SAT Practice Test #7

ESSAY
Time — 25 minutes

Turn to page 2 of your answer sheet to write your ESSAY.

The essay gives you an opportunity to show how effectively you can develop and express ideas. You should, therefore, take care to develop your point of view, present your ideas logically and clearly, and use language precisely.

Your essay must be written on the lines provided on your answer sheet—you will receive no other paper on which to write. You will have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size. Remember that people who are not familiar with your handwriting will read what you write. Try to write or print so that what you are writing is legible to those readers.

Important Reminders:

- **A pencil is required for the essay.** An essay written in ink will receive a score of zero.
- **Do not write your essay in your test book.** You will receive credit only for what you write on your answer sheet.
- **An off-topic essay will receive a score of zero.**

You have twenty-five minutes to write an essay on the topic assigned below.

Think carefully about the issue presented in the following excerpt and the assignment below.

> "Tough challenges reveal our strengths and weaknesses." This statement is certainly true; adversity helps us discover who we are. Hardships can often lead us to examine who we are and to question what is important in life. In fact, people who have experienced seriously adverse events frequently report that they were positively changed by their negative experiences.

Assignment: Do you think that ease does not challenge us and that we need adversity to help us discover who we are? Plan and write an essay in which you develop your point of view on this issue. Support your position with reasoning and examples taken from your reading, studies, experience, or observations.

BEGIN WRITING YOUR ESSAY ON PAGE 2 OF THE ANSWER SHEET.

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.**

SECTION 2
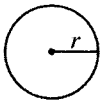### Time — 25 minutes
18 Questions

Turn to Section 2 (page 4) of your answer sheet to answer the questions in this section.

Directions: This section contains two types of questions. You have 25 minutes to complete both types. For questions 1-8, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.
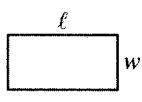
Notes

1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.
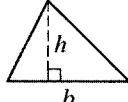
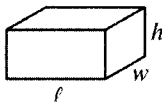**Reference Information**

$A = \pi r^2$
$C = 2\pi r$
$A = \ell w$
$A = \frac{1}{2}bh$
$V = \ell wh$
$V = \pi r^2 h$
$c^2 = a^2 + b^2$
Special Right Triangles

The number of degrees of arc in a circle is 360.
The sum of the measures in degrees of the angles of a triangle is 180.

Set $X = \{30, 31, 32, 33\}$

Set $Y = \{32, 33, 34, 35, 36\}$

1. Sets X and Y are shown above. How many numbers in set X are also in set Y ?

(A) Two
(B) Three
(C) Four
(D) Seven
(E) Nine

2. If Peg traveled 10 miles in 2 hours and Linda traveled twice as far in half the time, what was Linda's average speed, in miles per hour?

(A) 5
(B) 10
(C) 20
(D) 30
(E) 40

GO ON TO THE NEXT PAGE

3. If $x = k(k - 2)$, then $x + 1 =$

(A) $k^2 - k$

(B) $k^2 - 3k$

(C) $k^2 - 2k + 1$

(D) $k^2 + 2k + 1$

(E) $k^2 - 1$
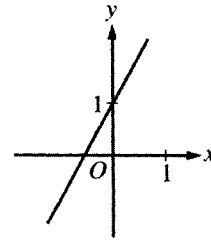
4. The figure above shows the graph of the line $y = ax + b$, where a and b are constants. Which of the following best represents the graph of the line $y = 2ax + b$?

(A)

(B)

(C)

(D)

(E)
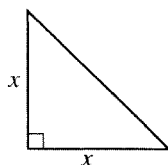
5. In the figure above, the perimeter of the triangle is $4 + 2\sqrt{2}$. What is the value of x ?

(A) 2

(B) 4

(C) $\sqrt{2}$

(D) $2\sqrt{2}$

(E) $2 + \sqrt{2}$

HISTORY TEST RESULTS

Score	Number of Students
100	1
95	2
90	4
85	1
80	3
75	2
70	2
65	0
60	1

6. The scores on Tuesday's history test for 16 students are shown in the table above. Sam, who was the only student absent on Tuesday, will take the test next week. If Sam receives a score of 95 on the test, what will be the median score for the test?

(A) 90

(B) 87.5

(C) 85

(D) 82.5

(E) 80

7. Ahmad has containers of two different sizes. The total capacity of 16 containers of one size is x gallons, and the total capacity of 8 containers of the other size is also x gallons, and $x > 0$. In terms of x, what is the capacity, in gallons, of each of the larger containers?

(A) $4x$

(B) $2x$

(C) $\dfrac{x}{2}$

(D) $\dfrac{x}{8}$

(E) $\dfrac{x}{16}$

8. Rectangle $ABCD$ lies in the xy-coordinate plane so that its sides are <u>not</u> parallel to the axes. What is the product of the slopes of all four sides of rectangle $ABCD$?
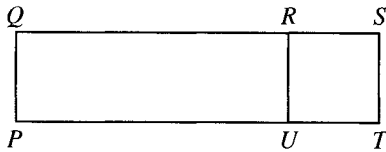
(A) −2

(B) −1

(C) 0

(D) 1

(E) 2

GO ON TO THE NEXT PAGE

Directions: For Student-Produced Response questions 9-18, use the grids at the bottom of the answer sheet page on which you have answered questions 1-8.

Each of the remaining 10 questions requires you to solve the problem and enter your answer by marking the circles in the special grid, as shown in the examples below. You may use any available space for scratchwork.

Answer: $\frac{7}{12}$

Answer: 2.5

Answer: 201
Either position is correct.

Write answer → in boxes.

← Fraction line

← Decimal point

Grid in → result.

Note: You may start your answers in any column, space permitting. Columns not needed should be left blank.

- Mark no more than one circle in any column.

- Because the answer sheet will be machine-scored, **you will receive credit only if the circles are filled in correctly.**

- Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately.

- Some problems may have more than one correct answer. In such cases, grid only one answer.

- No question has a negative answer.

- **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or 7/2. (If 3 1/2 is gridded, it will be interpreted as $\frac{31}{2}$, not $3\frac{1}{2}$.)

- **Decimal Answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid. For example, if you obtain an answer such as 0.6666..., you should record your result as .666 or .667. **A less accurate value such as .66 or .67 will be scored as incorrect.**

Acceptable ways to grid $\frac{2}{3}$ are:

9. An hour-long television program included 20 minutes of commercials. What fraction of the hour-long program was <u>not</u> commercials?

10. If the product of 0.3 and a number is equal to 1, what is the number?

11. Let $_x\!\overset{y}{\triangle}_z$ be defined as $_x\!\overset{y}{\triangle}_z = x^y - z^y$ for all positive integers x, y, and z. What is the value of $_{10}\!\overset{3}{\triangle}_5$?

P
Q
R
S
U
T

Note: Figure not drawn to scale.

12. In the figure above, *PQST* is a rectangle and *URST* is a square. $PU = 5$ and *UT* is a positive integer. If the area of *PQST* must be more than 10 but less than 30, what is one possible value of *UT* ?

13. A company sells boxes of balloons in which the balloons are red, green, or blue. Luann purchased a box of balloons in which $\frac{1}{3}$ of them were red. If there were half as many green balloons in the box as red ones and 18 balloons were blue, how many balloons were in the box?

14. The three distinct points P, Q, and R lie on a line ℓ; the four distinct points S, T, U, and V lie on a different line that is parallel to line ℓ. What is the total number of different lines that can be drawn so that each line contains exactly two of the seven points?

