

SECTION I

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.

- The Internet makes possible the instantaneous transmission and retrieval of digital text. It is widely assumed that this capacity will lead to the displacement of printed books by digitized books that are read
- (5) mainly on computer screens or handheld electronic devices. But it is more likely, I believe, that most digital files of books will be printed and bound on demand at point of sale by machines that can quickly and inexpensively make single copies that are
- (10) indistinguishable from books made in factories. Once most books have been digitized, anyone with access to the Internet will be able to purchase printed books from a practically limitless digital catalog that includes even those books that, under traditional publishing
- (15) assumptions, would have been designated “out of print.”

- Also, the digital publication of a book online involves no physical inventory, thereby eliminating the costs of warehousing, shipping books to wholesalers and to retail stores, displaying physical books in retail
- (20) stores, and returning unsold books to publishers. This would make digital publishing much less expensive than traditional publishing. Given the economic efficiency and convenience for customers of this new digital model of publishing, it is likely to eventually
- (25) supplant or at least rival traditional publishing—although it will be some time before a catalog of printable digitized books becomes large enough to justify investment in book printing machines at numerous regional sites.

- (30) Moreover, the elimination of whole categories of expense means that under the digital publishing model, authors would be responsible for a greater proportion of the value of the final product and would therefore, according to literary agents, be entitled to a larger
- (35) share of the proceeds. Currently a large percentage of publishers’ revenue is absorbed by the costs of printing, selling, and distributing physical books, costs that are irrelevant to digital publication. Literary agents marketing new manuscripts could thus be expected
- (40) to demand a significantly bigger slice of revenue for their authors than has been traditional. But large, established publishing houses, which are heavily invested in the infrastructure of traditional publishing, initially will be reluctant to accede. So the opportunity
- (45) to bid for new manuscripts will go first to upstart digital-publishing firms unfettered by traditional practices or infrastructure. Under this competitive pressure, traditional publishers will have to reduce their redundant functions in order to accommodate
- (50) higher royalty payments to authors or else they will

- lose their authors. Such adjustments are typical of the interval between a departing economic model and its successor and may help explain the caution with which today’s publishing conglomerates are approaching
- (55) the digital future.

1. Which one of the following statements most accurately expresses the main point of the passage?
- (A) The shift from traditional to digital publishing is typical of the shift from one economic model to a more efficient economic model.
- (B) Digital publishing is likely to one day rival traditional publishing, but social and economic factors are currently hindering its acceptance.
- (C) Digital publishing will be convenient for readers and profitable for publishers but will also result in a great deal of movement by authors among different publishing houses.
- (D) Although digital books can now be displayed on computers and handheld electronic devices, consumers will demonstrate that they prefer books printed at the point of sale.
- (E) Digital publishing will transform the economics of the publishing business and in doing so will likely create competitive pressures to pay authors a greater percentage of publishers’ net revenue.
2. The author uses the phrase “whole categories of expense” (lines 30–31) primarily to refer to
- (A) the fees collected by literary agents from their clients
- (B) the price paid to have books printed and bound
- (C) the royalties paid to authors by their publishers
- (D) the costs specific to the retail trade in traditional printed books
- (E) the total sales of a book minus the value of those books returned unsold to the bookseller

