

SECTION II

Time—35 minutes

27 Questions

Directions: Each set of questions in this section is based on a single passage or a pair of passages. The questions are to be answered on the basis of what is stated or implied in the passage or pair of passages. For some of the questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, the response that most accurately and completely answers the question, and blacken the corresponding space on your answer sheet.

Passage A

Muscle memory is a puzzling phenomenon. Most bodybuilders have experienced this phenomenon, yet virtually no discussions of it have appeared in scientific publications. Bodybuilders who start training again after a period of inactivity find that gaining muscle size seems easier the second time around—even if starting from the same place. With so many athletes observing muscle memory, some plausible explanation must exist.

- (10) One potential explanation of muscle memory involves the neurons (nerve cells) that stimulate your muscles, telling the muscle fibers to contract. It is well established that during weight lifting, only a small percentage of neurons for the working muscles are recruited. The more weight you lift, the more neurons are involved and the more muscle fibers are stimulated. But even when attempting your maximum weight, you don't recruit all the fibers in your working muscles. Now it could be that one way your body adapts to the demands of consistent training is by gradually increasing the percentage of muscle fibers that are stimulated by neurons during maximal lifts. When you're making a comeback, this ability to recruit more muscle fibers may remain intact. If so,
- (25) your muscles would start with a greater capacity to develop force. Although you may think you're starting from the same place, this greater strength would enable faster progress.

- Then again, it's also possible that the ease of retraining has nothing to do with your muscles: it could all be in your head. The first time you trained, you didn't know how much you could lift. So you increased weight cautiously. When retraining, you already know you can handle increasing weight because you've done it before. So you are likely to add weight more rapidly. These more rapid weight increases produce quicker gains in strength and size.

Passage B

Pumping up is easier for people who have been buff before, and now scientists think they know why—muscles retain one aspect of their former fitness even as they wither from lack of use.

- (45) Because muscle cells are huge, more than one nucleus is needed for making the large amounts of the proteins that give muscles their strength. Previous research has demonstrated that with exercise, muscle cells get even bigger by merging with stem cells that are nested between them. The muscle cells incorporate the nuclei that previously belonged to the stem cells. Researchers had thought that when muscles atrophy,

- (50) the extra cell nuclei are killed by a cell death program called apoptosis.

- In a recent study, researchers regularly stimulated the leg muscles of mice over a two-week period, during which time the muscle cells gained nuclei and increased in size. The researchers then let the muscles rest. As the muscles atrophied, the cells deflated to about 40 percent of their bulked-up size, but the number of nuclei in the cells did not change. Since the extra nuclei don't die, they could be poised to make muscle proteins again, providing a type of muscle memory at the cellular level.
- (55)
- (60)

1. Both passages seek an answer to which one of the following questions?
- (A) Why are explanations in the field of exercise physiology so inconclusive?
- (B) What is the best way for bodybuilders to begin training again after a period of inactivity?
- (C) Why is building muscle easier for people who have done so in the past?
- (D) Is muscle memory a purely psychological phenomenon?
- (E) Is there a psychological basis for the increases in muscle size and strength that result from exercise?
2. Passage B, but not passage A, seeks to achieve its purpose by
- (A) questioning the reality of an alleged phenomenon
- (B) discussing the results of a recent scientific experiment
- (C) appealing to the reader's personal experience
- (D) considering the psychological factors involved in bodybuilding
- (E) speculating about the cause of an observed phenomenon

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3. Passage B, unlike passage A, suggests that the phenomenon of muscle memory might be due to
- (A) muscle cells' ability to merge with stem cells
 - (B) the body's ability to adapt to consistent training
 - (C) psychological factors
 - (D) a cell death program known as apoptosis
 - (E) the neurons that stimulate muscles
4. It can be inferred from the passages that the author of passage A
- (A) is more certain than the author of passage B about the existence of muscle memory
 - (B) probably agrees with the author of passage B about the explanation for muscle memory
 - (C) was probably not aware of the scientific research that is described in passage B
 - (D) probably disagrees with the author of passage B about how muscle cells' nuclei affect muscle strength
 - (E) tends to be more skeptical than the author of passage B about conclusions drawn about one species on the basis of experiments involving another species
5. Given the style and tone of each passage, which one of the following is most likely to correctly describe the expected audience of each passage?
- (A) Passage A: skeptics of the phenomenon under discussion
Passage B: people with personal experience of the phenomenon under discussion
 - (B) Passage A: scientific researchers
Passage B: athletic trainers and coaches
 - (C) Passage A: athletes who work with a trainer
Passage B: people who pursue a fitness program on their own
 - (D) Passage A: bodybuilders
Passage B: a general audience
 - (E) Passage A: sports psychologists
Passage B: exercise physiologists