15. If $2^x + 2^x + 2^x + 2^x = 2^7$, what is the value of x ?

16. Each of 5 people had a blank card on which they wrote a positive integer. If the average (arithmetic mean) of these integers is 15, what is the greatest possible integer that could be on one of the cards?

17. Alice and Corinne stand back-to-back. They each take 10 steps in opposite directions away from each other and stop. Alice then turns around, walks toward Corinne, and reaches her in 17 steps. The length of one of Alice's steps is how many times the length of one of Corinne's steps? (All of Alice's steps are the same length and all of Corinne's steps are the same length.)

18. Let the function f be defined by $f(x) = x^2 + 18$. If m is a positive number such that $f(2m) = 2f(m)$, what is the value of m ?

S T O P
**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.**

SECTION 3
Time — 25 minutes
35 Questions

Turn to Section 3 (page 4) of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices.

In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

EXAMPLE:

Laura Ingalls Wilder published her first book and she was sixty-five years old then.

(A) and she was sixty-five years old then
(B) when she was sixty-five
(C) at age sixty-five years old
(D) upon the reaching of sixty-five years
(E) at the time when she was sixty-five

(A) ● (C) (D) (E)

1. While working as a nurse in the streets of Calcutta, that was when Mother Teresa developed a profound love for the poor.

(A) that was when Mother Teresa developed a profound love for the poor
(B) Mother Teresa developed a profound love for the poor
(C) then the development of Mother Teresa's profound love for the poor took place
(D) Mother Teresa's profound love for the poor developed
(E) a profound love for the poor developed in Mother Teresa

2. The legislators agreed to return to their districts and they would hold a series of town meetings on the recently passed tax bills.

(A) to return to their districts and they would hold
(B) to return to their districts to hold
(C) to returning to their districts, thereby holding
(D) with returning to their districts for holding of
(E) on the return to their districts to the holding

3. Legend has it that medieval Chinese warriors using manned kites to survey enemy troops anticipating modern aerial surveillance.

(A) using manned kites to survey enemy troops anticipating
(B) using manned kites to survey enemy troops and anticipate
(C) using manned kites and surveying enemy troops, they anticipated
(D) used manned kites to survey enemy troops, a technique anticipating
(E) used manned kites surveying enemy troops, so anticipating techniques of

4. For months, one of the most popular breakfast foods were selling for so little that people thought something was wrong.

(A) were selling for so little that people thought something was
(B) was selling for so little that people thought something were
(C) were selling for so little; so people thought something has gone
(D) was selling for so little that people thought something was
(E) was selling for very little; so people thought of it as

5. The programmers always talked of having too much to do, but in truth they had a lesser amount of work to do than their colleagues.

   (A) they had a lesser amount of work to do than
   (B) their work was the least among
   (C) they were having less work to do than
   (D) the amount of work they had to do was the least of
   (E) they had less work to do than

6. Film audiences in the 1950's saw more musicals than the 1960's and 1970's.

   (A) than
   (B) than did
   (C) than the films of
   (D) than with the audiences in
   (E) than did audiences in

7. Unlike American architects who preceded him, Frank Lloyd Wright did not draw on classical or European architecture for inspiration.

   (A) Unlike American architects who preceded him, Frank Lloyd Wright
   (B) Unlike the inspiration of American architects who preceded him, Frank Lloyd Wright
   (C) Frank Lloyd Wright's architecture, unlike American architects who preceded him,
   (D) Different from the American architects who preceded him, Frank Lloyd Wright's designs
   (E) Frank Lloyd Wright's inspirations, different from American architects who preceded him,

8. The revolt against Victorianism was perhaps even more marked in poetry than either fiction or drama.

   (A) either fiction or drama
   (B) either fiction or in drama
   (C) either in fiction or drama
   (D) in either fiction or drama
   (E) in either fiction or in drama

9. Because economic hardship is the real source of many other problems is the reason why the revolutionary government attacked inflation first.

   (A) Because economic hardship is the real source of many other problems is the reason why
   (B) Because economic hardship is the real source of many other problems,
   (C) Economic hardship causes many other problems and is the reason for why
   (D) As a result of economic hardship causing many other problems,
   (E) The fact that economic hardship is the real source of many other problems is why

10. In Germany, foresters discovered that trees killed by acid rain had begun to die four years earlier, even though the trees had shown no signs of disease then.

    (A) earlier, even though the trees had shown no signs of disease then
    (B) earlier, but not showing any signs of disease then
    (C) earlier, no outward signs of disease had been shown then in the trees, however
    (D) earlier without any signs of disease shown then
    (E) earlier, not then having shown any signs of disease, however

11. In the wild, pygmy chimpanzees are found only in an inaccessible region south of the Zaire River, since such is the case, very few are in captivity.

    (A) since such is the case, very few are in captivity
    (B) and very few are in captivity because of that
    (C) no more than a few are in captivity as a result
    (D) the number in captivity is very few for this reason
    (E) and so no more than a few are in captivity

The following sentences test your ability to recognize
grammar and usage errors. Each sentence contains either
a single error or no error at all. No sentence contains more
than one error. The error, if there is one, is underlined
and lettered. If the sentence contains an error, select the
one underlined part that must be changed to make the
sentence correct. If the sentence is correct, select choice E.
In choosing answers, follow the requirements of standard
written English.

EXAMPLE:

The other delegates and him immediately
   A   B   C
accepted the resolution drafted by the
                         D
neutral states. No error
             E

Ⓐ ● Ⓒ Ⓓ Ⓔ

12. Although born in the Midwest, Langston Hughes lived

most of his adult life in Harlem, in New York City,

where , like other writers in the 1930's, he had wrote
  A   B   C

some of his finest works. No error
          D   E

13. In constant demand as a speaker, Ms. Chernock
            A

has never been more busier than she is now .
     B   C   D
No error
 E

14. During the night, there is usually two German
   A   B

shepherds at the warehouse to guard against robbery
                          C

attempts . No error
  D   E

15. Candy manufacturers applauded the discovery by
                              A

researchers that students which smell chocolate while
                  B

studying and again while taking a test are able to
           C   D
recall more material than students not exposed to the

odor of chocolate. No error
             E

16. One can hardly determine which contributes more
   A   B   C   D
to the success of a violinist—innate skill or regular

practice. No error
      E

17. The Red Cross workers had not expected the

refugees from the flooded plain to be as desperate
     A   B
and as undernourished as those whom they had seen
                 C   D
earlier in the week. No error
             E

18. Although naturalists have identified six hundred
       A
    different forms of the corion snail, there is actually
                                              B
    no more than two true species within this genus.
          C   D
    No error
       E

19. The department of transportation has introduced
                                      A
    pictorial traffic signs because drivers can react to this
                                                          B
    more quickly than to verbal ones . No error
         C   D   E

20. She claimed that the "representational" actor

    is having to imitate a character's behavior, whereas
            A   B
    the "presentational" actor attempts to reveal human
                                         C
    behavior through self-understanding . No error
                    D   E

21. Many nations, and the United Nations itself ,
                                           A
    has issued stamps that commemorate the fiftieth
         B   C
    anniversary of the signing of the UN charter.
                    D
    No error
       E

22. The tribal council's program familiarized young people

    with Cherokee history, taught them tribal traditions,
     A   B
    and they had the opportunity to learn skills used by
         C   D
    ancient artists. No error
                      E

23. Observation of diverse animal species show that the
                                         A
    most successful in the struggle for survival are
         B
    those which are most adaptable to changes in their
         C   D
    world. No error
           E

