

INSTRUCTIONS

1. Read the instructions given at the beginning/end of each section or at the beginning of a group of questions very carefully.
2. This test has two sections with 60 questions – 30 questions in each section. The TOTAL TIME available for the paper is **140 minutes**. The time available for each section is 70 minutes and you cannot return to the first section once you have started the second section.
3. You are expected to show your competence in both the sections.
4. All questions carry three marks each. Each wrong answer will attract a penalty of one mark.

SECTION – I
Number of Questions = 30

DIRECTIONS for questions 1 to 7: Answer the questions independently of each other.

1. The pair of straight lines $y^2 = 2x^2$ meet the graph of $y^2 = 4x$ at the origin and also at points P and P' forming two closed loops. The ratio of the area of the upper loop to that of the lower loop is
 (A) 1 : 2 (B) 2 : 1 (C) 4 : 1 (D) 1 : 1
2. Five boys A, B, C, D and E are standing, in that order, at the five corners of a regular pentagon, with B to the left of A, C to the left of B and so on. Each of them has a card on which a positive number is written. The number on A's card is a , that on B's card is b and so on. The five numbers are in the ratio 1 : 2 : 3 : 4 : 5, not necessarily in any order. Each boy tells the neighbour on his immediate left, what the number on his own card is. Each boy then adds up his own number and number of his neighbour on his immediate right and reports the sum. If four of these sums, that is, those reported by B, C, D and E are in the ratio 7 : 6 : 7 : 6 respectively, then which of the following is definitely true?
 (A) $a + b > c + d$ (B) $b + c < d + e$
 (C) $a = c + e$ (D) $b > a + e$
3. The sum of the roots of two quadratic equations are equal. If the roots of both the equations are integers, and the roots of the first equation are in the ratio 3 : 7, while the roots of the second equation are in the ratio 2 : 3, what is the minimum possible difference in the product of the roots of the first equation and the products of the roots of the second equation?
 (A) 15 (B) 30 (C) 3 (D) 12
4. A vertical cylindrical vessel has a radius of 7 cm. At what speed, in cm/sec (approximately), should water flow through a pipe, of 100 sq.cm cross-section, opening into the vessel, so that the water level in the vessel rises by 4 m in 3 minutes?
 (A) 3.4 (B) 10 (C) 7.8 (D) 5.2
5. Given α, β, γ are the roots of $x^3 - kx^2 + 2512x - 2013 = 0$. If α, β, γ are distinct and $\alpha^3 + \beta^3 + \gamma^3 = 6039$, then $k =$
 (A) -3025 (B) 3142 (C) 3284 (D) None of these

6. The average age of class X is 24 years and that of class Y is 28 years. If a student aged 'a' years is transferred from X to Y, the average age of only one class would not increase. Which of the following specifies the exact set of all the possible values of 'a'?
 (A) $a \leq 24$ (B) $a \geq 28$
 (C) $a \leq 24$ or $a \geq 28$ (D) None of these
7. Let S_n denote the sum of the first n terms of an arithmetic progression. If $\frac{S_3}{S_9} = \frac{1}{6}$, find the ratio of the third term of the progression to the tenth term.
 (A) $\frac{3}{11}$ (B) $\frac{2}{11}$ (C) $\frac{3}{10}$ (D) $\frac{4}{11}$

DIRECTIONS for questions 8 to 10: Answer the questions on the basis of the information given below.

The following tables gives the details about the Gross Domestic Product (GDP) and the population of five countries – A, B, C, D and E – for the years 2005-06 to 2009-10.

GDP
(in \$billion)

	2005-06	2006-07	2007-08	2008-09	2009-10
A	75	83	96	110	143
B	48	52	59	71	81
C	125	126	146	180	240
D	25	27	46	44	51
E	50	62	78	95	110

Population
(in million)

	2005-06	2006-07	2007-08	2008-09	2009-10
A	50	52	55	58	60
B	60	61	61	62	64
C	120	125	128	130	134
D	10	12	16	18	20
E	30	31	33	34	35

$$\text{Per Capita Income} = \frac{\text{GDP}}{\text{Population}}$$

8. For how many of the given countries did the percentage change in GDP (over the previous year) increase every year from 2007-08 to 2009-10?
 (A) 1 (B) 2 (C) 3 (D) 4
9. For which of the following countries is the percentage increase in the per capita income over the given period the highest?
 (A) A (B) C (C) D (D) E
10. If the given countries are ranked, from 1 to 5, on the basis of per capita income, such that the country with the highest per capita income is ranked first and the country with the lowest per capita income is ranked last, then how many of the given countries have improved their rank from 2005-06 to 2009-10?
 (A) 1 (B) 2 (C) 3 (D) 4

DIRECTIONS for questions 11 to 14: Answer the questions independently of each other.

11. In 1932, Ramu found that his age is exactly equal to the two-digit number formed by last two digits (i.e., the tens and the units place digits) of his year of birth. Similarly, his grandfather found that in 1932, his age also was equal to the two-digit number formed by the last two digits of his year of birth. What is the sum of the ages of Ramu and his grandfather in 1947?
 (A) 78 years (B) 64 years
 (C) 82 years (D) 112 years

12. If P and Q are two natural numbers, and an operation \oplus is defined such that $P \oplus Q =$

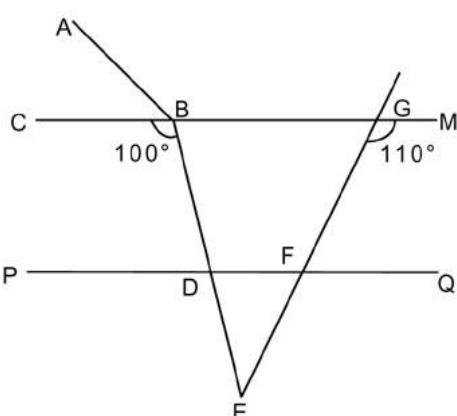
$$\sqrt[3]{\frac{P}{Q}} + \sqrt[3]{\frac{Q}{P}},$$

which of the following is an integer?

- (A) $27 \oplus 8$ (B) $64 \oplus 27$
 (C) $8 \oplus 64$ (D) None of these

13. For how many natural numbers less than 10^5 is the sum of their digits equal to 10?
 (A) 1381 (B) 100 (C) 996 (D) 252

14.



- In the given figure, if $\angle ABC = 2\angle DEF$ and CM is parallel to PQ, then find $\angle ABC$.
 (A) 30° (B) 80° (C) 40° (D) 60°

DIRECTIONS for questions 15 and 16: Answer the questions on the basis of the information given below.

A function S(n) takes a natural number n as its argument and gives the output as the sum of n and the number

formed by reversing the digits of n.

Another function D(n) takes the natural number n as its argument and gives the output as the difference between n and the number formed by reversing the digits of n.

15. If k is a three-digit natural number and $D[D(D(k))] = 0$ but $D(D(k)) \neq 0$, then which of the following cannot be the value of k?
 (A) 762 (B) 166
 (C) 495 (D) 298

16. If k is a three-digit natural number with its digits from one end to the other in either ascending order or descending order, from one end to the other, how many values can S(D(k)) take?
 (A) 1 (B) 2 (C) 3 (D) 9

DIRECTIONS for questions 17 to 19: Answer the questions independently of each other.

17. If x, y and z are positive numbers such that $x + y + z = 3$, then the maximum value of $\left(1 - \frac{1}{x}\right) + \left(1 - \frac{1}{y}\right) + \left(1 - \frac{1}{z}\right)$ is
 (A) 3 (B) 9 (C) 0 (D) 1

18. Let a, b, c and d be positive integers satisfying the equations $\log_a b = \frac{5}{4}$, $\log_c d = \frac{3}{2}$ and $a - c = 32$. Find $d - b$.
 (A) 80 (B) 92 (C) 100 (D) 108

19. PQ and RS are the parallel sides of the trapezium PQRS where $\angle PQR = 135^\circ$ and $\angle SPQ = 100^\circ$. If the height of the trapezium is 4 cm and RS = 16 cm, and T is the perpendicular from Q to RS, then find the length ST.
 (A) 10 cm (B) 8 cm (C) 11 cm (D) 12 cm

DIRECTIONS for questions 20 to 23: Answer the questions on the basis of the information given below.

The following table gives the number of seats in each of the five departments of an engineering college.

Department	No. of seats
CSE	60
ECE	72
EEE	76
IT	65
ME	80

During the present admission cycle, 500 students have applied for the college and they are ranked from 1 to 500, with 1 being the best rank and 500 being the least rank. Each student gave his/her preference for each of the five departments, with 1 being the highest preference and 5 being the least preference. The allocation process for each student is done sequentially, starting from the best ranked student to the least ranked student. A seat is allotted to a student in the department of his or her first preference, provided seats are available in that department after all the students ranked better than him have been allocated their seats. Otherwise, a seat is allotted to the student in the department of the student's next highest preference, and so on.

Any student who is allocated a seat in any department among his or her top three preferences will join the college and is considered to be out of the allocation process. Any student who is not allocated a seat in a department among his or her three highest preferences will opt out of the allocation process and not join the college. Any such rejected seats will be offered to the students still left in the allocation process.

The following table gives, for each department, the number of students who gave different preferences, from 1 to 5, for that department.

Department Preference	CSE	ECE	EEE	IT	ME
1	215	80	45	125	35
2	125	30	70	140	135
3	90	45	150	65	150
4	30	255	65	80	70
5	40	90	170	90	110

DIRECTIONS for questions 24 to 26: Answer the questions independently of each other.

DIRECTIONS for questions 27 and 28: Answer the questions on the basis of the information given below.

Substitute different digits from 0 to 9 for different letters in the addition problem below so that it results in the correct value of the sum.

27. What is the least possible value of DHIEC?

	A	B	C
	D	E	
F	E	B	G
<hr/>			
D	H	I	E
			C

- (A) 10563 (B) 10568 (C) 10263 (D) 10268

28. What is the value of H?
(A) 1 (B) 0 (C) 2 (D) 3

DIRECTIONS for questions 29 and 30: Answer the questions on the basis of the information given below.

These questions are based on the following table which shows the percentage share of valid votes polled and the number of seats won by different parties in two elections.