6. The author of passage B would be most likely to hold which one of the following views about the characterization of muscle memory offered in the first sentence of passage A?
- (A) It confirms that bodybuilders' experiences should not be accepted at face value.
 - (B) It reflects a dichotomy between athletes' experience and processes occurring at the cellular level of their muscles.
 - (C) It would not be accepted by most athletes who have started retraining after a period of inactivity.
 - (D) It is less apt now in light of recent research than it was before that research was conducted.
 - (E) It stems from a fundamental misunderstanding of the principles of exercise psychology.
7. Which one of the following is explicitly mentioned in passage B but not in passage A?
- (A) the condition of a person's muscles when that person begins retraining
 - (B) muscles' adaptation to exercise
 - (C) the percentage of muscle fibers used in a working muscle
 - (D) the prevalence of discussions of muscle memory in scientific publications
 - (E) the large amounts of protein responsible for muscles' strength

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Best known for her work with lacquer, Eileen Gray (1878–1976) had a fascinating and multifaceted artistic career: she became a designer of ornaments, furniture, interiors, and eventually homes.

- (5) Though her attention shifted from smaller objects to the very large, she always focused on details, even details that were forever hidden. In Paris she studied the Japanese tradition of lacquer, employing wood surfaces—e.g., bowls, screens, furniture—for the
- (10) application of the clear, hard-drying liquid. It is a time-consuming craft, then little known in Europe, that superimposes layer upon layer, sometimes involving twenty layers or more. The tradition of lacquer fit well with her artistic sensibilities, as Gray eschewed the
- (15) flowing, leafy lines of the Art Nouveau movement that had flourished in Paris, preferring the austere beauty of straight lines and simple forms juxtaposed.

- In addition to requiring painstaking layering, the wood used in lacquer work must be lacquered on both
- (20) sides to prevent warping. This tension between aesthetic demands and structural requirements, which invests Gray's work in lacquer with an architectural quality, is critical but not always apparent: a folding screen or door panel reveals more of the artist's work
- (25) than does a flat panel, which hides one side. In Gray's early work she produced flat panels; later she made door panels and even unfolded the panels into screens. In a screen she made for the lobby of an apartment, she fully realizes the implications of this expansion
- (30) from two to three dimensions: the screen juts out from a wall, and that wall visually disintegrates into panels of lacquered bricks on the screen. The screen thus becomes a painting, a piece of furniture, and an architectural element all at once. She subsequently
- (35) became heavily invested in the design of furniture, often tailoring pieces to fit a particular interior environment. She often used modern materials, such as tubular steel, to create furniture and environments that, though visually austere, meet their occupants' needs.

- (40) Gray's work in both lacquer and interior design prefigures her work as an architect. She did not believe that one should divorce the structural design of the exterior from the design of the interior. She designed the interior elements of a house together with the
- (45) more permanent structures, as an integrated whole. Architecture for her was like work in lacquer: it could only be achieved from the inside out. But in architecture we discover the hidden layers; in fact we inhabit them. We find storage cabinets in the recesses
- (50) of a staircase, desks that are also cabinets, and tables that are set on pivots to serve different functions in different contexts. One such table can be positioned either outside, on a balcony, or inside the house. Gray placed a carpet underneath it in each location,
- (55) as though to underscore that there is no important distinction between exterior and interior.