24. Far away from having been a diehard conservative,
         A
    Hoover was , some scholars now contend , the leading
         B   C
    progressive of his day . No error
                D   E

25. For the past hundred years or more, Yellowstone
         A
    National Park was a kind of sociological laboratory
                    B
    in which North Americans have been exploring
         C
    the meaning of the national-park concept. No error
         D   E

26. Alerted by the nervousness and evasiveness of the
      A

witness, the jurors were quick to perceive that his
                         B

statements were inconsistent to those he had made
                 C   D

earlier. No error
       E

27. In many respects Anna Karenina and Emma Bovary
       A

are very similar characters, but Bovary has
                 B   C

the most spirit and determination. No error
      D   E

28. Between the sales manager and I existed an easy,
                    A   B   C

cooperative working relationship; neither of us
                             D

hesitated to discuss problems. No error
                  E

29. As the archbishop of Canterbury, Thomas à Becket
      A

assumed an independence that was intolerable to the
            B   C

king, who had long been his friend. No error
          D   E

Directions: The following passage is an early draft of an essay. Some parts of the passage need to be rewritten.

Read the passage and select the best answers for the questions that follow. Some questions are about particular sentences or parts of sentences and ask you to improve sentence structure or word choice. Other questions ask you to consider organization and development. In choosing answers, follow the requirements of standard written English.

Questions 30-35 are based on the following passage.

(1) Many people have never heard of Lou Henry Hoover. (2) Of all the wives of United States Presidents since 1900, she is probably the most forgotten. (3) She attended Stanford University, where she met and married another student—a mining engineer named Herbert Hoover—and became one of the first American women to earn a degree in geology. (4) Together they began a life of travel, adventure, and accomplishment.

(5) The Hoovers served on a relief mission in Beijing, China, during the Boxer Uprising of 1900. (6) Lou Hoover held bandages in one hand, a gun in the other. (7) From 1902 to 1916, the Hoovers circled the world five times. (8) In the process Lou Hoover designed for her two young sons a portable crib. (9) It would remain stable during the rocking of a ship. (10) She also learned several languages and published scholarly works on such topics as the gold-mining techniques of the Egyptians.

(11) Lou Hoover being a versatile person, as comfortable in an outdoor camp as she was in a Victorian drawing room. (12) She triumphed over the limits of her position and the times in which she lived. (13) A leader of the Girl Scout movement, she firmly believed that girls should be encouraged to pursue their interests. (14) In 1929 she became the first person to break the racial barrier at the White House. (15) She entertained Jessie DePriest, wife of Oscar DePriest, the African American Congressman from Chicago.

30. Which is the best version of the underlined portion of sentence 3 (reproduced below) ?

She attended Stanford University, where she met and married another student—a mining engineer named Herbert Hoover—and became one of the first American women to earn a degree in geology.

(A) (As it is now)
(B) Attending Stanford University, where she
(C) At Stanford University, where she
(D) Having attended Stanford University, she
(E) She attended Stanford University, she

31. Which of the following is the best version of the underlined portion of sentences 8 and 9 (reproduced below) ?

In the process Lou Hoover designed for her two young sons a portable crib. It would remain stable during the rocking of a ship.

(A) crib so that it would remain stable
(B) crib, and it would remain stable
(C) crib that nevertheless remained stable
(D) crib that would remain stable
(E) crib. It was designed to remain stable

32. Which of the following ways to revise the underlined portion of sentence 10 (reproduced below) most effectively links the sentence to the rest of the second paragraph?

She also learned several languages and published scholarly works on such topics as the goldmining techniques of the Egyptians.

(A) Because as a child she had learned
(B) Since her time in China she was also learning
(C) By this time she had also been learning
(D) And in the midst of all this activity, she learned
(E) Nevertheless, by now she had also learned

33. In context, which is the best way to deal with sentence 11 ?

(A) Change "being" to "was".
(B) Insert "Finally" at the beginning.
(C) Change "she" to "Lou Hoover".
(D) Delete "she was".
(E) Change "was" to "had been".

34. Which of the following is the best version of the underlined portion of sentences 14 and 15 (reproduced below) ?

In 1929 she became the first person to break the racial barrier at the White House. She entertained Jessie DePriest, wife of Oscar DePriest, the African American Congressman from Chicago.

(A) In 1929 she became the first person to break the racial barrier at the White House, and she entertained
(B) In addition, in 1929 she became the first person to break the racial barrier at the White House when she entertained
(C) So in 1929 she becomes the first person to break the racial barrier at the White House by entertaining
(D) Consequently, the racial barrier at the White House was first broken in 1929 by Hoover's entertaining
(E) By being the first person to break the racial barrier at the White House in 1929, Hoover entertained

35. Which sentence is best to add after sentence 15 ?

(A) Lou Henry Hoover was an exceptionally gracious and polished first lady.
(B) Lou Henry Hoover was an accomplished woman who was truly ahead of her time.
(C) Lou Henry Hoover's personal papers have only recently been made available to the public.
(D) Obviously, not a great deal is known about the early life of this extraordinary woman.
(E) Only historians now know that she was born in Waterloo, Iowa, in 1874.

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 4
Time — 25 minutes
24 Questions

| Turn to Section 4 (page 5) of your answer sheet to answer the questions in this section. |

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, <u>best</u> fits the meaning of the sentence as a whole.

Example:

Hoping to ------- the dispute, negotiators proposed a compromise that they felt would be ------- to both labor and management.

(A) enforce . . useful
(B) end . . divisive
(C) overcome . . unattractive
(D) extend . . satisfactory
(E) resolve . . acceptable   Ⓐ Ⓑ Ⓒ Ⓓ ●

---

1. Initially only the carpeting outside the restroom was ------- by water from the burst pipe; eventually the entire hallway flooded.

   (A) diverted   (B) confined   (C) scuttled
      (D) cleansed   (E) drenched

2. Communal nests have advantages and disadvantages for animals like voles and mice: they enable the animals to ------- body heat, but leave them more ------- to discovery by predators.

   (A) insure . . inclined
   (B) maintain . . vulnerable
   (C) squander . . liable
   (D) stimulate . . resistant
   (E) retain . . immune

3. He displayed a nearly pathological -------, insisting on knowing every detail of his friends' lives.

   (A) orderliness   (B) credulity   (C) curiosity
      (D) shyness   (E) morbidity

4. Despite global efforts to ------- malaria, this mosquito-borne disease continues to -------: the World Health Organization estimates that it still affects up to 500 million people a year.

   (A) cure . . flag
   (B) foster . . thrive
   (C) combat . . abate
   (D) scrutinize . . prosper
   (E) eradicate . . flourish

5. Although condemned by the review panel, to film critic Pauline Kael the movie seemed entirely ------- and unlikely to offend.

   (A) impressionable   (B) innocuous
      (C) unsuitable   (D) insensitive
      (E) unapproachable

6. The reviewer characterized Madonna Swan-Abdalla's autobiography as a portrait of an ------- person, one who prevailed against great odds.

   (A) empathetic   (B) indomitable   (C) expeditious
       (D) idiosyncratic   (E) astute

7. Although it stayed in business for several months, the company was actually ------- and met its financial obligations only by engaging in ------- activities.

   (A) insolvent . . fraudulent
   (B) prudent . . speculative
   (C) autonomous . . subordinate
   (D) bankrupt . . charitable
   (E) stable . . manipulative

8. Mary Shelley's *Frankenstein* centers on a scientist's -------, the overweening pride that makes him believe he can usurp nature.