Party	2005		2010	
	% share of votes	Seats won	% share of votes	Seats won
A	30%	210	36.67%	305
B	40%	360	30%	255
C	15%	50	18%	60
D	7%	20	5.33%	18
E	8%	7	10%	9

29. If the number of valid votes polled for B increased by 20% from 2005 to 2010 elections, then the number of valid votes polled for E increased by

(A) 50%
(B) 75%
(C) 100%
(D) Cannot be determined

30. If the total number of valid votes polled increased by 20% from 2005 to 2010, then the percentage increase in the average number of valid votes polled per seat won by C is

(A) 10%
(B) 20%
(C) 30%
(D) Cannot be determined

SECTION – II
Number of Questions = 30

DIRECTIONS for questions 1 to 3: Answer the questions on the basis of the information given below.

Harsha went to a village to buy a fruit orchard. He inquired of three persons A, B, and C, who are the only persons working on a farm, about the prices of a Mango orchard, an Orange orchard and a Guava orchard. It is known that the prices of the three orchards are distinct. Each of the three persons gave three statements in reply to Harsha's enquiry. Two of the three persons are alternators, who always alternate between truth and lie, in any order, while the third person is either a truth teller, who always tells the truth, or a liar, who always lies. The following are the statements made by each of the persons:

- A – (i) *The cost per acre, in Rs.lakh, of each of the orchards is a prime number less than ten.*
(ii) *B always lies.*
(iii) *The Mango orchard is the costliest among the three.*
- B – (i) *The Guava orchard is the cheapest among the three.*

- (ii) *No person working on this farm always speaks the truth.*
(iii) *The cost per acre, in Rs.lakh, is an even number for one of the orchards.*

- C – (i) *The Guava orchard is the costliest orchard.*
(ii) *A always lies.*
(iii) *The Mango orchard is cheaper than the Orange orchard.*
1. Who among the following is not an alternator?
(A) A
(B) B
(C) C
(D) Cannot be determined
2. What is the cost per acre (in Rs. lakh) of the Orange orchard?
(A) 2 (B) 3 (C) 5 (D) 7
3. Which is the costliest orchard among the three?
(A) Orange
(B) Mango
(C) Guava
(D) Cannot be determined

DIRECTIONS for questions 4 to 7: Read the following passage and answer the questions that follow it.

Desert, the noun deriving from the verb "to deserve", appears to be an essential human dynamic. It is at least a central anxiety that provides the plot for so many novels and films that depend on our sense that there is or should be such a thing. Like Kafka and Poe, Hitchcock repeatedly returns to the individual who is singled out, wrongly accused, an innocent suffering an injustice. Yet consider Montgomery Clift's priest in *I Confess*, Henry Fonda in *The Wrong Man*, James Stewart in *The Man Who Knew Too Much*; none of them is – or could be according to Hitchcock's Catholic upbringing – truly innocent of everything and often their moral failings give some cause for the suspicion that falls on them. There is always a faint tang of consequence about their troubles.

We worry about people not getting what they deserve, but, due to religion or some essential guilt we carry with us, we are also concerned that there might be a deeper, less obvious basis for guilt that our everyday, human sense of justice doesn't take into account. In Victorian fiction, Dickens and Hardy are masters of just and unjust deserts, as innocents such as Oliver Twist, David Copperfield, Tess of the D'Urbervilles and Jude the Obscure become engulfed by persecutory institutions and struggle, only sometimes with success, to find the life they ought, in a fair world, to have.

In Dickens, readers get a joyful reassurance after evil intent almost overcomes goodness but justice finally, though at the last moment, wins out by decency and coincidence. Hardy, in his covert modernism, offers no reassurance at all that his innocents' day will come; his victims' hopes and lives are snuffed out by forces such as nature and class that have no concern at all with the worth of individual lives and hopes. For both writers, however, the morally just or unjust result is usually an accident that works in or against the protagonist's favour.

Fairness and desert are not exactly the same, I suppose; we might have a basic requirement for a generalized fairness – equality of opportunity, say – that has nothing to do with what anyone deserves, but our strangely inbuilt earliest sense of fairness provides our first encounter with the complexity of justice and injustice. Perhaps it arose even earlier than human consciousness. There are those who, like the primatologist Frans de Waal, suggest that a sense of fairness is an inherent emotion in monkeys:

An experiment with capuchin monkeys by Sarah Brosnan, of Georgia State University's CEBUS Lab, and myself illuminated this emotional basis. These monkeys will happily perform a task for cucumber slices until they see others getting grapes, which taste so much better. They become agitated, throw down their measly cucumbers, and go on strike.

I'm not sure if this is exactly a sense of fairness. If so, it is a limited, unidirectional sense. Perhaps a sense of unfairness precedes the more general idea. I imagine a full sense of fairness would be demonstrated by a capuchin throwing the grapes down when she sees her fellow worker receiving cucumber. All for one and one for all. I couldn't find any experiment that showed this.

4. The passage addresses which of the following issues related to Hitchcock's sense of justice?
- Whether his cinematic plots are derived from Kafka's and Poe's novelistic interpretations of injustice.
 - Whether there is a deeper sense of guilt than that which one stands accused of, that pushes one into misfortune's path.
 - How his cinematic protagonists may not be entirely guiltless.
 - How his cinematic protagonists are wrongly accused despite being paragons of innocence.
5. The author of the passage is primarily concerned with
- resolving the paradox of fairness.
 - the amorphous nature of the idea of fairness, justice and desert.
 - questioning a hypothesis regarding the inevitability of desert.
 - distinguishing the human concepts of fairness, justice and desert.
6. The author of the passage is skeptical about the capuchin experiment for which of the following reasons?
- It suggests a sense of unfairness rather than a sense of fairness.
 - It implied that justice is separated from fairness.
 - It suggests a lack of perspective.
 - There was little extraordinariness in the primates' rebellion against discrimination.
7. All the following, except one, would be appropriate as follow-up questions to the author, for a better understanding of the ideas discussed. Pick the exception.
- "What makes one person more deserving than another?"
 - "What is it that the more deserving deserve more of?"
 - "Do we have to settle for the muddle of 'good enough' fairness while thinking and trying for something better?"
 - "Is there a relationship between fairness and justice?"

DIRECTIONS for question 8: In the question, there are five sentences or parts of sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are correct in terms of grammar and usage (including spelling, punctuation and logical consistency). Then, choose the **most appropriate** option.

8. (a) Could Adolf Hitler come to power today? Timur Vermes poses this question in his
- debut novel "He's Back". Said in the first person,
 - the plot sees Hitler wake up from a 66-year sleep in 2011 Berlin. There is no explanation for how or why this has happened, but that hardly is the point.
 - Hitler begins to muddle his way through this new Germany, and people can't help but notice his unusual appearance, his uncanny likeness to the late Führer.
 - Assuming no one would decide to look guilelessly like Hitler, many start to assume he is engaged in some kind of comedic performance art.
- a, b and d
 - a and d
 - a, c and e
 - d and e

DIRECTIONS for question 9: The sentences given in the following question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. From among the four choices given below the question, choose the most logical order of sentences that constructs a coherent paragraph.

9. (a) The fact that they speak thus, that they can speak thus, is definitely no fiction.
- Fiction has grown odious to the writers; it sickens them; they have lost faith in its necessity and therefore have become atheists of their own omnipotence.
 - The novel is pulling back into the author; that is, from the position of the fiction of the only reality it retreats to the position of the origin of that fiction.
 - No longer do the writers believe that when they say, "Let there be light," genuine radiance dazzles the reader.
 - This, at least, is what has been taking place in the vanguard of European prose.
- | | |
|-----------|-----------|
| (A) cdabe | (B) bdace |
| (C) badec | (D) cebda |

DIRECTIONS for questions 10 to 13: Answer the questions on the basis of the information given below.

Five universities – Harvard, MIT, Stanford, NYU and Pennsylvania – offer courses in three different disciplines of Management, viz. Finance, Operations and Marketing. No university offers the same number of courses in any two disciplines and no two universities offer the same number of courses in any discipline. The number of courses offered by any university in any single discipline is at least one and at most five.

Further, it is known that,

- the total number of courses offered at Pennsylvania is six.
 - in Operations, MIT offers two courses and Stanford offers three courses.
 - Harvard offers five courses in Finance, the discipline in which Stanford offers only two courses and MIT offers only one.
10. If the total number of courses, in all the disciplines put together, offered by Harvard is 12, then what is the total number of courses, in all the disciplines put together, offered at NYU?
- 11
 - 13
 - 10
 - 14
11. The maximum number of courses, in all the disciplines put together, can be offered at which of the following universities?
- Harvard
 - NYU
 - Stanford
 - Either (A) or (B)
12. If the difference between the total number of courses, in all the disciplines put together, offered by MIT and Stanford is one, then the difference between the number of courses offered in Marketing at Stanford and Pennsylvania is
- 4
 - 3
 - 2
 - Cannot be determined

13. Which of the following statements is definitely true?
- (A) The total number of courses offered at NYU and Stanford is the same.
 - (B) The total number of courses offered at Harvard and NYU is the same.
 - (C) MIT offers the second lowest number of courses in all the disciplines put together.
 - (D) Stanford offers the second highest number of courses in all the disciplines put together.

DIRECTIONS for questions 14 and 15: There are two blanks in each of the following sentences. From the pairs of words given below them, choose the pair that fills the blanks **most appropriately**.

14. We have always known that students often indulge in _____ – everything from homework assignments and studying for exams to filling out college applications are put off for the future –

research now shows that students are biologically

- _____ to it.
- (A) postponement . . . inured
 - (B) temporizing . . . predisposed
 - (C) prevarication . . . prone
 - (D) procrastination . . . drawn

15. American _____ of torture crowed that the successful hunt for Osama Bin Laden, whose precise location was supposedly revealed by an acolyte incarcerated in Guantanamo after he was 'persuaded' to do so, _____ their support of the euphemistically-named enhanced interrogation techniques.
- (A) sympathisers . . . inveighed
 - (B) apologists . . . vindicated
 - (C) evangelists . . . burlesqued
 - (D) fanatics . . . ratiocinated

DIRECTIONS for questions 16 to 18: Read the following passage and answer the questions that follow it.

So Cézanne's portraits are all still lives. And when they succeed, they do so as paintings governed by colour and harmony, rather than as visual descriptions of human beings who do normal human things like talk, laugh and move. Those card players bent over their table are never actually going to play a card or take a trick; they may be staring at the best hand they've ever seen, but the undertaker will arrive before they will be permitted to lay it down. Mme Cézanne, strapped into her chair by her husband's stern command to immobility, is not going to reveal her personality to us, however many times he paints her. And so Danchev's argument for her greater importance in the painter's life stumbles a little when we consider Cézanne's attitude to portraiture. She might as well have been his favourite door.