8. Which one of the following most accurately summarizes the main point of the passage?

- (A) Eileen Gray's artistic career, which ranged from interior to exterior design, was greatly influenced by her early work in lacquer, which molded her aesthetic sensibilities and caused her to develop independence as an artist, yet prevented her from garnering acclaim by critics of contemporary art.
- (B) Eileen Gray's artistic career, ranging from the design of ornaments and interiors to architectural design, was exemplified by her work in lacquer, from which she derived an aesthetic that downplayed the distinctions between interior and exterior and sought integral wholeness in a work of art.
- (C) Eileen Gray, a multifaceted artist whose designs ranged from ornaments to houses, is best known for her use of modern materials such as tubular steel in the design of furniture and houses, which, while informed by an austerity of line, create humanistic environments that meet their occupants' needs.
- (D) Although Eileen Gray's artistic endeavors ranged from the design of ornaments and interiors to architectural design, her distinctive style, which is characterized by a sense of the hidden, is evident in all her work, making it readily identifiable.
- (E) The fact that Eileen Gray's artistic career evolved from the design of ornaments and furniture to architecture ultimately derives from her eventual dissatisfaction with Japanese traditional art and its emphasis on integral wholeness.

9. Which one of the following comes closest to exemplifying the characteristics of Gray's work as described in the passage?

- (A) an upholstered sofa with tasseled fringes and curved, wooden arms
- (B) a coffee table decorated with intricate carvings of birds, trees, and grasses that are painted in bright colors
- (C) a thin, stainless steel vase intended to resemble the ornate flowers it will hold
- (D) a round, wooden picture frame inlaid with glass beads, pearls, and gracefully cut pieces of colorful shells
- (E) a metal chair whose simple shape is adapted to fit the human form

10. The passage provides information that most strongly supports which one of the following assertions?
- (A) Gray's reputation rests primarily on the range of styles and media in which she worked, rather than on her work in any particular medium.
 - (B) Gray personally constructed most of the interior furnishings that she designed.
 - (C) In Paris in Gray's time, wood was generally considered an inappropriate medium for visual art.
 - (D) Few of Gray's works in lacquer were intended for public viewing.
 - (E) Much of Gray's later work was functional as well as ornamental.
11. Information in the passage most helps to answer which one of the following questions?
- (A) When did the tradition of lacquer first become known in Europe?
 - (B) What types of wood are usually considered best for use in traditional Japanese lacquer work?
 - (C) Were the artistic motifs of traditional lacquer work similar to those that were typical of Art Nouveau?
 - (D) Did Gray allow the style of her architecture to be informed by the landscape that surrounded the building site?
 - (E) What is a material that Gray used both structurally for its superior strength and decoratively for its visual interaction with another material?
12. Which one of the following most accurately characterizes the author's attitude toward Gray's artistic accomplishments?
- (A) appreciation of the fact that her aesthetic philosophy, as well as the materials she used and the range of her work, sets her work apart from that of many of her contemporaries
 - (B) admiration for her artistic independence and refusal to conform to contemporary art trends even though such refusal positioned her on the periphery of the art world
 - (C) appreciation for the interpretation of Japanese tradition in her work, by which she made a unique contribution to modern architectural design while remaining faithful to Japanese architectural traditions
 - (D) admiration for the rapid development in her career, from the production of smaller works, such as ornaments, to large structures, like houses, that ensured her reputation as an avant-garde artist
 - (E) appreciation for her help in revolutionizing the field of structural design through her use of traditional materials and modern materials in her furniture creations and architectural work

13. The passage most strongly suggests that which one of the following principles was used by Gray in her work?
- (A) Traditional lacquering techniques can be applied to nontraditional materials, such as brick and steel, with artistically effective results.
 - (B) The nature and placement of a dwelling's interior features can be essential factors in determining the overall structural design of the dwelling.
 - (C) Traditional ornamental techniques that are usually applied to small items are especially suitable for use on large structural elements of buildings.
 - (D) Excellent artistic effects can be achieved through the juxtaposition of visually austere elements with gracefully ornate elements of design.
 - (E) The superficial visual aspects of a building's decor can give evidence of the materials that have been used in its basic, unseen structural components.
14. The passage most strongly suggests that the author would agree with which one of the following statements about Gray's architectural work?
- (A) It was considered by other architects of her time to be iconoclastic and inconsistent with sound principles of structural design.
 - (B) Her involvement in it was marked by a radical shift in her attitude toward the relation between the expressive and functional aspects of her work.
 - (C) The public is less knowledgeable about it than about at least some of her other work.
 - (D) It has been less controversial among recent critics and scholars than has at least some of her work in interior design.
 - (E) Unlike her work in lacquer, it was not influenced by an established tradition of Asian art.