   (A) obstinacy   (B) hubris   (C) impetuosity
       (D) valor   (E) callousness

The passages below are followed by questions based on their content; questions following a pair of related passages may also be based on the relationship between the paired passages. Answer the questions on the basis of what is <u>stated</u> or <u>implied</u> in the passages and in any introductory material that may be provided.

Questions 9-12 are based on the following passages.

Passage 1

American writers Henry Adams (1838-1918) and Samuel Clemens (1835-1910) gradually approached, during their careers, a mood of total despair. Personal
Line tragedies have been set forth to explain this development:
5 the deaths of loved ones, the humiliation of family bank-ruptcies. These certainly are contributory causes, but the writings of Adams and Clemens reveal that the despair is in a slow process of incubation from their earliest work, and that it is finally hatched by the growing political
10 discords, moral conflicts, and economic problems of their age. It is not a despair of personal bereavement but of country—and ultimately of humanity—that manifests itself in their works.

Passage 2

The bankruptcy of Samuel Clemens, the death of his
15 daughter, and the chronic illness of his wife are agonizing as personal history. Our interest, however, is in the works that came out of these disasters. Literary critics are usually unable to say how an author's experience is transformed into art. In Clemens' writings from 1895 onward, how-
20 ever, we can watch while he repeatedly tries and fails to make something of these experiences that were so vitally important to him—and finally we can see him fuse and transform them into a culminating work of art, the book (published posthumously) that we know as
25 *The Mysterious Stranger.*

9. Both authors agree that Clemens

(A) deplored societal and human tendencies
(B) endured painful personal loss
(C) was deeply affected by literary critics
(D) endured hardships much like those of Adams
(E) revealed pessimism in his earliest writings

10. The metaphor in lines 7-11 ("the despair . . . their age") is central to the overall argument of Passage 1 in its suggestion of

(A) literary creativity
(B) gradual development
(C) timeless artistry
(D) reluctant acknowledgement
(E) culminating achievement

11. The author of Passage 2 would most likely view the "contributory causes" mentioned in line 6, Passage 1, as personal experiences that

(A) did not influence Clemens' literary output significantly
(B) affected Clemens early rather than late in his career
(C) were less important than political, moral, and economic factors
(D) were of little interest to literary critics
(E) were eventually molded by Clemens into a meaningful work

12. The author of Passage 1 would most likely. regard the "personal history" (line 16, Passage 2) as

(A) essential knowledge for any reader of Clemens' work
(B) more distressing than the personal diffi-culties experienced by Henry Adams
(C) inconsistent with the tone and character of Clemens' literary output
(D) less important than public events as an influence on Clemens' writing
(E) instrumental in making Clemens a unique American writer

Questions 13-24 are based on the following passage.

This passage is part of an introduction written by a well-known doctor and essayist for his 1996 book about rare neurological disorders.

I am writing this with my left hand, although I am
strongly right-handed. I had surgery to my right shoulder a
month ago and am not permitted, not capable of, use of the
Line right arm at this time. I write slowly, awkwardly—but
5 more easily, more naturally, with each passing day. I am
adapting, learning, all the while—not merely this left-
handed writing, but a dozen other left-handed skills as well.
I have also become very adept with my toes, to compensate
for having one arm in a sling; I was quite off balance for a
10 few days when the arm was first immobilized, but now I
walk differently, I have discovered a new balance. I am
developing different patterns, different habits . . . a differ-
ent identity, one might say, at least in this particular sphere.
There must be changes going on with some of the programs
15 and circuits in my brain—altering synaptic weights and
connectivities and signals (though our methods of brain
imaging are still too crude to show these).
Though some of my adaptations are deliberate, planned,
and some are learned through trial and error (in the first
20 week I injured every finger on my left hand), most have
occurred by themselves, unconsciously, by reprogram-
mings and adaptations of which I know nothing (any more
than I know, or can know, how I normally walk). Next
month, if all goes well, I can start to readapt again, to regain
25 a full (and "natural") use of the right arm, to reincorporate
it back into my body image, myself, to become a dexterous
human being once again.
But recovery, in such circumstances, is by no means
automatic, a simple process like tissue healing—it will
30 involve a whole nexus of muscular and postural adjustments,
a whole sequence of new procedures (and their synthesis),
learning, finding, a new path to recovery. My surgeon,
an understanding man who has had the same operation
himself, said, "There are *general* guidelines, restrictions,
35 recommendations. But all the particulars you will have to
find out for yourself." Jay, my physiotherapist, expressed
himself similarly: "Adaptation follows a different path in
each person. The nervous system creates its own paths.
You're the neurologist—you must see this all the time."
40 Nature's imagination, as physicist Freeman Dyson likes
to say, is richer than ours, and he speaks, marvellingly, of
this richness in the physical and biological worlds, the end-
less diversity of physical forms and forms of life. For me,
as a physician, nature's richness is to be studied in the
45 phenomena of health and disease, in the endless forms of
individual adaptation by which human organisms, people,
adapt and reconstruct themselves when faced with the chal-
lenges and vicissitudes of life.
Thus while one may be distressed by the trials of devel-
50 opmental disorders or disease, one may sometimes see them

as creative too—for if they destroy particular paths, partic-
ular ways of doing things, they may force the nervous system
into making other paths and ways, force on it an unexpected
growth and evolution. This other side of development or
55 disease is something I see, potentially, in almost every
patient. That such radical adaptations can occur demands
a view of the brain as dynamic and active rather than pro-
grammed and static, a supremely efficient adaptive system
geared for evolution and change, ceaselessly adapting to the
60 needs of the organism—its need, above all, to construct a
coherent self and world, whatever defects or disorders of
brain function befall it. That the brain is minutely differen-
tiated is clear: there are hundreds of tiny areas crucial for
every aspect of perception and behavior (from the percep-
65 tion of color and of motion to, perhaps, the intellectual
orientation of the individual). The miracle is how they all
cooperate, are integrated together, in the creation of a self.
This sense of the brain's remarkable plasticity, its capac-
ity for the most striking adaptations, not the least in the
70 special (and often desperate) circumstances of neural or sen-
sory mishap, has come to dominate my own perception of
my patients and their lives. So much so, indeed, that I am
sometimes moved to wonder whether it may be necessary
to redefine the very concepts of "health" and "disease," to
75 see these in terms of the ability of the organism to create a
new organization and order, one that fits its special, altered
disposition and needs, rather than in the terms of a rigidly
defined "norm."