Though, of course, a door, or an apple, or a bowl, can be just as interesting, and just as "alive" as a human being. Danchev quotes J.K. Huysmans, in somewhat exasperated admiration, referring to "skewed fruit in besotted pottery". That "besotted" is wonderful. Because though an apple, unlike an art dealer, can hold an obedient pose until it begins to rot, it is also more than an apple, if we define an apple in terms of shape, colour and edibility. Virginia Woolf noted that the longer you stare at Cézanne's apples, the heavier they seem to get. Cézanne would doubtless have approved the aperçu. "Grappling directly with objects" was central to his purpose. "They buoy us up. A sugar bowl teaches us as much about ourselves and our art as a Chardin or a Monticelli . . . People think a sugar bowl has no physiognomy, no soul. But that changes every day, too."

A bowl with a soul. Does a sugar bowl change every day? Of course the light on it may change, and so might our feelings (about its associations, or its intrinsic beauty), but the bowl itself? Its weight, its form, its surface? True, it may be a conduit to wider, greater things, and Danchev cites Auden on how "the crack in the teacup opens / A lane to the land of the dead". But there is a point where a stern and principled pantheism shades into an implausible pathetic fallacy. Wassily Kandinsky wrote that "Cézanne made a living thing out of a teacup, or rather in a teacup he realized the existence of something alive. He raised still life to such a point that it ceased to be inanimate". This may be true, but then so is its opposite – that he lowered or sat on human life to the point where it almost ceases to be animate. Movement in the paintings is generally the movement of the viewer's eye, following the movement of the paint, rather than the representation of movement. Occasionally there might be a scurry of shorter brushstrokes animating the branches of a tree; but just as his colours rarely blaze – he used bright colours but in a grey light, as his friend and closest colleague Camille Pissarro observed – his landscapes rarely stir. What they do, nonetheless, is express and inspire joy, and perhaps, amid the necessary account of struggle and high principle, this is one aspect of Cézanne's work that Danchev underemphasizes (just as he spends little time on the watercolours). One side of Cézanne holds the world down, paints it thickly as if to keep it pinned in place; another part has a buoyancy and dancingness about it – what John Updike called "this oddly airy severity, this tremor in the face of the mundane". If you were asked in a roomful of Cézannes that crass but reliable question – which one would you steal if you could? – most people, I suspect, would choose between "skewed fruit in besotted pottery" and one of those landscapes with trees, water, a rising riverbank, hillside and the lozenge of a red roof in the distance.

Art, for Cézanne, had a parallel existence to life rather than a dependence, imitative or otherwise, on it. It had its own rules, sought its own harmonies, purged old-style interpretativeness, and announced the democracy of tache-painting, in which a patch or stain in the form of a pair of trousers was as significant as a patch or stain representing a head. Happily, all theories fall foul of life, and the inhabitants of Cézanne-world were sometimes no more obedient than in the parallel world they occupied when posing.

16. The passage addresses which of the following issues related to Cézanne's portraits in the first paragraph?
- (A) How she bears no likeness at all to her portraits.
 - (B) Whether her husband painted portraits of his wife against her will.
 - (C) How they define her character by being lifelike.
 - (D) Whether they would release her personality out towards the spectator.

17. The author mentions that John Updike confronted which of the following dichotomies while attempting to evaluate Cézanne's portraits?
- (A) The tension between their frostiness and their spirit.
 - (B) The discrepancy between Cézanne's popularity and Cézanne's standing among critics.
 - (C) The contrast between their stillness and their verve.
 - (D) The inconsistency between Cézanne's artistic intentions and the actual output on the canvas.

18. The author mentions Auden primarily in order to
- (A) provide examples of painters who are often compared with Cézanne.
 - (B) identify certain critics who disagree with Cézanne's pantheistic code of aesthetics.
 - (C) question the hypothesis that all inanimate objects are inevitably endowed with life.
 - (D) establish a standard of comparison for Cézanne's portraits of still life.

DIRECTIONS for question 19: In the following question, the word in capitals is used in four different ways. Choose the option in which the usage of the word is INCORRECT or INAPPROPRIATE.

19. BURN

- (A) The bank robbers burned out the roads while escaping but they were soon captured.
- (B) The image of the train derailment was burned into my memory.
- (C) We really got burned on the second hand television we bought.
- (D) My father always used to advise me not to burn the bridges with my superiors at work.

DIRECTIONS for questions 20 and 21: The following question presents four statements, of which three, when placed in appropriate order, would form a contextually complete paragraph. Pick the statement that is not part of that context.

20. (A) Armed with a better understanding of how – and how much – the Internet contributes to national economies, policy makers and business executives can focus their efforts more acutely and effectively to promote and strengthen their domestic Internet ecosystems.
- (B) Many have compared the dawn of the Internet to another communications game changer, the introduction of the Gutenberg press five centuries earlier.
- (C) Electricity changed the landscape of cities around the world, allowing elevators that can travel great heights and heralding the dawn of massive skyscrapers; the Internet also bridges vast distances and has made the world flatter by allowing instant access to an almost endless stream of information that can be immediately brought into play.
- (D) But a comparison with the development and commercialization of electric power may be more appropriate.

21. (A) God is no longer the transcendent creator of the universe who rules it via providence, but Nature itself, understood as an infinite, necessary, and

- fully deterministic system of which humans are a part.
- (B) Given Spinoza's devaluation of sense perception as a means of acquiring knowledge, his description of a purely intellectual form of cognition, and his idealization of geometry as a model for philosophy, this categorization is fair.
 - (C) Among philosophers, Spinoza is best known for his Ethics, a monumental work that presents an ethical vision unfolding out of a monistic metaphysics in which God and Nature are identified.
 - (D) Humans find happiness only through a rational understanding of this system and their place within it.

DIRECTIONS for questions 22 and 23: Answer the questions on the basis of the information given below.

Five professors – A, B, C, D and E – are assigned to eight students, with roll numbers 1 through 8, as project guides. Each student is assigned to only one professor. Professors C, D and E are part-time professors, while A and B are full time. Not more than one student can be assigned to any part-time professor. The number of students assigned to any professor cannot be more than three. For any professor, all the students assigned to him must have consecutive roll numbers and any student who needs a computer for his project must be assigned to a professor among C, D and E.

22. Which of the following statements can never be true?

- (A) Roll number 2 is assigned to A and roll number 3 is assigned to B.
- (B) Roll number 3 is assigned to C and roll number 6 is assigned to D.
- (C) Roll number 2 is assigned to C and students assigned to D and E have consecutive roll numbers.
- (D) More than one of the above.

23. If roll number 3 is assigned to D, then which of the following statements can be true?

- (A) The roll numbers of the students assigned to C and E are both even.
- (B) The student with roll number 6 needs a computer for his project.
- (C) The roll numbers of the students assigned to C and E are both odd.
- (D) The students with roll numbers 2 and 4 need a computer.

DIRECTIONS for question 24: The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the sentence that completes the paragraph in the most appropriate way.

24. The main species of online writing might all be said to belong to the family of "commentary" rather than what is still sometimes called (though not usually without embarrassment) "literature". They have, that is, a sort of secondary status to whatever primary object they comment on; they are prompted by and dependent on some other object or event, whether a commercial product, a recent private experience, a news story, someone else's political opinion, a song

or book, or whatever. This is not to disdain commentary for its failure to be primary rather than secondary, only to attempt to suggest its difference from literature.

- (A) The difference between literature and perception is a matter of perception – the interaction between them is akin to the effect of a chisel on a marble stone while making a sculpture.
- (B) Literature, you might say, describes a chess player's predicament over adopting a defensive strategy against an aggressive opponent, while

commentary describes a mountaineer's choice of the best path to Mt. Everest from the base camp.

- (C) Literature, you might say, transforms the world into an illustration of the text, while commentary's relationship to the world is more like that of a caption to a photograph or a wall-paragraph to a painting.
- (D) Literature, absorbs psychologically interesting phenomena, while commentary deals with "adult" analogues of juvenile adventure tales.

DIRECTIONS for questions 25 and 26: Read the following passage and answer the questions that follow it.

Anyone hoping for signs of a healthy economic recovery was disappointed by lower-than-expected GDP growth for the first quarter of 2013 — a mere 2.5%, far short of the forecast 3.2%. Meanwhile, the stock market continues to soar, hitting record levels in recent weeks. It's a striking disconnect, and one that is discouraging and confusing for Americans as they seek to earn a living and save for the future.

Companies and small businesses are also dealing with the same paradox. Many are in good shape and have money to spend. So why aren't they pumping more capital back into the economy, creating jobs and fueling the country's economic engine?

Quite simply, if firms can't see a clear road to economic recovery ahead, they're not going to hire and they're not going to spend. It's what economists call a "deadweight loss".

Today, there is uncertainty about regulatory policy, uncertainty about monetary policy, uncertainty about foreign policy and, most significantly, uncertainty about U.S. fiscal policy and the national debt. Until a sensible plan is created to address the debt, America will not fulfill its economic potential.

Uncertainty comes with a very real and quantifiable price tag — an uncertainty tax, so to speak. Over the past two years, amid stalled debates in Washington and missed opportunities to tackle the debt, the magnitude of this uncertainty tax has gotten short shrift.

We estimate that since 2011 the rise in overall policy uncertainty has created a \$261 billion cumulative drag on the economy (the equivalent of more than \$800 per person in the country). Without this uncertainty tax, real U.S. GDP could have grown an average 3% per year since 2011, instead of the recorded 2% average in fiscal years 2011-12. In addition, the U.S. labor market would have added roughly 45,000 more jobs per month over the past two years. That adds up to more than one million jobs that we could have had by now, but don't.

But it's not just about the numbers. Every time lawmakers seemingly get close to a deal that will restore fiscal responsibility but instead fail, we hear the concerns of investors. They ask: How does this affect my retirement fund? What about my college savings account? How does this affect my taxes? Would I be better off putting my savings under the mattress?

Investor anxiety is a critical component in all of this. We'd be foolish to take comfort in the strength of recent stock-market performance. Until the U.S. debt issue is resolved for the long term, market gains and losses will be built on an unstable foundation of promises that cannot be kept.