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It is generally accepted that woodland clearings were utilized by Mesolithic human populations (populations in Europe roughly 7,000 to 12,000 years ago) for food procurement. Whether there was

- (5) deliberate removal of tree cover to attract grazing animals or whether naturally created clearings just afforded opportunistic hunting, the common view is that clearings had an economic use. The archaeological evidence for this, however, is at best circumstantial.
- (10) Some locales where the presence of clearings has been demonstrated in the paleoecological record of vegetation have also yielded human artifacts from around the same time, but the two kinds of evidence are never securely linked. Furthermore, artifactual evidence that preparation of animals for human consumption took place within or near such clearings is generally lacking.

Most of the evidence invoked in favor of the resource-procurement model for clearings comes from ethnography rather than archaeology, and principally from the recognition that some recent premodern populations used fire to increase grazing areas. But while some ethnographic evidence has been used to bolster the resource-procurement model, other

(20) ethnographic evidence may suggest a different vision, a noneconomic one, of why clearings may have been deliberately created and/or used.

Geographer Yi-Fu Tuan argues that right up through the modern era, human behavior has been driven by fear of the wilderness. While we might be tempted to see this kind of anxiety as a product of modern urban life, it is clear that such fears are also manifest in preliterate and nonurban societies. If we apply this insight to the Mesolithic era, our view of the

(30) purpose and use of woodland clearings may change.

We have recently become aware of the importance of woodland paths in prehistory. The fact that Mesolithic human populations moved around the landscape is not a new idea. However, the fact that they may have done so along prescribed pathways has only recently come to the fore. I propose that one of the primary motivators in establishing paths may have been fear of the wooded surroundings—whether fear of harm from wildlife or spirits, or of simply

(40) getting lost.

From this view an alternative hypothesis may be developed. First, paths become established and acquire a measure of long-term permanence. Then this permanence leads to concentration of activity in some areas (near the paths) rather than others (away from the paths). This allows us to legitimately consider wilderness as a motivating concept in the Mesolithic, and may force us to consider environment as more than “backdrop.” And finally, it may lead us to

(50) explain some clearings as purely social phenomena, since where paths meet, wider clearings emerge as corners are cut and intersections become convenient spots for resting.

15. Which one of the following most accurately states the main idea of the passage?
- (A) Though fear of the wilderness is commonly thought to be a modern urban phenomenon, archaeological evidence suggests that the concept of wilderness may go as far back as the Mesolithic period.
- (B) Though the resource-procurement model for Mesolithic woodland clearings is widely accepted, the available evidence provides comparable support for an alternative, noneconomic model.
- (C) Though ethnographic evidence appears to support the resource-procurement model for woodland clearings, archaeological evidence suggests that clearings were used for multiple purposes by Mesolithic human populations.
- (D) Evidence of woodland clearings from the paleoecological record of plant types may lend support to the hypothesis that Mesolithic human populations moved around the landscape via established paths.
- (E) Ethnography provides clear and unambiguous insight into the purpose and use of woodland clearings during the Mesolithic period.
16. According to the resource-procurement model for clearings, Mesolithic human populations engaged in which one of the following practices?
- (A) They traveled on preestablished pathways.
- (B) They hunted animals that grazed in clearings.
- (C) They grazed domesticated animals in clearings.
- (D) They used clearings as resting sites.
- (E) They planted crops in clearings.
17. Which one of the following is most clearly an example of the kind of evidence that would lend support to the author’s proposal in the next-to-last paragraph?
- (A) Mesolithic artwork that appears to depict woodland paths and clearings
- (B) the ubiquity of paths and roads in areas densely settled by humans
- (C) maps showing pathways used by certain recent premodern human populations
- (D) survey results showing that modern urban dwellers experience heightened anxiety in wilderness areas
- (E) rituals performed by certain recent premodern populations for the purpose of protection in the forest