13. The passage can primarily be described as

(A) scientific evidence used to refute an established
theory
(B) amusing anecdotes countered by a profound insight
(C) skeptical commentary evolving into a detached
analysis
(D) a case study followed by a scientific hypothesis
(E) a personal account leading to a general observation

14. The author describes himself as "strongly right-handed"
(line 2) in order to

(A) convey the ease with which he learned to be ambi-
dextrous
(B) contrast his particular abilities and those of other
individuals
(C) suggest the difficulties he had to overcome
(D) evoke a sympathetic response from the reader
(E) characterize the sources of his physical strength

15. The author's remark in lines 14-16 ("There must . . . signals") can best be described as

(A) conjecture
(B) irony
(C) inquiry
(D) observation
(E) evidence

16. In line 17, "crude" most nearly means

(A) obvious
(B) natural
(C) offensive
(D) undeveloped
(E) vulgar

17. The author's parenthetical reference in lines 22-23 serves to

(A) depict his physical capabilities before his accident
(B) highlight the process of learning through experience
(C) explain his continuing inability to perform simple tasks
(D) rationalize the frustration he felt about achieving his goals
(E) illustrate a point about unconscious adaptation

18. In lines 34-36 the surgeon advises the author to

(A) become more open-minded about muscular adjustments than he had been
(B) follow a detailed and specific regimen of rehabilitation
(C) find out how others have dealt with the same problem
(D) develop his own procedures for coping
(E) endure patiently until he physically recovers

19. The physiotherapist's remarks (lines 36-39) reveal the assumption that

(A) patients have complete control over the progress of their recovery
(B) each neurologist follows a different path to understanding
(C) all neurologists are aware of the nervous system's adaptability
(D) the author is inadequately informed about the intricacies of the muscular system
(E) some neurologists consider both healthy and injured brain processes to be parallel

20. In line 42, "richness" most nearly means

(A) biological importance
(B) economic wealth
(C) meaning
(D) variety
(E) resources

21. Why does the author mention that he is a physician in lines 43-48 ?

(A) To emphasize his particular point of view
(B) To illustrate the limits of scientific knowledge
(C) To establish that he views brain function strictly from his patients' standpoint
(D) To suggest that his main concern is the surgery he performs on patients
(E) To dispel any doubt about his credentials in the field of neurology

22. Lines 49-54 primarily encourage readers to view disease as

(A) a source of psychological harm
(B) an opportunity for productive change
(C) an inevitable fact of human existence
(D) a force that retards evolutionary change
(E) a condition to be dealt with on a spiritual level

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23. It can be inferred from the author's discussion of radical adaptations in lines 56-62 that others may have

(A) believed that adaptations occur only as a response to disease
(B) held that neurological change can occur only as a result of an evolutionary process
(C) viewed the brain as inflexible and unchanging
(D) failed to recognize how minutely differentiated the brain is
(E) recognized that the intellectual orientation of the individual is an organic function

24. The main point of the passage is to

(A) explain the most fundamental aspects of brain function
(B) discuss the impact of surgery on the nervous system
(C) invite speculation about how physical rehabilitation complements natural healing
(D) emphasize that current technology to measure brain activity is inadequate
(E) argue that the brain's ability to adapt to changing needs is virtually limitless

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 5
Time — 25 minutes
20 Questions

Turn to Section 5 (page 5) of your answer sheet to answer the questions in this section.

Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.

Notes

1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

Reference Information

$A = \pi r^2$
$C = 2\pi r$

$A = \ell w$

$A = \frac{1}{2}bh$

$V = \ell w h$

$V = \pi r^2 h$

$c^2 = a^2 + b^2$

Special Right Triangles

The number of degrees of arc in a circle is 360.
The sum of the measures in degrees of the angles of a triangle is 180.

$$2, 6, 14, 30, \ldots$$

1. In the sequence above, the first term is 2. Each number after the first is obtained by adding 1 to the preceding number and then doubling the result. What is the sixth number in the sequence?

(A) 122
(B) 123
(C) 124
(D) 125
(E) 126

2. If $a(x + y) = 45$ and $ax = 15$, what is the value of ay ?

(A) 3
(B) 5
(C) 15
(D) 25
(E) 30

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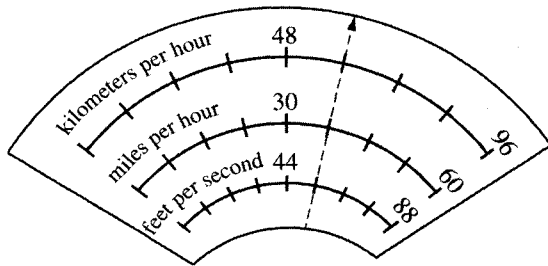
3. On the speedometer above, what is the speed, in miles per hour, indicated by the needle position?

(A) 32.5
(B) 37.5
(C) 40
(D) 55
(E) 60

4. How many different positive three-digit integers can be formed if the three digits 4, 5, and 6 must be used in each of the integers?

(A) Three
(B) Four
(C) Six
(D) Eight
(E) Nine
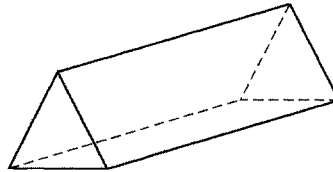
5. The three-dimensional figure represented above consists of rectangular and triangular faces. Each rectangular face has area r and each triangular face has area t. What is the total surface area of the figure, in terms of r and t ?

(A) $2r + t$
(B) $3r + 2t$
(C) $4r + 3t$
(D) $6rt$
(E) $r^3 t^2$

6. If n is a positive integer and $\dfrac{n + 1}{2^n} = \dfrac{1}{2}$, then $n =$

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

GO ON TO THE NEXT PAGE

7. The average (arithmetic mean) of the weights of 14 books is p pounds. In terms of p, what is the total weight of the books, in pounds?

(A) $14 + p$

(B) $p - 14$

(C) $\dfrac{p}{14}$

(D) $\dfrac{14}{p}$

(E) $14p$
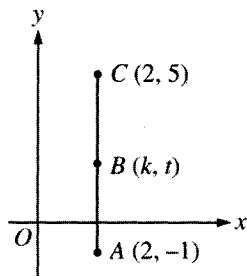
8. Point B is the midpoint of $\overline{AC}$ in the figure above. What is the value of t ?

(A) 1
(B) 1.5
(C) 2
(D) 2.5
(E) 3

9. If $k(2x + 3)(x - 1) = 0$ and $x > 1$, what is the value of k ?

(A) $\dfrac{-3}{2}$

(B) 0

(C) $\dfrac{2}{3}$

(D) 1

(E) 2

10. If all men in the Williams family are over six feet tall, which of the following statements must be true?

(A) No man under six feet tall is a member of the Williams family.
(B) All men over six feet tall are members of the Williams family.
(C) All men who are not members of the Williams family are under six feet tall.
(D) Every member of the Williams family over six feet tall is a man.
(E) There is one man in the Williams family under six feet tall.

GO ON TO THE NEXT PAGE

11. What is the radius of a circle that has a circumference of π ?

(A) $\dfrac{1}{4}$

(B) $\dfrac{1}{2}$

(C) 1

(D) 2

(E) 4

13. If $4x = 6u = 5v = 7w > 0$, which of the following is true?

(A) $x < v < u < w$
(B) $x < u < v < w$
(C) $x < v < w < u$
(D) $w < u < v < x$
(E) $u < v < w < x$

12. If y is directly proportional to x^2 and $y = \dfrac{1}{8}$ when $x = \dfrac{1}{2}$, what is the positive value of x when $y = \dfrac{9}{2}$?

(A) $\dfrac{3}{4}$

(B) $\dfrac{3}{2}$

(C) $\dfrac{9}{4}$

(D) 3

(E) 9

14. Let the function h be defined by $h(t) = 2\left(t^3 - 3\right)$.

When $h(t) = -60$, what is the value of $2 - 3t$?