Developing a credible, long-term solution to the country's staggering debt is the biggest collective challenge right now. It should be America's biggest collective priority, too. Any comprehensive deficit reduction must take on the imbalance between revenues and expenditures as a share of GDP. That means entitlement reforms, spending reductions and additional tax revenues.

This does not have to be about European-style "instant austerity." Because the U.S. dollar is the world's reserve currency, America doesn't have to balance the budget tomorrow.

The key is to provide clarity to businesses, financial markets and everyday savers and investors. Make no mistake: A comprehensive, long-term, binding plan that brings the budget into balance over a reasonable time frame is essential. If Washington fails to achieve one, the consequences will be harsh.

25. Which of the following titles best summarizes the contents of the passage?
- (A) Aftershocks from policy uncertainty drags US Economy.
 - (B) Economists see clear road to recovery ahead.
 - (C) Policy uncertainty is the economic challenge of the times.
 - (D) Uncertainty is the enemy of recovery.

DIRECTIONS for question 27: The sentences given in the following question, when properly sequenced, form a coherent paragraph. Each sentence is labelled with a letter. From among the four choices given below the question, choose the most logical order of sentences that constructs a coherent paragraph.

27. (a) One consequence of this shift, of course, has been that philosophers who are concerned with the theories and theorists of the past in terms of the traditional concerns with evidence, explanation, justification, find rather less of interest in many, but I should emphasize, not all, the history-of-science journals today than they would have done of yore.

(b) One way or another, the historiography of science has been greatly broadened, not to say transformed, in recent decades.

(c) From the side of the working historian of science, however, it would seem hazardous to claim that philosophic issues or explicit reference to work in the philosophy of science play a larger role today in their work than they did forty years ago.

DIRECTIONS for question 28: The sentences given in the following question, when properly sequenced, form a coherent paragraph. The sentence labelled 'a' is in the correct place. From the choices given below the question, choose the most logical order of remaining sentences (b), (c), (d) and (e) that constructs a coherent paragraph.

DIRECTIONS for questions 29 and 30: Read the following passage and answer the questions that follow it.

Gogol is the comic genius among Russian writers, always playful but never shallow. "Dead Souls" is about Pavel Ivanovich Chichikov, who travels the provincial countryside buying up dead serfs from small landowners. These serfs remain on the landowners' books until the next census and, even though dead, are still taxable. Chichikov offers to relieve the landowners of their tax burden. His plan is to install these dead serfs on the tax rolls of a far-away estate, on which he will then be able to get a generous government mortgage and come away with a small fortune.

The great Russian poet Alexander Pushkin was Gogol's friend and supporter, and the man who gave him the idea for "Dead Souls." Gogol refers to the book not as a novel but as a poem. "Dead Souls" is a poem about Russia, its provincial backwaters, its secondary characters (clerks, minor officials, small landowners), its heartbreakingly squalid. "Russia! Russia!" Gogol exclaims midway through the book, ". . . Everything in you is open, desolate and level; your squat towns barely protrude in the midst of the plains like dots, like counters; there is nothing to tempt or enchant the onlooker's gaze. But what is this inscrutable, mysterious force that draws me to you?"

What gives "Dead Souls" its poetic quality is its author's exuberant passion for the details – one might even say the irrelevant details – of provincial Russian life. In his brief, brilliant study "Nikolai Gogol," Vladimir Nabokov accounts for Gogol's artistry through this and what he calls Gogol's "four dimensional" prose, a sinuous style that captures characters in their inner being. Gogol's scenes light up their surroundings and his characters flame into life. "I am fated to journey hand in hand with my strange heroes and to survey the surging immensity of life," he wrote in "Dead Souls," "to survey it through the laughter that all can see and through unknown invisible tears." The book's characters might be thought stock – the miser, the spendthrift, the bearish Russian and the rest – but for their creator's ability to bring them to life with a shimmering individuality.

Chichikov, the character at the heart of Gogol's masterpiece, is a lower-echelon civil servant with a corrupt past who specializes in what Gogol calls "blandiloquence," or elaborately empty compliments. Chichikov was brought up by a father whose last words of advice to his son were to please his superiors, not to be seduced by friendship, and to remember that nothing in life is so important as money – advice, notes Gogol, "that remained deeply engraved in his soul."

One of life's "acquirers" – for Gogol, a major sin – Chichikov turns out to be an inept acquirer, which makes him quite as interesting as he is detestable. "Wise is the man," Gogol writes, "who does not disdain any character, and instead, examining him with a searching look, plumbs him to the very main-springs of his being." That sentence should stand as the first commandment for every novelist.

Chichikov is a fantasist who imagines himself one day running a plush and productive estate, with a pretty wife and fine children, himself the very model of the perfect Russian citizen. Although Gogol writes that "we have not taken a virtuous man as our hero," he has made Chichikov, though vile and petty in so many ways, oddly sympathetic.

When the rascal is caught out at his game, Chichikov garners our pity. Who cannot feel for the poor wretch, down on his knees, begging forgiveness "in his tailcoat of Narvarino smoke and flame, in his velvet waistcoat and new trousers, with his satin necktie and carefully groomed hair from which emanated the fresh smell of eau de Cologne"?

(Key and Solutions for AIMCAT1405)

Key

SECTION – I

- | | | | | | |
|------|-------|-------|-------|-------|-------|
| 1. D | 6. D | 11. D | 16. A | 21. B | 26. A |
| 2. C | 7. D | 12. D | 17. C | 22. C | 27. C |
| 3. C | 8. A | 13. C | 18. C | 23. B | 28. B |
| 4. A | 9. D | 14. D | 19. D | 24. B | 29. C |
| 5. D | 10. A | 15. C | 20. A | 25. A | 30. B |

SECTION – II

- | | | | | | |
|------|-------|-------|-------|-------|-------|
| 1. C | 6. C | 11. D | 16. D | 21. B | 26. B |
| 2. B | 7. D | 12. C | 17. C | 22. D | 27. D |
| 3. B | 8. B | 13. C | 18. C | 23. A | 28. D |
| 4. C | 9. D | 14. D | 19. A | 24. C | 29. B |
| 5. B | 10. C | 15. B | 20. A | 25. D | 30. C |

Solutions

SECTION – I

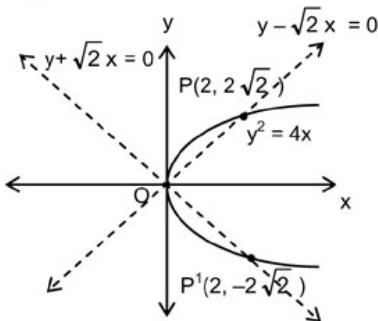
Solutions for questions 1 to 7:

1. Given curves are:

$$y^2 = 2x^2 \text{ and } y^2 = 4x$$

$$\text{i.e., } (y + \sqrt{2}x)(y - \sqrt{2}x) = 0$$

$$\text{and } y^2 = 4x$$



Since, y appears only as y^2 , both the graphs will be symmetric about the x -axis.

From the figure it is clear that the loops OPO and $OP'P$ are of equal areas (from symmetry about the y -axis).

\therefore Ratio of their areas is $1 : 1$. Choice (D)

2. Let the five numbers be 1, 2, 3, 4 and 5. Now these have to be written in a sequence a, b, c, d and e such that $(a + b) = 7$, $(b + c) = 6$, $(c + d) = 7$ and $(d + e) = 6$.

We tabulate the possible sequences below:

	$a + b$	$b + c$	$c + d$	$d + e$	
a	b	c	d	e	
5	2	4	3	x	
4	3	x	2	5	
3	4	2	5	x	
2	5	1	x	1	

We consider the various possibilities for (a, b) , viz. (5, 2) (4, 3) (3, 4) and (2, 5). By trial we see that $(a, b, c, d, e) = (3, 4, 2, 5, 1)$. The other sequences are not possible (marked with 'X' above)

We consider the choices one by one.

Choice (1): $a + b = 7$ and $c + d = 7$ False

Choice (2): $b + c = 6$ and $d + e = 6$ False

Choice (3): $a = 3$ and $c + e = 3$ True

Choice (4): $b = 4$ and $a + e = 4$ False

Choice (C)

3. Let the roots of the two quadratic equations be $3k$, $7k$ and $2p$, $3p$ respectively.

$$\text{Given } 10k = 5p \Rightarrow p = 2k.$$

Product of the roots of the first equation is $21k^2$ and that of the second equation is $6p^2$ i.e., $24k^2$.

As the roots are integers least value of k has to be 1.

\therefore Least difference of the product of the roots = 3.

Choice (C)

4. The volume of water that fills up the pipe $= \pi r^2 (400) \text{ cm}^3$

$$= \frac{22}{7} (7)(7)(400) \text{ cm}^3 = (22)(7)(400) \text{ cm}^3$$

The time taken is 3 minutes

Let the speed of the water in the inlet pipe be S (cm/sec)

$$\therefore (100)(3)(60) S = (22)(7)(400)$$

$$\Rightarrow S = \frac{22(7)(4)}{3(60)} = \frac{154}{45} \text{ cm/sec}$$

$$\approx 3.4 \text{ cm/sec}$$

Choice (A)

5. α, β, γ are the distinct real roots of

$$x^3 - kx^2 + 2512x - 2013 = 0 \rightarrow (1)$$

$$\alpha^3 + \beta^3 + \gamma^3 = 6039 \rightarrow (2)$$

$$\alpha + \beta + \gamma = k \text{ and}$$

$$\alpha\beta\gamma = -(-2013) = 2013$$

From (2)

$$\alpha^3 + \beta^3 + \gamma^3 = 3(2013) = 3\alpha\beta\gamma$$

$$\Rightarrow \alpha^3 + \beta^3 + \gamma^3 - 3\alpha\beta\gamma = 0$$

$$\Rightarrow (\alpha + \beta + \gamma)(\alpha^2 + \beta^2 + \gamma^2 - \alpha\beta - \beta\gamma - \gamma\alpha) = 0$$

$$\Rightarrow (\alpha + \beta + \gamma) \cdot \frac{1}{2}[(\alpha - \beta)^2 + (\beta - \gamma)^2 + (\gamma - \alpha)^2] = 0$$

$\Rightarrow \alpha + \beta + \gamma = 0$ [$\therefore \alpha, \beta, \gamma$ are distinct and hence the second factor on the LHS cannot be 0.]

$$\Rightarrow k = 0$$

Choice (D)