18. The author suggests that which one of the following may have been true of Mesolithic human populations?
- (A) They were the first people to use fire to increase grazing areas.
 - (B) They were the first people to travel in prescribed pathways.
 - (C) They worshipped nature.
 - (D) They possessed a concept of wilderness.
 - (E) They had a complex economic system.
19. In the third paragraph, the author mentions Yi-Fu Tuan's argument primarily in order to
- (A) render doubtful the hypothesis about clearings that the author seeks to challenge
 - (B) exemplify the kind of argument about clearings that the author seeks to challenge
 - (C) give credit to the scholar who developed the hypothesis about clearings that the author favors
 - (D) lay the groundwork for the hypothesis about clearings that the author outlines
 - (E) point out the similarity between Tuan's view about clearings and the author's view
20. It can be inferred that the author would be more likely to endorse the resource-procurement model for clearings if this model were supported by which one of the following kinds of evidence?
- (A) artifactual evidence that it was near or within clearings that Mesolithic human populations processed animals for human consumption
 - (B) ethnographic evidence that certain recent premodern populations used clearings for resource procurement
 - (C) experimental evidence that the creation of clearings is an effective means of attracting grazing animals
 - (D) paleoecological evidence that the majority of woodland clearings during the Mesolithic period were the result of wildfires
 - (E) statistical evidence that there was a significant increase in the number of woodland clearings during the Mesolithic period

21. Which one of the following comes closest to capturing what the phrase "purely social phenomena" means in line 55?
- (A) phenomena that arise as by-products of a society's noneconomic practices
 - (B) phenomena that are universal and unique to human societies
 - (C) phenomena that serve the purpose of strengthening ties between a society's members
 - (D) phenomena that are intentionally created by human actions to produce a social benefit
 - (E) phenomena that reveal information about a society's cultural and economic development
22. Which one of the following arguments is most closely analogous to the author's argument in the second paragraph?
- (A) The prosecution's case against the defendant rests almost entirely on circumstantial evidence. The defense, in contrast, has provided direct evidence that establishes that the defendant could not have committed the crime in question.
 - (B) The prosecution maintains that the physical evidence presented establishes the defendant's guilt. However, that same physical evidence can be interpreted in such a way that it instead establishes the defendant's innocence.
 - (C) The prosecution's case against the defendant rests entirely on circumstantial evidence. This suggests that there is no direct evidence to support the charge against the defendant.
 - (D) The prosecution's primary witness against the defendant is known to be untrustworthy. The defense, in contrast, has provided a parade of witnesses whose reputations are beyond reproach.
 - (E) The prosecution's case against the defendant rests almost entirely on circumstantial evidence. However, there is other circumstantial evidence that suggests that the defendant is innocent.

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A remedy that courts sometimes use in disputes involving a breach of contract is simply to compel the participants in the contract to do precisely what they have agreed to do. Specific performance, as this

- (5) approach is called, can be used as an alternative to monetary damages—that is, to requiring the one who has violated the agreement to pay a specified amount of money in compensation for the loss that is incurred or the wrong that is suffered. But while there are some cases for which specific performance can be a better alternative than monetary damages, there are many instances in which it is clearly not a suitable remedy.

- Whether or not specific performance is an appropriate remedy in a case depends on the particular characteristics of that case. It is often the only reasonable remedy when monetary damages could not adequately compensate the one who has been harmed by the breach of contract. For example, a contract may provide for one party to sell some item of personal property that is unique or of such subjective importance to the buyer that there is no way to assign an accurate financial measure of the buyer's loss in not possessing the item. When the promised seller in such a case refuses to complete the sale, the best remedy would be to order that the contract be fulfilled exactly according to its terms.