(A) 35
(B) 11
(C) 7
(D) -7
(E) -11

GO ON TO THE NEXT PAGE

15. If x is divisible by 3 and y is divisible by 5, which of the following must be divisible by 15 ?

   I. xy
  II. $3x + 5y$
 III. $5x + 3y$

(A) I only
(B) III only
(C) I and II only
(D) I and III only
(E) I, II, and III
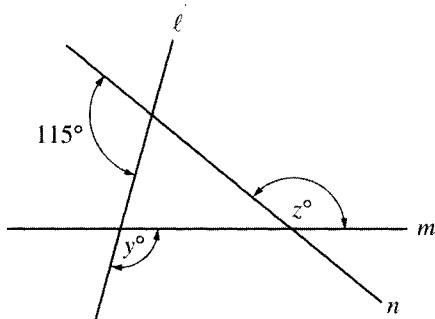
16. In the figure above, $y + z =$

(A) 180
(B) 195
(C) 215
(D) 230
(E) 245

The sum of three consecutive odd integers is 111.

17. If n represents the least of the three integers, which of the following equations represents the statement above?

(A) $3n = 111$
(B) $3n + 2 = 111$
(C) $3n + 4 = 111$
(D) $3n + 6 = 111$
(E) $3n + 9 = 111$
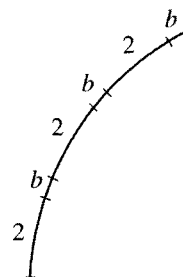
18. The figure above shows part of a circle whose circumference is 45. If arcs of length 2 and length b continue to alternate around the entire circle so that there are 18 arcs of each length, what is the <u>degree</u> measure of each of the arcs of length b ?

(A) 4°
(B) 6°
(C) 10°
(D) 16°
(E) 20°
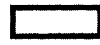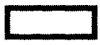
19. The cost of maintenance on an automobile increases each year by 10 percent, and Andrew paid $300 this year for maintenance on his automobile. If the cost c for maintenance on Andrew's automobile n years from now is given by the function $c(n) = 300x^n$, what is the value of x ?

(A) 0.1
(B) 0.3
(C) 1.1
(D) 1.3
(E) 30
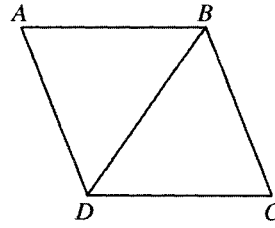
Note: Figure not drawn to scale.

20. If the five line segments in the figure above are all congruent, what is the ratio of the length of $\overline{AC}$ (not shown) to the length of $\overline{BD}$?

(A) $\sqrt{2}$ to 1
(B) $\sqrt{3}$ to 1
(C) $\sqrt{2}$ to 2
(D) $\sqrt{3}$ to 2
(E) $\sqrt{3}$ to $\sqrt{2}$

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 6
Time — 25 minutes
24 Questions

Turn to Section 6 (page 6) of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

Example:

Hoping to ------- the dispute, negotiators proposed a compromise that they felt would be ------- to both labor and management.

(A) enforce . . useful
(B) end . . divisive
(C) overcome . . unattractive
(D) extend . . satisfactory
(E) resolve . . acceptable   Ⓐ Ⓑ Ⓒ Ⓓ ●

1. May Sarton had a ------- career: it ------- from 1929, when *Poetry* magazine published her early sonnets, to 1994, when her last collection of poems came out.

    (A) limited . . developed
    (B) diverse . . foundered
    (C) variable . . declined
    (D) lengthy . . lasted
    (E) sedate . . soared

2. Recent data recording a bottlenose whale's phenomenal dive of over 4,700 feet ------- earlier ------- that such whales were among the sea's deepest divers.

    (A) refuted . . theories
    (B) challenged . . predictions
    (C) confirmed . . speculations
    (D) validated . . disclaimers
    (E) substantiated . . doubts

3. The residents of the town lived ------- lives; no one indulged in wild or ------- behavior.

    (A) rambunctious . . indecent
    (B) extravagant . . excessive
    (C) secluded . . scrupulous
    (D) circumscribed . . impulsive
    (E) irreverent . . animated

4. The study's warning that monkey populations were declining in Guatemala and Mexico was ------- by new evidence that nearby populations along the Belize River were -------.

    (A) corroborated . . prospering
    (B) confirmed . . extant
    (C) belied . . dwindling
    (D) diminished . . debilitated
    (E) tempered . . thriving

5. The staff complained that management was -------, focusing on short-term profits while disregarding the long-term welfare of the corporation.

    (A) irresolute   (B) officious   (C) rancorous
        (D) punctilious   (E) myopic

Each passage below is followed by questions based on its content. Answer the questions on the basis of what is <u>stated</u> or <u>implied</u> in each passage and in any introductory material that may be provided.

Questions 6-7 are based on the following passage.

Among the side benefits of the museum's exhibition of early photographs of Egypt is that it can inspire you to read the travel classic *Flaubert in Egypt*. Looking at
Line the photographs from the 1850's after reading the book,
5 you should be able to conjure up the French author just outside the picture frame. There is Flaubert in his long white shirt, his shaved head topped by a red tarboosh, settled into the cool shade of an ancient temple, reading poetry, and seeming oh-so-exquisitely bored.

6. In context, "conjure up" (line 5) most nearly means

(A) convene
(B) portray
(C) imagine
(D) entreat
(E) recollect

7. The characterization of Flaubert in the last sentence chiefly serves to suggest that

(A) Flaubert had an affected manner
(B) Egypt inspired Flaubert to write
(C) Flaubert found the Egyptian climate oppressive
(D) Flaubert was timid about posing for photographs
(E) Egypt's culture was of great interest to Flaubert

Questions 8-9 are based on the following passage.

By breaking down the graphic or pictorial vocabulary to a bare minimum, maps achieve a visual minimalism that, physiologically speaking, is easy on the eyes. They turn
Line numbers into visual images, create pattern out of measure-
5 ments, and thus engage the highly evolved human capacity for pattern recognition. Some of the most intense research in the neurosciences today is devoted to elucidating what are described as maps of perception: how perception filters and maps the relentless torrent of information provided by
10 the sense organs, our biotic instruments of measurement. Maps *enable* humans to use inherent biological skills of perception, their "educated" eyes, to separate the message from the static, to see the story line running through random pattern.

8. The effect of the "breaking down" (line 1) is to

(A) accentuate selected information
(B) make details small
(C) create momentary confusion
(D) minimize the distinction between words and numbers
(E) eliminate words that would clarify the meaning of images

9. In line 8, the phrase "maps of perception" refers to

(A) drawings of the organs of human perception
(B) depictions of how the world actually appears to the human eye
(C) models of the way humans process what they encounter
(D) illustrations of how the human eye functions at the cellular level
(E) representations of a place from one person's perspective

Questions 10-16 are based on the following passage.

The passage below was adapted from a 1998 book on the history of Black women in the United States written by two scholars of African American culture.