6. The effect on the average ages of X and Y for different values of a are tabulated below.

	X	Y
a > 28	decrease	increase
a = 28	decrease	no change
24 < a < 28	decrease	decrease
a = 24	no change	decrease
a < 24	increase	decrease

Given: Average age of only one class would not increase, If $a < 24$ or $a > 28$, the given condition would be satisfied.
 $\therefore a < 24$ or $a > 28$. Neither (A) nor (B) specify all these values
 Choice (D)

7. $\frac{S_3}{S_9} = \frac{1}{6} \Rightarrow \frac{3t_2}{9t_5} = \frac{1}{6}$

$$\Rightarrow 2t_2 = t_5$$

$$\Rightarrow 2(a + d) = a + 4d$$

$$\Rightarrow a = 2d$$

$$\therefore \frac{t_3}{t_{10}} = \frac{a + 2d}{a + 9d} = \frac{4d}{11d} = \frac{4}{11}$$

Choice (D)

Solutions for questions 8 to 10:

8. The percentage change in GDP of A for

$$2006-07 \rightarrow \frac{83 - 75}{75} = 10.67\%$$

$$2007-08 \rightarrow \frac{13}{83} = 15.66\%$$

$$2008-09 \rightarrow \frac{14}{96} = 14.58\%$$

Thus, the percentage change in GDP has decreased in 2008-09 when compared to 2007-08 for A. for country B, we can see that the percentage change in 2009-10 is

$\frac{10}{71}$ which is less than the percentage change in 2008-09,

$$\text{i.e., } \frac{12}{59}.$$

For country C, the percentage changes over the given period are

$$2006-07 \rightarrow \frac{1}{125} = 0.8\%$$

$$2007-08 \rightarrow \frac{20}{126} = 15.87\%$$

$$2008-09 \rightarrow \frac{34}{146} = 23.29\%$$

$$2009-10 \rightarrow \frac{60}{180} = 33.33\%$$

Thus the percentage change has increased for every year for country C.

For country D the GDP has increased in 2007-08 when compared to the previous year, whereas it has decreased in 2008-09.

For country E the percentage change in 2008-09, i.e., $\frac{17}{78}$

is more than that in 2009-10, i.e., $\frac{15}{95}$.

Thus, for only for country C, does the percentage change in GDP increase every year over the given period.

Choice (A)

9. The percentage change in per capita income of the given countries over the given period are as follows

Country	Per capita income 2005-06	Per capita income 2009-10	Percentage change
A	$\frac{75 \text{ Bn}}{50 \text{ Mn}} = 1500$	$\frac{143 \text{ Bn}}{60 \text{ Mn}} = 2383.3$	58.87%
B	$\frac{48 \text{ Bn}}{60 \text{ Mn}} = 800$	$\frac{81 \text{ Bn}}{64 \text{ Mn}} = 1265.6$	57%
C	$\frac{125 \text{ Bn}}{120 \text{ Mn}} = 1041.6$	$\frac{240 \text{ Bn}}{134 \text{ Mn}} = 1791$	72%
D	$\frac{25 \text{ Bn}}{10 \text{ Mn}} = 2500$	$\frac{51 \text{ Bn}}{20 \text{ Mn}} = 2550$	2%
E	$\frac{50 \text{ Bn}}{30 \text{ Mn}} = 1666.6$	$\frac{110 \text{ Bn}}{35 \text{ Mn}} = 3142.8$	88.56%

Thus the percentage increase is the highest for country E.
 Choice (D)

10. From the preceding solution, the ranks of the countries in 2005-06 and 2009-10 are

	2005 - 06	2009 - 10
A	3	3
B	5	5
C	4	4
D	1	2
E	2	1

Only country E has improved its ranking from 2005-06 to 2009-10.
 Choice (A)

Solutions for questions 11 to 14:

11. Given that in 1932 the ages of Ramu and his grandfather are equal to the last two digits of their respective years of birth, their age is a two digit number. So one possible number is $\frac{32}{2} = 16$ i.e. born in 1916

Only other possible number is $\frac{132}{2} = 66$ i.e. born in 1866

\therefore Sum of their ages = 66 + 16 = 82

In 1947 the sum of the ages is $82 + 2 \times 15 = 82 + 30 = 112$
 Choice (D)

12. Evaluating the first three choices does not result in an integer. Hence choice (D) follows.
 Choice (D)

13. Consider ten balls that have been placed in a row from left to right as shown below O O O O O O O O O O.
 Now, all digits less than 10^5 (i.e., upto 99999) with sum of digits being 10 can be represented by drawing four vertical lines separating these 10 balls into five groups, where the number of balls in each group will stand for a digit (the number of balls in the left most group for the ten thousands digit and the number of balls in the right most for the units digit).

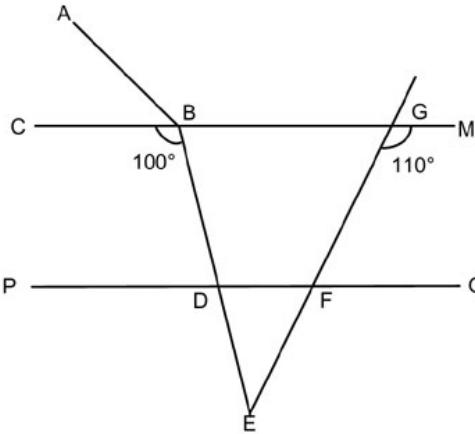
Hence these 10 balls + 4 lines can be arranged among themselves in $\frac{(10+4)!}{10!4!}$ ways (i.e., distinct permutations of 14 items, of which 4 are of one type and 10 are of another type) = ${}^{14}C_4$ ways

But since the maximum value of a single digit = 9, there are five invalid cases where all 10 balls fall into the same group (i.e., there cannot be any single-digit numbers satisfying the given condition).
 Hence required answer = ${}^{14}C_4 - 5$

$$= \frac{14 \times 13 \times 12 \times 11}{1 \times 2 \times 3 \times 4} - 5 = 996$$

Choice (C)

14.



$$\begin{aligned}\Rightarrow \angle GBE &= 180^\circ - 100^\circ = 80^\circ \\ \Rightarrow \angle BGE &= 180^\circ - 110^\circ = 70^\circ \\ \Rightarrow \angle BEG &= \angle DEF = (180^\circ - 80^\circ - 70^\circ) = 30^\circ \\ \therefore \angle ABC &= 2\angle DEF = 2 \times 30^\circ = 60^\circ\end{aligned}$$

In this case, the information that $PQ \parallel CM$ is redundant.
Choice (D)

Solutions for questions 15 and 16:

15. Calculating the required values for each of the choices, it can easily be seen that k cannot be 495. Choice (C)

16. Let abc be the three digit number i.e.,

$$k = 100a + 10b + c$$

$$\Rightarrow D(k) = 99(a - c)$$

Since a , b and c are in either ascending order (or) descending order ($a - c$) cannot be 1.

So ($a - c$) can take values from 2 to 9. For every value of ($a - c$), the sum of $99(a - c)$ and the number obtained by reversing $99(a - c)$ will always be equal to 1089.

$$\therefore S(D(k)) = 1089$$

Hence it can take only one value. Choice (A)

Solutions for questions 17 to 19:

17. For any three positive numbers x , y and z , we have
 $A.M(x, y, z) \geq H.M(x, y, z)$

$$\begin{aligned}\text{i.e., } \frac{x+y+z}{3} &\geq \frac{3}{\frac{1}{x} + \frac{1}{y} + \frac{1}{z}} \geq \frac{3}{\frac{1}{x} + \frac{1}{y} + \frac{1}{z}} \\ \Rightarrow \frac{3}{3} &\geq \frac{3}{\frac{1}{x} + \frac{1}{y} + \frac{1}{z}}\end{aligned}$$

$$\text{i.e., } \frac{1}{x} + \frac{1}{y} + \frac{1}{z} \geq 3$$

$$\Rightarrow \left(1 - \frac{1}{x}\right) + \left(1 - \frac{1}{y}\right) + \left(1 - \frac{1}{z}\right) \leq 0$$

\therefore Maximum value = 0
Choice (C)

18. $\log_a b = \frac{5}{4}$ and $\log_c d = \frac{3}{2} \Rightarrow b = a^{\frac{5}{4}}$ and $d = c^{\frac{3}{2}}$

For b to be an integer, a must be a perfect fourth power.
Also for d to be an integer, c must be a perfect square.

\therefore Let $a = p^4$ and $c = q^2$ (Given $p^4 - q^2 = 32$)

$$(p^2 - q)(p^2 + q) = 32$$

$$\text{Also } p^2 - q < p^2 + q$$

$$\therefore (p^2 - q, p^2 + q) = (1, 32), (2, 16) \text{ or } (4, 8)$$

$$p^2 - q + p^2 + q = 2p^2$$

$$\therefore 2p^2 = 33, 18 \text{ or } 12$$

$$\therefore p^2 = \frac{33}{2}, 9 \text{ or } 6$$

As p^2 must be a perfect square, only possibility is $p^2 = 9$.

$$\therefore p^4 = 81$$

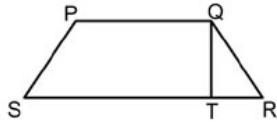
$$\therefore a = 81, c = 9$$

$$b = \left(\frac{1}{81^{\frac{1}{4}}}\right)^5 = 243 \text{ and } d = \left(\frac{1}{9^{\frac{1}{2}}}\right)^3 = 343$$

$$d - b = 100$$

Choice (C)

19.



As QT is perpendicular to RS .

$$\angle PQT = 90^\circ \text{ and } \angle QTR = 90^\circ$$

$$\angle TQR = \angle PQR - \angle PQT = 45^\circ \text{ and hence } \angle TRQ = 45^\circ.$$

Therefore,

$$\therefore TR = QT = 4$$

$$ST = RS - TR = 16 - 4 = 12$$

Choice (D)

Solutions for questions 20 to 23:

20. Let us assume that the students with ranks 1 - 215 had their first preference as CSE, students with ranks 216 - 340 had their first preference as IT and students with ranks 341 - 420 had their first preference as ECE.

As CSE has 60 seats, students with ranks 1 - 60 will get a seat in the department of their first preference. In order to minimize the number of students who get a seat in the department of their first preference, let us assume that students with ranks 61 - 90 had their second preference as ECE and students with ranks 91 - 125 had their second preference as IT. Of these 65 students get a seat in IT. In such a case 45 the remaining students can have their third preference as ECE. Similarly, students who have their first preference as ECE and IT will have their second/third preferences in EEE and ME in which they can get seats. Thus a minimum of 60 students can get a seat in a department of their first preference.