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3. It can most reasonably be inferred that the author would agree with which one of the following statements?
- (A) Those publishers that fail to embrace the new digital model of publishing will be unlikely to remain economically competitive.
 - (B) The primary threat to the spread of digital publishing will be the widespread use of computers and handheld devices for reading text.
 - (C) The growth of digital publishing is likely to revitalize the book retail business.
 - (D) Any book will sell more copies if it is published digitally than if it is published traditionally.
 - (E) Digital publishing will allow publishers to substantially decrease the amount of money they allocate for advertising their books.
4. Each of the following is identified in the passage as something digital publishing will dispense with the need for EXCEPT:
- (A) warehousing printed books
 - (B) having book covers designed
 - (C) having books shipped to retail stores
 - (D) having unsold books returned to publishers
 - (E) displaying books in retail stores
5. If the scenario described in the first two paragraphs were to become true, then which one of the following would most likely be the case?
- (A) The need for warehousing will shift mainly from that of individual books to that of paper and binding material to make books.
 - (B) The patronage of stores that sell used books will increase significantly.
 - (C) Most publishers will sell their own books individually and will not use distributors or retailers.
 - (D) There will be significantly less demand by publishers for the services of copy editors and book designers.
 - (E) The demand for book-grade paper will decrease significantly.
6. It can most reasonably be inferred that the author would agree with which one of the following statements?
- (A) The changing literary tastes of consumers will be the main cause of the eventual transition to the new digital model.
 - (B) The ease of keeping books “in print” will be the primary factor in the eventual acceptance of the new digital model.
 - (C) The demands of literary agents will be the impetus for completing the transition to the new digital model.
 - (D) The development of innovative marketing strategies will ensure acceptance of the new digital model.
 - (E) Widespread familiarity with new ways of storing information will be the primary reason for the acceptance of the new digital model.
7. The primary purpose of the final sentence of the passage is to
- (A) suggest that traditional publishing houses have been too slow to embrace digital publishing
 - (B) provide a broader context that helps to clarify the situation facing traditional publishers
 - (C) summarize the argument for the claim that digital publishing will likely replace traditional publishing
 - (D) illustrate the primary obstacle facing traditional publishing houses that wish to incorporate digital publishing capabilities
 - (E) recommend a wait-and-see approach on the part of traditional publishing houses

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Passage A

In this appeal of his criminal conviction, the defendant challenges the fingerprint evidence used against him at trial, claiming that fingerprint identification theory has not been adequately tested.

- (5) He cites the inability of the fingerprint examiner who incriminated him at trial to name any studies establishing that no two persons have identical fingerprints.

The defendant claims that there are no established error rates revealing how often fingerprint examiners

- (10) incorrectly identify a fingerprint as a particular person's, and asserts that fingerprint examiners lack uniform, objective standards. He cites testimony given by the fingerprint examiner at trial that there is no generally accepted standard regarding the number of "points of identification" required for a positive identification.

Although fingerprint identification has not attained the status of scientific law, it has been used in criminal trials for 100 years, and experts have long concurred about its reliability. While further testing

(20) and the development of even more consistent standards may be desirable, this court sees no reason to reject outright a form of evidence that has so ably withstood the test of time.

- While it may be true that different agencies
- (25) require different degrees of correlation before permitting a positive identification, fingerprint examiners are held to a consistent "points and characteristics" approach to identification. As the fingerprint expert testified at the defendant's trial,
- (30) examiners are regularly subjected to testing and proficiency requirements, and uniform standards have been established through professional training and peer review. The trial court below was therefore within its discretion in crediting testimony that fingerprint
- (35) identification has an exceedingly low error rate.

Passage B

Fingerprint examiners lack objective standards for evaluating whether two prints "match." There is simply no consensus about what constitutes a sufficient basis for identification. Some examiners use a "point-counting" method that entails counting the number of

(40) similar "ridge" characteristics on prints, but there is no fixed requirement about how many points of similarity are needed, and local practices vary. Others reject point counting for a more holistic approach. Either

(45) way, there is no generally agreed-on standard for determining precisely when to declare a match.

Although we know that different individuals can share certain ridge characteristics, the chance of two individuals sharing any given number of identifying

(50) characteristics is unknown. How likely is it that two people could have four points of resemblance, or five, or eight? Moreover, fingerprints used in forensic identification are typically partial and smudged. Are the odds that two partial prints from different people

(55) will match one in a thousand, one in a million, or one in a billion? No fingerprint examiner can answer such questions decisively, yet the answers are critical to evaluating the value of fingerprint evidence.