We both knew that the story of Black women was a remarkable one. We also knew that a great many people, over the centuries and even over the last few decades,
Line have not wanted it told. Some have dismissed it, saying
5 it wasn't worth telling. Others have actively suppressed it, afraid of what it would reveal. Still others have tried to deny that there was any story particular to Black women. They have insisted that, after you've told the story of African Americans and the story of women, you're finished. Black
10 women are included in those narratives.
But no matter what anyone may say to the contrary, Black women are different. They're different from Black men and they're different from White women. It is true that much of what they have experienced derives from
15 racism and much from sexism. At the same time, however, much of what Black women have experienced and still experience today—bad and good—involves the blending of their separate identities in a way that chemists would call a combination, not just a mixture. Both race and gender
20 are transformed when they are present together, and class is often present as a catalyst.
Unfortunately, both Black men and White feminists have sometimes seen this separate identity as threatening. Many members of both groups want to put their arms
25 metaphorically around the Black woman's shoulder and say, "She's with us." Black women are sought after by Black historians and White feminist historians, by Black political leaders and by White feminist political leaders. But their inclusion is provisionary. They will be valued
30 for their difference so long as they do not mention it too often. It just makes people feel nervous and guilty.
This is a sad situation for everyone, and it is an unnec- essary one. Unity and loyalty do not depend on absolute homogeneity. Maybe it's the American obsession with
35 race that makes it so difficult for us as a nation to get rid of our fear that difference implies, even guarantees, animosity and opposition. But denial of difference is not the road to harmony. It is the road only to a kind of false unity that is so fragile it will splinter at a touch.
40 In a landmark article, "What Has Happened Here," Elsa Barkley Brown compares history to the Louisiana conversational style "gumbo ya ya," in which everyone talks at once and all the stories told interrelate and play off each other. "History," says Barkley Brown, "also is
45 everybody talking at once, multiple rhythms being played simultaneously. The events and people we write about did not occur in isolation but in dialogue with a myriad of other people and events. In fact, at any given moment millions of people are all talking at once." Listening to
50 all those voices at once can be confusing, but silencing

any of them puts in danger the very meaning of the his- torical pursuit. We were sure it was time for the voice of Black women to be heard loud and clear.

10. The purpose of lines 4-10 ("Some . . . narratives") is to

    (A) defend diverse perspectives on race and gender
    (B) discredit the views of a particular group
    (C) introduce a topic of interest to most historians
    (D) present a sample of views held by Black women
    (E) note the different kinds of resistance to a historical topic

11. The sentence in lines 11-12 ("But . . . different") is best described as

    (A) an assertion
    (B) an apology
    (C) a decision
    (D) a concession
    (E) a criticism

12. The chemistry metaphor in lines 15-21 ("At . . . catalyst") is used to

    (A) characterize the challenges faced by some groups of people
    (B) illustrate the connection between scientific and historical studies of race, class and gender
    (C) identify the agents for change in a particular social transition
    (D) suggest the way certain influences interact to produce a unique perspective
    (E) show the similarities between racism and sexism

13. The author suggests that the figurative gesture described in lines 24-26 ("Many . . . us") is one of

    (A) misguided affection
    (B) calculated self-interest
    (C) genuine empathy
    (D) uncommon courage
    (E) overt arrogance

14. The author suggests that the explanation for the "sad situation" (line 32) is the

(A) resistance that most people exhibit toward political change
(B) fear that most people feel about being held up as role models
(C) differing ways in which men and women behave in positions of power
(D) concern that focusing on differences will lead to disharmony
(E) high value that many people place on nonconformity

15. The tone of lines 37-39 ("But . . . touch") is best described as

(A) confiding
(B) defiant
(C) skeptical
(D) resigned
(E) admonishing

16. Elsa Barkley Brown's article, described in the last paragraph, emphasizes

(A) multiplicity and inclusion
(B) privacy and mutual respect
(C) self-reliance and individuality
(D) intellectual curiosity
(E) cooperative invention

Questions 17-24 are based on the following passage.

*This passage is taken from the beginning of a short story
by a nineteenth-century Russian writer.*

In the department of . . . but I had better not mention
in what department. There is nothing in the world more
readily moved to wrath than a department, a government
Line office, in fact any sort of official body. And so, to avoid
5 any unpleasantness . . .

In a certain department there was a government clerk,
of whom it cannot be said that he was very remarkable;
he was short, somewhat pockmarked, with dim, bleary
eyes and a small bald patch on the top of his head. As
10 for his grade in the service (for among us the grade is
what must be put first), he was what is called a perpet-
ual titular councillor, a class at which, as we all know,
various writers who indulge in the habit of attacking
those who cannot defend themselves jeer and jibe to
15 their heart's content.

His name was Akaky Akakyevitch. No one has been
able to remember when and how long ago he entered the
department. However many directors and high officials
of all sorts came and went, he was always seen in the
20 same place, at the very same duty, so that they used to
declare that he must have been born a perpetual titular
councillor in uniform all complete and with a bald patch
on his head. The porters, far from getting up from their
seats when he came in, took no more notice of him than
25 if a simple fly had flown across the vestibule. His superiors
treated him with a sort of domineering chilliness. The head
clerk's assistant used to throw papers under his nose with-
out even saying "Copy this" or "Here is an interesting, nice
little case," as is usually done in well-behaved offices. And
30 he would take it, gazing only at the papers without looking
to see who had put them there and whether he had the right
to do so; he would take the papers and at once set to work
to copy them. The young clerks made jokes about him to
the best of their clerkly wit, and told before his face all
35 sorts of stories of their own invention about him. They
would enquire when the wedding was to take place,
or would scatter bits of paper on his head, calling them
snow. In the midst of all this teasing, Akaky Akakyevitch
never answered a word, but behaved as though there were
40 no one there. Only when they jolted his arm and prevented
him from going on with his work would he cry out, "Leave
me alone! Why do you insult me?" There was something
strange in the words and in the voice in which they were
uttered, so that one young clerk, new to the office, was
45 cut to the heart, and in those words thought that he heard
others: "I am your brother."

It would be hard to find a man who loved his work as
did Akaky Akakyevitch. In that copying, he found a varied
and agreeable world of his own. If rewards had been given
50 according to the measure of zeal in the service, he might to
his amazement have even found himself a civil councillor;

but all he gained in the service, as the wits, his fellow
clerks expressed it, was a buckle in his belly button and a
pain in his back. It cannot be said, however, that no notice
55 had ever been taken of him. One director, being a good-
natured man and anxious to reward him for his long
service, sent him something a little more important than
his ordinary copying; he was instructed from a finished
document to make some sort of report for another office;
60 the work consisted only of altering the headings and in
places changing the first person into the third. This cost
Akaky Akakyevitch such an effort that it threw him into
a regular perspiration: he mopped his brow and said at
last, "No, better let me copy something." From that time
65 forth they left him to go on copying forever.

17. The word "unpleasantness" (line 5) most likely
refers to

(A) possible consequences resulting from the strong
language the author uses when angered
(B) repercussions that might result from identifying
Akaky's department
(C) arguments that inevitably occur between different
government offices
(D) increased teasing to which Akaky would be sub-
jected by his fellow workers
(E) discomfort that this story might cause for many
Russian citizens

18. The reference to how Akaky "must have been born"
(line 21) indicates that he

(A) could not escape his basic nature even though
he tried to do so continually
(B) would have been viewed differently by others
if not for his uniform
(C) could not be imagined any way other than how he
appeared at the department each day
(D) had not been working long in the department
(E) was older than he appeared to be

19. The "simple fly" (line 25) is used primarily
as an image of something that is

(A) annoying
(B) uncomplicated
(C) fast-moving
(D) easily overlooked
(E) potentially harmful

20. The two quotations in lines 28-29 serve as examples of

(A) typical civilities
(B) superficial compliments
(C) unreasonable demands
(D) unappreciated small talk
(E) unnecessary explanations

21. In line 35, "invention" most nearly means

(A) creative experiment
(B) new device
(C) fabrication
(D) discovery
(E) adeptness

22. The narrator's attitude toward the young clerks in Akaky's office is primarily one of

(A) disapproval of their cruelty
(B) annoyance with their disrespect for supervisors
(C) dissatisfaction with their laziness
(D) mock sympathy for their lack of challenge
(E) amusement over their antics

23. The clerk who is "new to the office" (line 44) responds to Akaky's words with

(A) confusion
(B) sarcasm
(C) disbelief
(D) fear
(E) compassion

24. It can be inferred from the incident described in lines 55-65 that

(A) the director was not really trying to reward Akaky for his hard work
(B) the director understood Akaky better than anyone else in the office did
(C) Akaky was not really a hard worker
(D) Akaky wanted a promotion very much
(E) Akaky feared increased responsibility

S T O P

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 8
Time — 20 minutes
16 Questions

Turn to Section 8 (page 7) of your answer sheet to answer the questions in this section.