Choice (A)

21. To maximize the number of students who did not join the college, let us assume all the seats in CSE, ECE and IT are filled by the students who had their first preference in these departments. Further 45 seats in ECE and 35 seats in ME will be filled up by students who had their first preference in these departments.

Thus a total of $60 + 72 + 45 + 65 + 35 = 277$ students get into a department of their first choice.

We can arrange the students in such a way that some of the seats in either EEE department or ME department remain vacant.

Case (i):

Some seats remain vacant in EEE department
Total number of seats vacant after first preference

$$= 76 - 45 = 31$$

There are a total of $70 + 150 = 220$ students with their second or third preferences in EEE. However, there can be $60 + 72 + 65 + 80 = 277$ students who already joined the other departments. Thus the 220 students can be from these 277 students.

$$\therefore \text{Maximum number of seats left vacant} = 31$$

$$\text{Number of students who didn't join the college} = 500 - (353 - 31) = 178$$

Case (ii):

Some seats remain vacant in ME department. Total number of seats vacant in ME after first preference
= $80 - 35 = 45$

There are a total of $135 + 150 = 285$ students with their second or third preference in ME department. However, there can be $60 + 72 + 76 + 65 = 273$ students who already joined other departments.

\Rightarrow At least $285 - 273 = 12$ students who had their second / third preference as ME department will join that department.

Hence, maximum number of seats remaining vacant
 $= 45 - 12 = 33$

Number of students who didn't join the college
 $= 500 - (353 - 33) = 180$ Choice (B)

22. The two departments with minimum number of seats and maximum number of first preferences are CSE and IT respectively. If we assume all the top rankers opt for these departments, we can arrange the second preferences in such a way that all other departments will be filled by students whose third preference is that particular department. The number of students who join a department of their third preference will be the minimum of the number of seats in that particular department or the number of students whose third choice is that particular department
 $= 45 (\text{ECE}) + 76 (\text{EEE}) + 80 (\text{ME}) = 201$

Alternative Solution:

Let us assume rank 1 – 60 and 126 – 280 first preference as CSE and Rank 61 – 125 and 281 – 340 first preference as IT and rank 126 – 265 second preference is IT and rank 281 – 340 second preference as CSE. Rank 266 – 280 second preference as EEE.

If the third preference of rank 126 – 201 is EEE, all ECE seats will be filled in by the students whose third preference is ECE. If the third preference of ranks 202 – 265 and 266 – 281 is ME, all ME seats will be filled in by the students were third preference is ME.

If the third preference of ranks 282 – 326 is ECE, 45 ECE seats will be filled is by the students whose third preference is ECE.

Thus the maximum possible number of students who join a department of their third preference is $76 + 80 + 45 = 201$
 Choice (C)

23. Among the 500 students, $180(70 + 110)$ have ME as their 4th or 5th preference and so will not join that department. Out of the remaining 320 ($500 - 180$) a maximum of $273(60 + 72 + 65)$ can join other departments.
 \therefore a minimum of $320 - 273 = 47$ students joined ME.
 Choice (B)

Solutions for questions 24 to 26:

24. As the two circles touch each other, distance between their centres is equal to sum of their radii i.e., 18 cm. As the radii are equal, difference is radii = 0.

Length of direct common tangent

$$= \sqrt{(\text{distance between the centres})^2 - (\text{difference of their radii})^2}$$

$$= \sqrt{(18)^2 - (0)^2} = 18 \text{ cm}$$
 Choice (B)

25. Ajay and Bijay started from P at the same time, travelled for same time, both reversed their direction at the same time and hence, they reach P at the same time. But it is also given that Chatur who starts from Q reaches P at the same time as Ajay did.

\Rightarrow All three reach P at the same time.

It is also given that, Bijay reversed the direction after travelling $\frac{1}{3}(\text{PQ})$. So, he travelled a total of $\frac{2}{3}(\text{PQ})$ before he reached P.

\Rightarrow The time taken by Bijay to travel $\frac{2}{3}(\text{PQ})$ is same as the time taken Chatur to travel (PQ). Hence we can find the ratio of their speeds (2 : 3).
 Choice (A)

26. As Aparna and Sushma celebrate their birthdays on the same day of the week every year, they both must have been born either before 29th February or after 29th February. As

Aparna was born on 7th February. Sushma must have been born before 28th February.

As both were born on the same day of the week, the birthday of Aparna must fall on the same day of the week in the year in which Sushma was born as it was in the year in which Aparna was born i.e., the number of odd days between the year in which Aparna was born and the year in which Sushma was born must be a multiple of 7.

The number of odd days from 2005 to 2009

$$1(2005) + 1(2006) + 1(2007) + 2(2008) = 5 \text{ days}$$

The number of odd days form 2005 to 011 =

$$1(2005) + 1(2006) + 1(2007) + 2(2008) + 1(2009) + 1(2010) = 7 \text{ days.}$$

Hence, Sushma was born on 10th January, 2011.

Choice (A)

Solutions for questions 27 and 28:

In the hundreds column only two different digits are being added. The carry over from the tens column is at most 2. Therefore the sum can be at most $2 + 9 + 8$ or 19.

The carry over to the thousands column can only be 1.

\therefore F has to be 9 and DH has to be 10.

$$\therefore \text{FDH} = 910$$

$$\text{Units} \Rightarrow \text{E} + \text{G} = 10 \quad (\text{U})$$

$$\text{Tens} \Rightarrow 1 + \text{B} + 1 + \text{B} = 10 + \text{E} \quad (\text{T})$$

i.e., E has to be even. If E = 2

A has to be 7, 8 (F = 9)

If A = 7, there has to be a carry over from the tens and it can only be 1 i.e., $1 + 7 + 2$ is the hundreds column.

I has to be 0, which is not possible. ($\because H = 0$)

If A = 8 and there is a carry over from the tens, the hundreds column is $1 + 8 + 2$. I has to be 1, which is not possible. ($D = 1$)

\therefore E can't be 2.

The other even values for E and the corresponding values for G and B that satisfy U and T are tabulated below.

E	G	B
4	6	6
6	4	7
8	2	8

As both G, B can't be 6 and both E, B can't be 8, EGB = 647.
 We get the following result

	A	7	C
		1	6
9	6	7	4
1	0	I	6
			C

The unused digits are 2, 3, 5, 8

$$\text{Hundreds} \Rightarrow 7 + \text{A} = 10 + \text{I} \text{ or } \text{A} = \text{I} + 3$$

$$\therefore \text{AI} = 52 \text{ or } 85$$

We get the following two solutions.

	5	7	C		8	7	C
		1	6			1	6
9	6	7	4		9	6	7
1	0	2	6	C	1	0	5
							C

where C can be 3 or 8

where C can be 2 or 3

27. The least value of DHIEC is 10263. Choice (C)

28. The value of H is 0. Choice (B)

Solutions for questions 29 and 30:

Let the number of valid votes polled in 2005 and 2010 elections be x and y respectively.

29. Votes polled for B in 2005
 $= 0.4x$
 Votes polled for B in 2010 = 0.3y
 But given that 0.3y is 20% more than 0.4x
 $\Rightarrow \frac{0.3y}{0.4x} = 1.2$
 $\Rightarrow \frac{y}{x} = 1.6$
 Number of valid votes polled for E in 2005 and 2010 are 0.08x and 0.1y
 $\therefore \frac{0.1y}{0.08x} = \frac{0.10}{0.08}(1.6) = 2$
 Hence the number of votes polled for E doubled.
 \Rightarrow Increased by 100% Choice (C)

30. Given that number of valid votes polled increased by 20%
 $\Rightarrow \frac{y}{x} = 1.2$
 For C, the number of votes polled per seat won
 $\text{In 2005} = \frac{0.15x}{50}$
 $\text{In 2010} = \frac{0.18y}{60}$
 $\therefore \frac{0.18y}{0.15x} = \frac{0.18}{0.15} \times \frac{5}{6} \left(\frac{y}{x} \right) = \frac{y}{x} = 1.2$
 \Rightarrow The required percentage = 20% Choice (B)

<i>Difficulty level wise summary - Section I</i>	
Level of Difficulty	Questions
<i>Very Easy</i>	-
<i>Easy</i>	9, 12, 14, 24
<i>Medium</i>	1, 3, 4, 6, 7, 8, 10, 15, 17, 19, 25, 29, 30
<i>Difficult</i>	2, 5, 11, 13, 16, 18, 20, 21, 23, 26, 27, 28
<i>Very Difficult</i>	22

SECTION – II

Solutions for questions 1 to 3:

Let us look at the second statement of A which says B always lies. If we take this statement as truth. A and C will be alternators and B will be a liar.

However, when we look at the second statement of B which says "No person working on this farm always speaks the truth", if B is a liar, their statements should be false and at least one of them should be a truth teller. But this contradicts the conclusion drawn from A's statement – B always lies – rendering this statement a lie.

Thus B can be an alternator or a truth teller — (1)

Let the second statement of B be a lie. In that case, there should be one truth teller in the farm. As B is an alternator and as A cannot be the truth teller, C should be the truth teller.

However, if we look at C's second statement — "A always lies", it means that A is a liar. As the group can only have a liar or a truth teller but not both the statement of B that — No person working in this farm always speaks truth is true. Thus we can conclude that there are two alternators and one liar among A, B, C and the second statement of B is true —(2)

As the second statement of B is true, his first and last statement should be false _____. (3)

Now one among A and C, should be a liar.

If C is a liar, then all the statements of C would be lies. If C is an alternator, then A would be a liar, then the second statement of C would be a truth and the first and last statements of C would be lies.

Thus, in any case, the first and third statements of C are lies.

The first statement of C, as it is false, implies that Guava is not the costliest orchard. The third statements, as it is false, implies Mango orchard is costlier than Orange orchard.

These two statements, taken together, imply that Mango orchard is the costliest orchard which is the third statement made by A —(4)

Thus, A is an alternator and his first and third statements are truths and C is a liar ———(5)

From the first statement of A, the cost per acre of orchards should be either 2, 3, 5, or 7 lakh.

As the third statement of B is false from (2), the costs should be among 3, 5 and 7 lakh.