- The error rate for fingerprint identification in
- (60) actual practice has received little systematic study. How often do fingerprint examiners mistakenly declare a match? Although some proficiency tests show examiners making few or no errors, these tests have been criticized as lax; a more rigorous test
- (65) showed a 34 percent rate of erroneous identification.

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

- (A) Criminal defendants do not always have a full and fair opportunity to challenge faulty fingerprint evidence when it is used against them at trial.
- (B) Fingerprint evidence has been shown to be too unreliable for use in criminal trials.
- (C) The error rate for fingerprint identification is significantly higher than is generally acknowledged.
- (D) There are a number of fundamental problems in the field of fingerprint identification as it is currently practiced.
- (E) There is a growing consensus within the legal community that fingerprint evidence is often unreliable.

9. The authors would be most likely to disagree about

- (A) whether uniformity in the training of fingerprint examiners is desirable
- (B) the likelihood that a fingerprint examiner will incorrectly declare a match in a given criminal case
- (C) whether fingerprint identification should be accorded the status of scientific law
- (D) the relative merits of the point-counting and holistic methods of fingerprint identification
- (E) whether different agencies vary in the degree of correlation they require for examiners to declare a match

10. It can be inferred that the author of passage A is

- (A) a judge presiding over an appeal of a criminal conviction
- (B) a defense attorney arguing an appeal of a client's criminal conviction
- (C) a prosecutor arguing for the affirmation of a guilty verdict
- (D) a professor of law lecturing to a criminal law class
- (E) an academic presenting a paper to a group of legal scholars

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11. Each passage discusses the relationship between the reliability of the practice of fingerprint identification and which one of the following?
- (A) the ability of a criminal defendant to expose weaknesses in the prosecution's case
 - (B) the personal integrity of individual fingerprint examiners
 - (C) differences in the identification practices used by various fingerprint examiners
 - (D) the partial or smudged prints that are typically used as evidence in criminal cases
 - (E) use of the holistic approach to fingerprint identification
12. Which one of the following principles underlies the arguments in both passages?
- (A) Courts should be extremely reluctant to reject those forms of evidence that have withstood the test of time.
 - (B) Defendants should have the right to challenge forms of evidence whose reliability has not been scientifically proven.
 - (C) To evaluate the value of fingerprint evidence, one must know how likely it is that partial prints from two different people would match.
 - (D) Fingerprint identification should not be considered to have a low error rate unless rigorously conducted tests have shown this to be so.
 - (E) Fingerprint examiners must follow objective standards if fingerprint identification is to be reliable.
13. Both passages allude to a method of fingerprint identification in which examiners
- (A) rely on a holistic impression of how similar two fingerprints are
 - (B) use computerized databases to search for matching fingerprints
 - (C) count the number of characteristics two fingerprints have in common
 - (D) calculate the odds of two different individuals' sharing certain very rare fingerprint characteristics
 - (E) use computer technology to clarify the images of smudged or partial fingerprints
14. Passage B differs from passage A in that passage B is more
- (A) optimistic in its conclusions
 - (B) general in focus
 - (C) tentative in its claims
 - (D) respectful of opposing claims
 - (E) dependent on unsubstantiated assumptions

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Music and literature, rivals among the arts, have not coexisted without intruding on each other's terrain. Ever since what we think of as "literature" developed out of the sounds of spoken, sung, and chanted art,

- (5) writing has aspired to the condition of music, in which form contributes significantly to content. Nowhere is this truer than in the African American tradition, whose music is often considered its greatest artistic achievement and one of the greatest contributions to
- (10) North American art. But while many African American writers have used musicians and music as theme and metaphor in their writing, none had attempted to draw upon a musical genre as the structuring principle for an entire novel until Toni Morrison did so in her 1992
- (15) novel *Jazz*, a novel set in the Harlem section of New York City in 1926.

