, if they *still readjust their course* so as to be able to reach their intended destination, it means that they *do not depend on compass sense alone*, but *depend on magnetic cues*. So, (A) is the answer.

(B) is wrong because, if bisons migrate using their compass sense, based on the position of the sun and stars, a partial change *in the landscape* will not affect their movement.

(C) does not support either the *compass sense theory* or the *magnetic sense theory*, and is wrong.

(D) and (E) can be explained even on the basis of the 'compass sense' theory, and *do not point to the existence of a magnetic sense* in the migratory birds and insects.