From (4), Mango orchard is the costliest orchard.

From (2), the first statement of B is false. Thus, Guava orchard is not the cheapest orchard \Rightarrow Guava is the second costliest orchard, which costs 5 lakh/acre.

Thus, the Orange orchard is the cheapest, which costs 3 lakh per acre.

1. C is a liar and A and B are alternators. Choice (C)
 2. Cost per acre of Orange orchard is 3 lakh. Choice (B)
 3. Mango orchard is the costliest orchard. Choice (B)

Solutions for questions 4 to 7:

Number of words and Explanatory notes for RC:

Number of words : 530

4. The passage initially clubs Kafka, Poe and Hitchcock together, then states that unlike Kafka and Poe's innocent sufferers, Hitchcock's innocent guilty have inculpating moral failings, thus beggar the belief that their troubles are entirely unwarranted. Refer to the penultimate sentence of para 1. (None of them is truly innocent and their moral failings give some cause for the suspicion that falls on them) (A) is not stated. (B) is plausible, but out of scope. (D) is belied by the author.
Thus, (C) is correct Choice (C)

5. (A) is premature, given the tentative nature of the passage. Refer to the last para. – "I'm not sure..." The passage begins with "Desert ... a central anxiety", moves on to "fairness and desert are not exactly the same" and encounters "the complexity of justice". So (B) is appropriate. (C) is limited. Fairness and justice are excluded in the choice. (D) is too technical.
Thus, (B) is correct Choice (B)

6. In the penultimate paragraph, the author mentions that the Primatologist Frans de Waal suggests that a sense of fairness is an inherent emotion in monkeys. He then counters this (in the last para) by stating that he is not sure if the capuchin experiment demonstrates a sense of fairness. He adds -in a limited, unidirectional sense. The author is not saying that a 'sense of fairness' is wrong and should be replaced with 'a sense of unfairness'. To be able to judge, one needs to have basis or parameters for both a sense of fairness and a sense of unfairness. Refer to the last few sentences of the passage - I imagine a full sense of fairness would be demonstrated by..... I couldn't find any experiment that showed this. So choice C is the answer. Perspective, in its secondary meaning, implies the ability to perceive things in their actual interrelations or comparative importance.

Choice A is wrong because of the words 'rather than'. The author is not stating that one sense (fairness) should exclude the other (unfairness).

In para 4, the author says that fairness and justice are not the same. Our inherent sense of fairness helps us encounter the

fact that justice is a complex term. So choice B goes overboard as this is not what the experiment implied.

Also choice D is not a fact or opinion that the author would be skeptical about.
Choice (C)

7. Statements 'a, b and c' include a correct set of follow up questions to be put to the author, in the context of the passage. The author ends the passage on "I couldn't find any experiment that showed this (a full sense of fairness)." So the fundamental and complex nature of deserving needs to be explored. The author says in the fourth para – "he supposes that fairness and desert are not exactly the same basic requirement of generalized fairness .." and (in the last para) "I'm not sure if this is exactly, a sense of fairness" So statements 'a', 'b' and 'c' are valid and the author would also be happy to answer these questions. The author has already discussed choice (D) in para 4 and hence choice (D) is the exception.
Choice (D)

Solution for question 8:

8. Part 'a' is error free. In part 'b', the verb should be 'written' and not 'said'. Part 'c' should read 'but that is hardly the point.' Sentence 'd' is error-free. Sentence 'e' should have the adverb 'guilelessly', placed after 'would' and the sentence should read "..... no one would guilelessly decide to look like Hitler". So parts 'a' and 'd' are correct.
Choice (B)

Solution for question 9:

9. On a close reading of the sentences in the paragraph, it can be seen that 'da' is a mandatory pair. "believe that when they say....." links with "they speak thus". From the choices, it can be observed that either statement 'b' or 'c' can open the paragraph. Also statement 'b' is more or less, a 'resultant' statement or a statement of consequence. So statement 'b' cannot begin the para. Statement 'b' (with the word 'Fiction') cannot precede statement 'c' which has the part "The novel is pulling back into the author...". Statement 'c' is a general sentence which begins the paragraph and introduces the changes happening in the novel today. The meaning of "pulling back into the author" is also explained here. This is followed by statement 'e'. This "retreating of the novel" is taking place in European prose. Statement 'b' follows as it explains that fiction has become redundant to the writers and this mirrors the view "retreating from the position of the fiction of the only reality to the position of the origin of that fiction" as given in statement 'c'. "become atheists of their own omnipotence" as given in statement 'b' links with "do not believe that when the writers say" as given in statement 'd'. As mentioned earlier, statement 'd' is followed by statement 'a'. So, cebda. The other choices disrupt the thought flow. In choice B and C, statement 'b' is incorrectly given as the introduction sentence. Choice A is a close choice. But statement 'a' (The fact that they speak thus, that they can speak thus, is **definitely** no fiction) is a more definite, more conclusive sentence than statement 'e' (This, **at least**, is what has been taking place in the vanguard of European prose). Statement 'a' also sounds like the author's own view point. So in choice A, statement 'a' is incorrectly given in the middle of the paragraph. Also, there is no 'ab' link. Statement 'a' refers to 'speak'. There is no reference to 'speak thus....' in statement 'b'
Choice (D)

Solutions for questions 10 to 13:

	Harvard	MIT	Stanford	NYU	Pennsylvania
Finance	5	1	2		
Operations		2	3		
Marketing					
Total				6	

The above table can be constructed using the information given in the question. In any university, as no two disciplines have the same number of courses, the number of courses offered by

Pennsylvania in Finance, Operations and Marketing should be 1, 2, 3 in any order. As no two universities offer the same number of courses in any discipline, Pennsylvania should offer one course in Operations and 3 courses in Finance \Rightarrow it should offer two courses in marketing. Using the above information Harvard offers 4 courses in Operations, NYU offers 5 courses in Operations 4 courses in Finance.

Using the above information, Harvard and NYU should offer either 1 or 3 courses in Marketing and MIT and Stanford should offer either 4 or 5 courses in Marketing.
Thus, the final table will be as follows:

	Harvard	MIT	Stanford	NYU	Pennsylvania
Finance	5	1	2	4	3
Operations	4	2	3	5	1
Marketing	1/3	4/5	4/5	1/3	2
Total					6

10. Total number of courses offered at Harvard is 12
 \Rightarrow 3 courses are offered in Marketing at Harvard. Thus, only one course offered in Marketing can be offered at NYU.
Total no. of courses offered at NYU = $4 + 5 + 1 = 10$.
Choice (C)

11. From the above table, either Harvard or NYU can offer 12 courses, which is the highest.
Choice (D)

12. The difference between the total number of courses offered at MIT and Stanford is one \Rightarrow MIT offers 5 courses in Marketing and Stanford offers 4 courses in Marketing.
The difference between the courses offered in Marketing for Stanford and Pennsylvania is $4 - 2 = 2$. Choice (C)

13. NYU can offer either 10 or 12 courses whereas Stanford can offer either 9 or 10 courses. Hence, (a) need not be true in all cases.
If Harvard offers (a) total of 12 courses, then NYU can offer only a total of 10 courses and vice versa. Hence, (b) is not true.

If Stanford offers 4 courses in Marketing, then the total number of courses offered at Stanford will be 9. As the number of courses offered by Harvard and NYU can be 12 or 10 (in any order), (D) need not be true in all cases.
The minimum number of courses that can be offered at Harvard, Stanford and NYU is 10, 9 and 10 respectively. The maximum number of courses that can be offered at MIT is 8 and the minimum number of courses that can be offered at MIT is 7. Thus, MIT offers the second lowest number of courses. Hence (C) is true.
Choice (C)

Solutions for questions 14 and 15:

14. Upon reading the passage, we realize that the first blank is to be filled by a word that is related to the 'postponement of things'. 'inured' means 'to habituate to something undesirable, especially by prolonged subjection; to accustom'. 'temporised' means 'to act evasively in order to gain time, avoid argument, or postpone a decision or to engage in discussions or negotiations, especially so as to achieve a compromise or gain time.' 'predisposed' means 'to make (someone) inclined to something in advance or to make susceptible or liable'. 'prevarication' means 'to stray from or evade the truth; equivocate'. 'procrastination' refers 'to put off doing something, especially out of habitual carelessness or laziness'.

In the given context, 'temporizing' is inappropriate and 'prevarication' cannot fit the first blank. Also 'inured' does not work for the second blank. 'postponement' would imply 'deciding to delay a task and do it at a later time' (The deadline is changed). 'procrastination' would mean 'not deciding at all' or 'to put off intentionally or needlessly the doing of something that should be done, especially out of habitual carelessness or laziness.'
Choice (D)

15. Since one is unable to eliminate any of the options for the 1st blank, let us attempt to fill the 2nd blank. Upon reading the sentence, one can infer that it is to be filled by a close synonym of 'justified'. The word 'crowed' means to exult loudly, as over another's defeat; boast. The idea expressed in the sentence is that the "enhanced" interrogation techniques helped in the successful hunt for Osama Bin Laden. So the word required in the second blank is 'vindicated' which means to provide justification or support or prove the worth of, especially in light of other developments. The remaining words given for the second blank are inappropriate. 'Inveighed' means to give vent to angry disapproval or to protest vehemently. 'Burlesqued' means to imitate mockingly or humorously. ('Burlesque' refers to a literary or dramatic work that ridicules a subject either by presenting a solemn subject in an undignified style or an inconsequential subject in a dignified style). 'Ratiocinated' means to reason methodically and logically. ('Ratiocination' means the process of logical reasoning or rational thought).

The first blank is thus filled by 'apologists', meaning 'supporters who defend their opinions through speech or writing'. The second blank is filled by 'vindicated' and the answer option is B. So, apologists crowdedvindicated their support. 'Evangelists' are zealous advocates of a cause. 'Sympathisers' share or understand the feelings or ideas of others. 'Fanatics' are people marked or motivated by an extreme, unreasoning enthusiasm, as for a cause.

Choice (B)

Solutions for questions 16 to 18:

Number of words and Explanatory notes for RC:

Number of words : 748

16. The author concludes that Cézanne "is not going to reveal her personality to us" as given in the fourth sentence of para 1. So the issue in (D) is settled. (C) contrasts the passage. There isn't sufficient information in the passage to conclude (A) or (B).

Thus, (D) is correct.