In *Jazz*, the connection to music is found not only in the novel's plot but, more strikingly, in the way in which the story is told. The narration slips easily from

- (20) the third-person omniscience of the narrator's disembodied voice—which, though sensitive and sympathetic, claims no particular identity, gender, or immersion in specific social circumstances—to the first-person lyricism of key characters. But throughout
- (25) these shifts, the narrator is both generous with the characters' voices and protective of his or her mastery over the narrative as a whole. On the one hand, the central characters are given the responsibility of relating their parts of the overarching story, but on
- (30) the other hand, their sections are set off by quotation marks, reminders that the narrator is allowing them to speak. In this way, the narrative is analogous in structure to the playing of a jazz band which intertwines its ensemble sound with the individuality
- (35) of embedded solo performances.

In jazz, composer and conductor Duke Ellington was the first to construct his compositions with his individual musicians and their unique "voices" in mind. Yet no matter how lengthy his musicians' improvisations, no matter how bold or inventive their solos might be, they always performed within the undeniable logic of the composer's frame—they always, in other words, performed as if with quotation marks around their improvisations and solos. It is this

(40) same effect that Toni Morrison has achieved in *Jazz*, a literary rendering of an art of composition that Duke Ellington perfected around the time in which *Jazz* is set.

In this novel, Morrison has found a way,

(50) paradoxically, to create the sense of an ensemble of characters improvising within the fixed scope of a carefully constructed collective narration. By simulating the style of a genius of music while exhibiting Morrison's own linguistic virtuosity,

(55) *Jazz* serves to redefine the very possibilities of narrative point of view.

15. Which one of the following most accurately states the main point of the passage?
- (A) In *Jazz*, Morrison has realized a significant artistic achievement in creating the first African American work of fiction whose plot, themes, and setting are all drawn from the world of jazz.
- (B) Morrison's striking description of a musical ensemble performance containing solo improvisations constitutes an important artistic innovation and makes *Jazz* an important model for other writers.
- (C) Although many African American writers have used music as a central metaphor in their works, Morrison's 1992 novel is unique and innovative for using jazz as its central metaphor.
- (D) Building on the works of many African American writers and musical composers, Morrison has over the years developed an innovative jazzlike style of narration, which she used especially effectively in the novel *Jazz*.
- (E) In *Jazz*, Morrison has succeeded in creating an original and effective narrative strategy that is a literary analogue of Duke Ellington's style of musical composition.
16. The author's discussion in the first paragraph proceeds in which one of the following ways?
- (A) from a common claim about the arts, to a denial of this claim as applied to a particular artistic tradition, to a hypothesis about a particular individual
- (B) from a general remark about two art forms, to a similar observation about a particular artistic tradition, to a specific comment about a particular work that exemplifies the prior remarks
- (C) from a description of a common claim about two art forms, to some specific evidence that supports that claim, to an inference regarding a particular individual to whom that claim applies
- (D) from an observation about a specific art form, to a more general claim about the applicability of that observation to other art forms, to a particular counterexample to the first observation
- (E) from general comments about the arts, to a purported counterexample to the general comments as applied to a particular artistic tradition, to a description of a particular work that bears out the original comments