- Nevertheless, in many cases monetary payment can adequately compensate for the refusal to fulfill the terms of a contract, and thus the court commonly need not consider ordering specific performance. In fact, in some types of cases, court-enforced performance of the contract would actually be detrimental to those involved in the dispute and thus should be avoided. This most often occurs when a contract calls for a service to be performed and the one who has previously agreed to perform the service now refuses to do so—especially if a contract has been broken through someone's refusal to undertake employment as promised. The most compelling reasons against enforcement of contracts in such cases have to do with the kind of coercion that enforcement would necessitate. Forcing someone to perform a service in association with, and especially under the direction of, another who has become an antagonist can, at the very least, heighten dissatisfaction and intensify psychological friction. Even if a court had the resources necessary to ensure that such a contract would be enforced according to its terms, it would often do better to avoid imposing such uncomfortable conditions. Awarding monetary compensation where possible in such cases permits the court to steer clear of entanglement in troublesome aspects of the disputed relationship while still providing relief to the wronged party.

23. Based on the information in the passage, which one of the following is most clearly an example of a court's ordering specific performance?

- (A) A publishing house is ordered by a court to return a manuscript to a writer after it has broken its contract for publication of the manuscript, and the contract has subsequently been nullified.
- (B) A systems analyst who refuses to work for a certain company as she has contracted to do is ordered by a court to assume her contracted duties with the company, and the company is ordered to pay her the contracted salary.
- (C) A building contractor who has received the full payment specified in his contract with a developer for the construction of a new mall but fails to complete the project is ordered to transfer all of the funds to a new contractor who will complete the construction.
- (D) A dealer in rare antique furniture is ordered to return a contracted buyer's down payment for a chair after an expert appraiser has informed the buyer and the court that the chair's authenticity is questionable.
- (E) An engineer who has agreed to work for a certain company but no longer intends to do so is ordered to pay the company for the losses it will incur as a result of the breach of agreement, but the company is not ordered to compensate the engineer.

24. Based on the passage, the author would be most likely to agree with which one of the following statements regarding cases in which someone is deemed by the court to have failed to undertake employment as contracted?

- (A) Often specific performance in such cases can help the courts avoid problematic involvement in difficult aspects of the cases.
- (B) While specific performance costs the court less to enforce than monetary damages, the savings should be weighed against the former's negative psychological repercussions.
- (C) Enforcement of specific performance by the courts in such cases would often be less than fully successful.
- (D) If the person who failed to fulfill the contract also refuses to pay monetary damages, specific performance should be imposed instead.
- (E) Specific performance is more often considered by the courts in such cases than in other cases involving someone's refusal to perform services.

25. The main purpose of the passage is to
- (A) predict the consequences of following a policy whereby a particular legal remedy becomes the standard approach
 - (B) argue for the implementation of a set of standards for the use of a new legal measure
 - (C) explain the differences among a group of interrelated legal procedures
 - (D) generate a set of guidelines for the evaluation of evidence in a particular type of legal dispute
 - (E) identify some criteria for the application of two different legal remedies
26. The passage most strongly suggests that the author would agree with which one of the following statements?
- (A) Courts should examine the suitability of assessing monetary damages in breach-of-contract cases before they consider ordering specific performance.
 - (B) Specific performance is usually the most appropriate remedy for violations of contracts to sell personal property.
 - (C) In general, coercive court-ordered remedies in contract violation cases are unfair and should be avoided.
 - (D) Specific performance is successful at resolving disputes only when the objective value of the personal property contracted for sale is reasonably low.
 - (E) To provide fair enforcement of contracts, legal systems should offer disputing parties the option to use any of a number of resolution methods.

27. Which one of the following would, if true, most strengthen the author's position with regard to remedies in employment contract cases?
- (A) Court-ordered compensation in employment cases is often nearly impossible to enforce.
 - (B) All types of court-ordered remedies for contract violations entail coercion of one or more of the parties involved in the dispute.
 - (C) Most people who are sued for violating their agreement to undertake employment have adequate financial resources to compensate their would-be employers.
 - (D) The legal issues involved in employment contract disputes are for the most part very different from the legal issues involved in other disputes over contracts for performance of services.
 - (E) The rights of potential employees often override the monetary considerations involved in employment contract disputes.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.