Choice (D)

17. Refer to the penultimate sentence of para 2 – One side of Cézanne holds the world down another part has a buoyancy and dancingness about it. John Updike mentioned "airy severity" which is a coexistence of buoyancy and stillness, as given in (C). "Frostiness" (cold, covered by frost) in (A) is unflattering. (B) is out of scope. (D) is doubtful.

Thus, (C) is correct.

Choice (C)

18. There is no information in the passage to conclude that, Auden is a poet or a critic, so choices (A), (B) and (D) are suspect. Refer to the second para. Auden takes the idea of the sugar bowl further through his descriptions "the crack in the teacup opens; a lane to the land of the dead". Auden is enlisted to support Ce'zanne's argument that an object has life of its own; which the author disagrees with, as an "Implausible" theory. Refer to the sixth sentence of para 3 – But there is a point where a stern and principled pantheism.....

Thus, (C) is correct

Choice (C)

Solution for question 19:

19. Sentence A should have 'burned up" and not "burned out." "burn up the roads" means to go at top speed. All other choices have the correct usage of the word. In sentence B, the meaning is 'to engrave or make indelible.' In sentence C, the reference is to be cheated, deceived or swindled. In sentence 'D', the usage is to commit oneself to a particular course of action with no possibility of turning back.

Choice (A)

Solutions for questions 20 and 21:

20. If we analyse the sentences carefully, we realize that there are two sentences C and D which refer to electricity. Sentence A speaks about the contribution of the internet and the strengthening of Internet ecosystems. Sentence B compares the dawn of the internet to the introduction of the

Gutengerb press. Sentence C specifically compares the internet with electricity. So the paragraph begins with sentence B. Sentence D follows. The contrast conjunction 'but' corrects the fact mentioned in sentence B. Instead of comparing the dawn of the internet to the dawn of the Gutenberg press, it would be better to compare the former with the development and commercialization of electric power. The reason for the comparison as mentioned in D is then explained in sentence C which specifically completes the topic of discussion. So sentences B, D and C in that order form a coherent paragraph. Sentence A stands out as an odd man sentence. It is more of a "course of action" (for policy makers and business executives) sentence which needs a precedent. The point about the Internet's contribution to national economies needs substantiation.

Choice (A)

21. Sentences A, B and C more or less look like Introduction Sentences. Sentence D would not start the paragraph as 'this system' would need a precedent. On a more careful analysis, we get to understand that there are two sentences B and C referring to Spinoza. So the topic of discussion is introduced in Sentence C (...ethical vision unfolding out a metaphysics, God and nature are identified). The point 'monistic metaphysics' is further explained in sentence A. (In Monism, a variety of existing things can be explained in terms of a single reality or substance). God is nature itself and..... is understood as a system of which humans are a part. So sentence A follows sentence C. Sentence D effectively completes the idea – Humans are a part of God and can find happiness by a complete rational understanding of the system and their place in it. So sentences C, A and D in that order form a coherent paragraph. Sentence B stands out as an odd man sentence. There are new terms "devaluation of sense perception", "form of cognition" etc and the thought "this categorization is fair" cannot be connected to the other sentences in the para.

Choice (B)

Solutions for question 22 and 23:

Each of C, D and E are assigned one student. A and B are assigned 2 and 3 students (in any order)
As students who need a computer are assigned to C, D and E, at most three students need a computer.

22. From 1, the following assignment is one of the possibilities

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
A	B	C	D	E			

From 2,

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
C	D						

There is no chance for A or B (whoever has 3 students assigned)

(2) is false

From 3,

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
C							

If students with consecutive roll numbers are assigned to D and E, 1 cannot be assigned to any professor.

∴ 3 is false.

Choice (D)

23. From 1, possible assignment is

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
B	D	C	A				

From 2,

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
D							

There is no possible assignment for A and B

From 3, C, D and E are assigned odd roll numbers

But A and B each need at least one student with an odd roll number, which is not possible.

From 4,

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
C/E	D	C/E					

Student with roll no 1 cannot be assigned to any professor in this case.

Choice (A)

Solution for question 24:

24. The paragraph makes an attempt in stating that online writing belongs to the "commentary" rather than "literature" family. He then explains through various examples the difference between "commentary" and "literature". Commentary is secondary and not primary, it has a secondary status to whatever primary object is commented on. So the analogy of the primary object and the secondary status that highlights the difference between "commentary" and "literature" is best explained by choice C. The other choices do not exploit the said difference between literature and commentary and run tangent to the thought flow even though it seems that they express the point of difference between the two. In choice A, the difference of 'primary' and 'secondary' status appears to be shown (effect of a chisel on a marble stone) but the earlier part of the sentence (the differenceis a matter of perception) is not congruent with the thought that there is a marked difference between the two, (not to disdain commentary for its failure, suggest its difference from literature....). Choices B and D again do not bring out the said difference.

Choice (C)

have succeeded statement 'b'. In choice B, statement 'c' is wrongly given as an introduction sentence. 'edabc' in choice A distorts the thought flow.

Choice (D)

Solution for question 28:

28. Statement 'a' is a general sentence that introduces the paragraph by stating the objective of 'experiential products'. This is followed by statement 'e' which furthers the idea of creating 'experiential enclaves'. 'ec' is a mandatory pair – the 'pleasure domes' given in statement 'c' is a reference to 'experiential enclave' already mentioned in statement 'e'. The activity in the so-called created 'experiential enclave' is further discussed in statement 'c'. So statement 'c' follows statement 'e'. 'They' in statement 'b' is a reference to 'customers' given in statement 'c'. Statement 'd' is a stand alone sentence which brings in a new thought about 'techniques pioneered in the arts' and is best placed at the end of the paragraph. Choice B is incorrect as statement 'd' which is a stand alone sentence cannot be the second sentence. Choice C is incorrect as statement 'b' cannot come before statement 'c'. The pronoun 'they' is a reference to customers. In choice A, statement 'c' is given wrongly before statement 'e'. Statement 'e' which talks about 'creating experiential enclaves' should be placed before statement 'c' which refers to the activity in the pleasure domes. So given statement 'a' as the introductory sentence, the remaining sentences can be placed in the order 'ecbd'.

Choice (D)

Solutions for questions 25 and 26:**Number of words and Explanatory notes for RC:**

Number of words : 563

25. (A) is uncertain, given "Aftershocks" in the choice.
 (B) contrasts the passage. There is uncertainty not clarity. (C) undermines the sense of urgency in the passage. (D) captures the essence of the passage. The first sentence of the passage "Signs of.....economic recovery.....disappointed", and the first sentence of the fourth para.
 "Today, there is uncertainty help us infer choice D. Thus, (D) is correct.

Choice (D)

26. (a), (b) and (c) fall outside the scope of the passage. (d) is true. Refer to the last three paragraphs "Entitlement reforms (presumably cuts), spending reductions and tax (burdens)..." spell austerity for the American economy "over a reasonable time frame" (not instantly or tomorrow) otherwise "consequences will be harsh".
 Thus, (d) is correct.

'short shrift' in the context of the passage means 'careless treatment'. 'dead weight' can be implied to be a loss caused by inefficiency, from the third para. So (e) can be inferred. "Until a sensible plan is created to address the debt....." and "Until the U. S. debt issue is resolved for the long term....." supports 'debt crisis', not 'fiscal recklessness'. So (f) is not true. Statement (g) is supported by "Market....built on an unstable foundation of promises...." given in the last sentence of the eighth paragraph which discusses investor anxiety. So statements (d), (e) and (g) can be inferred.

Choice (B)

Solution for question 27:

27. Statement 'b' is a general statement which introduces the topic. Statement 'd' follows statement 'b' as 'bd' is a mandatory pair. The impulse for the broadening of the historiography of science came from the transformation in the philosophy of science. Statements 'a' and 'e' talk about the consequence of the shift and makes a comparison between philosophers interested in the theories of the past and philosophers interested in the new socialization. So after statement 'd', Statements 'a' and 'e' follow in that order. Statement 'c' through the contrast word 'however' concludes the paragraph by stating that even though there is a difference in the approach and the expectations of the two groups of philosophers as discussed in statements 'a' and 'e', it would be a folly to state for the working historian of science that philosophic issues play a greater role today than before. So, 'bdaec' is the correct sequence. In choice C, statement 'e' is wrongly inserted between the mandatory pair 'bd'. 'The impulse' given in statement 'd' has no reference to the fact provided in statement 'e' but should

Solutions for questions 29 and 30:**Number of words and Explanatory notes for RC:**

Number of words : 612

29. The title of Gogol's novel "Dead Souls" refers to 'Dead Serfs' at a literal level, but to Gogol's characters at a metaphorical level. Chichikov, one of life's acquirers, is the character at the heart of Gogol's masterpiece. So statement (a) is correct and statement (d) is wrong. Chichikov is a lower-echelon civil servant who dreams of running an estate and hence he buys dead serfs to inflate his wealth and secure a loan against them to lead the high life. (Refer to the first and the fourth paras). Chichikov is referred to as one of life's "acquirers" who was brought up by a father who considered money very important in life. So the theme of Gogol's novel is "get rich quick....." and not slave trade. So statement b is incorrect. Gogol says that a character must be examined to the greatest detail, and the author terms this the first commandment of a writer. Refer to the fifth paragraph. In the third paragraph, there is enough emphasis on "character" of a novel. ("style that captures characters in their inner being", "his characters flame into life", "creator's ability to bring characters to life with a shimmering individuality"). Thus statement 'c' is incorrect. Thus only 'a' is correct.

Choice (B)

30. Firstly Gogol is a "comic" writer (Refer first sentence "comic genius". Secondly we feel "pity" for Chichikov, and emotions that we experience for the "rascal" are aroused in tragedy. (A) is premature. (B) is of secondary importance even though the author mentions in the third paragraph that Gogol paid attention to detail(s). The last paragraph, through visual effects, explains the contrast mentioned in the last sentence of the third para. (Characters are captured in inner being, the surging immensity of life is portrayed through laughter and invisible tears). (D) is extreme.

Thus (C) is correct.

Choice (C)

Difficulty level wise summary - Section II	
Level of Difficulty	Questions
Very Easy	-
Easy	22, 23
Medium	8, 10, 11, 12, 13, 16, 17, 18, 20, 30
Difficult	1, 2, 3, 4, 5, 6, 7, 14, 15, 19, 21, 24, 25, 26, 27, 28, 29
Very Difficult	9