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17. The author's assertion in lines 10–16 would be most called into question if which one of the following were true?
- (A) Even a casual reading of *Jazz* makes it evident that the author has intentionally tried to simulate a style of jazz performance in the narration of the story.
 - (B) A small number of African American novelists writing earlier in the twentieth century sought to base the form of their work on the typical structure of blues music.
 - (C) All novels about nonliterary arts and artists appear as if their authors have tried to make their narrative styles reminiscent of the arts in question.
 - (D) Depending partly on whether or not it is read aloud, any novel can be found to be somewhat musical in nature.
 - (E) A smaller number of African American writers than of non-African American writers in North America have written novels whose plots and characters have to do with music.
18. The information in the passage most supports which one of the following statements regarding Ellington?
- (A) Morrison has explicitly credited him with inspiring the style of narration that she developed in *Jazz*.
 - (B) He prevented his musicians from performing lengthy solos in order to preserve the unity of his compositions.
 - (C) He is a minor character in Morrison's *Jazz*.
 - (D) He composed music that was originally intended to be performed by the specific musicians he conducted.
 - (E) Though he composed and conducted primarily jazz, he also composed some music of other genres.
19. The author's primary purpose in the passage is to
- (A) analyze and commend the variety of contributions to the art of the novel made by a particular writer
 - (B) contrast a particular African American writer's work with the work of African American practitioners of another art
 - (C) describe a particular aspect of one work by a particular writer
 - (D) demonstrate the ways in which two apparently dissimilar arts are, on a deeper analysis, actually quite similar
 - (E) detail the thematic concerns in the work of a particular writer and identify the sources of those concerns
20. Each of the following excerpts from the passage exhibits the author's attitude toward the novel *Jazz* EXCEPT:
- (A) "...whose music is often considered its greatest artistic achievement and one of the greatest contributions to North American art" (lines 8–10)
 - (B) "In *Jazz*, the connection to music is found not only in the novel's plot but, more strikingly, in the way in which the story is told" (lines 17–19)
 - (C) "The narration slips easily from the third-person omniscience of the narrator's disembodied voice..." (lines 19–21)
 - (D) "...Morrison has found a way, paradoxically, to create the sense of an ensemble of characters improvising within the fixed scope..." (lines 49–51)
 - (E) "By simulating the style of a genius of music while exhibiting Morrison's own linguistic virtuosity..." (lines 52–54)
21. It can be inferred from the passage that the author would be most likely to believe which one of the following?
- (A) In *Jazz*, Morrison has perfected a style of narration that had been attempted with little success by other North American writers in the twentieth century.
 - (B) Because of its use of narrative techniques inspired by jazz, Morrison's novel represents the most successful representation to date of the milieu in which jazz musicians live and work.
 - (C) In *Jazz*, Morrison develops her narrative in such a way that the voices of individual characters are sometimes difficult to distinguish, in much the same way that individual musicians' voices merge in ensemble jazz playing.
 - (D) The structural analogy between *Jazz* and Duke Ellington's compositional style involves more than simply the technique of shifting between first-person and third-person narrators.
 - (E) Morrison disguises the important structural connections between her narrative and Duke Ellington's jazz compositions by making the transitions between first- and third-person narrators appear easy.
22. The passage contains information that most helps to answer which one of the following questions?
- (A) Do any African American visual artists also attempt to emulate African American music in their work?
 - (B) In what way is *Jazz* stylistically similar to other literary works by Morrison?
 - (C) After the publication of *Jazz*, did critics quickly acknowledge the innovative nature of the narrative style that Morrison uses in that novel?
 - (D) How many works by African American writers have been inspired by the music of Duke Ellington?
 - (E) What characteristic of *Jazz* is also present in the work of some other African American writers?

Advances in scientific understanding often do not build directly or smoothly in response to the data that are amassed, and in retrospect, after a major revision of theory, it may seem strange that a crucial hypothesis

- (5) was long overlooked. A case in point is the discovery of a means by which the nuclei of atoms can be split. Between 1934, when a group of Italian physicists including Enrico Fermi first bombarded uranium with neutrons, and 1939, when exiled Austrian physicist (10) Lise Meitner provided the crucial theoretical connection, scientists compiled increasing evidence that nuclear fission had been achieved, without, however, recognizing what they were witnessing.

- Earlier, even before the neutron and proton (15) composition of atomic nuclei had been experimentally demonstrated, some theoretical physicists had produced calculations indicating that in principle it should be possible to break atoms apart. But the neutron-bombardment experiments were not aimed at (20) achieving such a result, and researchers were not even receptive to the possibility that it might happen in that context. A common view was that a neutron's breaking apart a uranium nucleus would be analogous to a pebble, thrown through a window, causing a house (25) to collapse.

- In Berlin, Meitner pursued research related to that of the Italians, discovering a puzzling group of radioactive substances produced by neutron bombardment of uranium. Fermi and others achieved (30) numerous similar results. These products remained unidentified partly because precise chemical analyses were hampered by the minute quantities of the substances produced and the dangers of working with highly radioactive materials, but more significantly (35) because of the expectation that they would all be elements close to uranium in nuclear composition. In 1938 Meitner escaped from Nazi Germany and undertook related research in Sweden, but her research partner Otto Hahn kept her informed of his continuing (40) experimentation. Late in that year he wrote to her of a surprising result: one of the substances resulting from the neutron bombardment of uranium had been conclusively identified as barium, an element whose structure would have made it impossible to produce (45) through any mechanism he envisaged as being involved in the experiments. Hahn even remarked that, despite the clear chemical evidence of what had occurred, it went "against all previous experiences of nuclear physics," but he also noted that together (50) the number of protons and neutrons in the nuclei of barium and technetium, the accompanying product of the experiment, added up to the number of such particles that compose a uranium nucleus.

- It was Meitner who finally recognized the (55) significance of the data in relation to underlying theoretical considerations: the researchers had actually been splitting uranium atoms. Coining the term "nuclear fission," she quickly submitted her conclusion for publication in a paper coauthored with

- (60) physicist Otto Frisch. When scientists in Europe and North America rushed to corroborate the findings, it became clear that the relevant evidence had been present for some time, lacking mainly the right conceptual link.

23. The author's primary aim in the passage is to
- (A) criticize a traditional view of scientific progress and advocate a replacement
 - (B) illustrate the often erratic way in which a scientific community achieves progress
 - (C) judge the relative importance of theory and experimentation in science
 - (D) take issue with the idea that scientists make slow, steady progress
 - (E) display the way in which intellectual arrogance sometimes hinders scientific progress
24. The most likely reason that the theoretical physicists in line 16 would have been pleased about Meitner's insight regarding the neutron bombardment experiments is that her insight
- (A) was dependent upon the calculations that they had produced
 - (B) paved the way for work in theoretical physics to become more acceptable abroad
 - (C) proved that the nuclei of atoms were generally unstable
 - (D) confirmed their earlier work indicating that atoms could be split
 - (E) came after years of analyzing the data from experiments conducted between 1934 and 1938
25. Which one of the following is most nearly equivalent to what the author means by "the relevant evidence" (line 62)?
- (A) the results of experiments in neutron bombardment of uranium conducted by the physics community between 1934 and 1939
 - (B) the results of related experiments in neutron bombardment of uranium conducted by Meitner in 1938
 - (C) the clear chemical evidence that Hahn had found of barium's being produced by neutron bombardment of uranium
 - (D) the fact that the sum of the number of protons and neutrons in the nuclei of barium and technetium was the same as the number of these particles in a uranium nucleus
 - (E) the fact that radioactive products of neutron bombardment of uranium went unidentified for so long

26. Given the information in the passage, which one of the following, if true, would have been most likely to reduce the amount of time it took for physicists to realize that atoms were being split?
- (A) The physicists conducting the experiments in neutron bombardment of uranium were all using the same research techniques.
 - (B) The physicists conducting the experiments in neutron bombardment of uranium did not have particular expectations regarding the likely nuclear composition of the by-products.
 - (C) The physicists conducting the experiments in neutron bombardment of uranium had not been aware of the calculations indicating that in principle it was possible to split atoms.
 - (D) More physicists concentrated on obtaining experimental results from the neutron bombardment of uranium.
 - (E) Physicists conducted experiments in the neutron bombardment of some substance other than uranium.
27. According to the passage, which one of the following was true of the physics community during the 1930s?
- (A) It neglected earlier theoretical developments.
 - (B) It reevaluated calculations indicating that atoms could be split.
 - (C) It never identified the by-products of neutron bombardment of uranium.
 - (D) It showed that uranium atoms were the easiest to split.
 - (E) It recognized the dangers of working with radioactive substances.

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.