Directions: For this section, solve each problem and decide which is the best of the choices given. Fill in the corresponding circle on the answer sheet. You may use any available space for scratchwork.
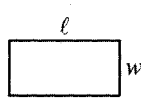
Notes

1. The use of a calculator is permitted.
2. All numbers used are real numbers.
3. Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that the figure is not drawn to scale. All figures lie in a plane unless otherwise indicated.
4. Unless otherwise specified, the domain of any function f is assumed to be the set of all real numbers x for which $f(x)$ is a real number.

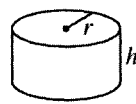**Reference Information**

$A = \pi r^2$
$C = 2\pi r$

$A = \ell w$
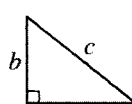
$A = \frac{1}{2}bh$
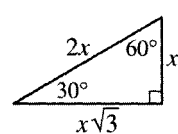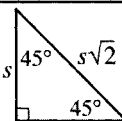
$V = \ell wh$

$V = \pi r^2 h$

$c^2 = a^2 + b^2$

Special Right Triangles

The number of degrees of arc in a circle is 360.
The sum of the measures in degrees of the angles of a triangle is 180.
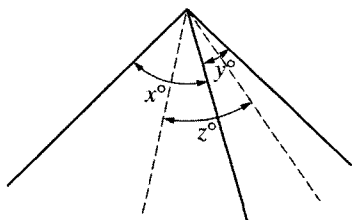
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1. If $6{,}700 = 100(6k + 7)$, then $k =$

   (A) $\dfrac{1}{10}$

   (B) 1

   (C) 10

   (D) 100

   (E) $1{,}000$

2. If 3 more than n is a negative number and if 5 more than n is a positive number, which of the following could be the value of n ?

   (A) -5
   (B) -4
   (C) -3
   (D) 0
   (E) 4

GO ON TO THE NEXT PAGE

Note: Figure not drawn to scale.

3. In the figure above, if $x = 70$ and $y = 40$ and the dotted lines bisect the angles with measures $x°$ and $y°$, what is the value of z ?

(A) 30
(B) 40
(C) 45
(D) 50
(E) 55

4. A piece of fruit is to be chosen at random from a basket of fruit. The probability that the piece of fruit chosen will be an apple is $\frac{2}{5}$. Which of the following could NOT be the number of pieces of fruit in the basket?

(A) 20
(B) 35
(C) 52
(D) 70
(E) 80

5. A square and an equilateral triangle have equal perimeters. If the square has sides of length 3, what is the length of one side of the triangle?

(A) 2
(B) 3
(C) 4
(D) 5
(E) 6

6. If $x = -1$ and $k > 0$, which of the following has the greatest value?

(A) $2kx$
(B) $4kx^2$
(C) $6kx^3$
(D) $8kx^4$
(E) $10kx^5$

7. Josephine's daily exercise routine consists of swimming, cycling, and running, in that order. She runs faster than she swims and cycles faster than she runs. If she does not rest between the activities, which of the following could be the graph of the distance she covers during the entire time of her exercise routine?
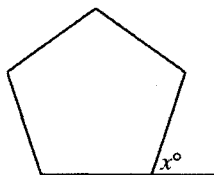
(A)

(B)

(C)

(D)

(E)
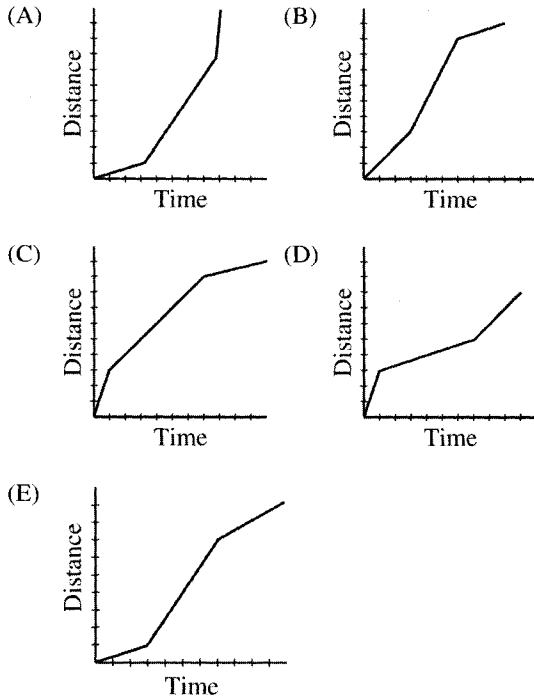
8. In the xy-coordinate system, $\left(\sqrt{6}, k\right)$ is one of the points of intersection of the graphs $y = x^2 - 7$ and $y = -x^2 + j$, where j is a constant. What is the value of j ?

(A) 5
(B) 4
(C) 3
(D) 2
(E) 1

9. If $|2 - x| < 3$, which of the following is a possible value of x ?

(A) 4
(B) 5
(C) 6
(D) 7
(E) 8

GO ON TO THE NEXT PAGE

10. If all interior angles of the polygon above are congruent, then $x =$

(A) 60
(B) 65
(C) 72
(D) 80
(E) 84

11. The length of a drawing of a tool is $\frac{3}{8}$ of the length of the actual tool. If the length of the drawing of the tool is 6 inches, what is the length, in inches, of the actual tool?

(A) $2\frac{1}{4}$

(B) $8\frac{1}{4}$

(C) 16

(D) $18\frac{1}{4}$
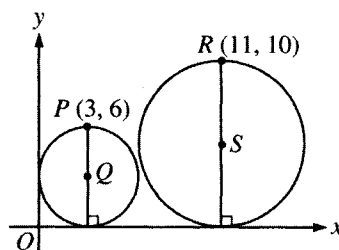
(E) 22

12. If $\frac{x + 3}{2}$ is an integer, then x must be

(A) a negative integer
(B) a positive integer
(C) a multiple of 3
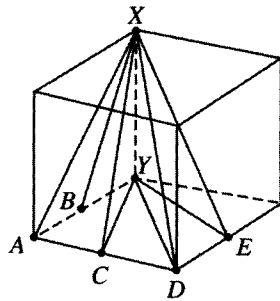(D) an even integer
(E) an odd integer

13. In the xy-plane above, points Q and S are the centers of the circles, which are tangent to the x-axis. What is the slope of line QS (not shown)?

(A) $\frac{1}{8}$

(B) $\frac{1}{4}$

(C) $\frac{1}{2}$

(D) $\frac{7}{8}$

(E) 1

GO ON TO THE NEXT PAGE

14. If n and p are integers greater than 1 and if p is a factor of both $n + 3$ and $n + 10$, what is the value of p ?

(A)   3
(B)   7
(C)   10
(D)   13
(E)   30

16. If $xy = 7$ and $x - y = 5$, then $x^2 y - xy^2 =$

(A)   2
(B)   12
(C)   24
(D)   35
(E)   70

15. In the cube shown above, points B, C, and E are midpoints of three of the edges. Which of the following angles has the least measure?

(A) $\angle XAY$
(B) $\angle XBY$
(C) $\angle XCY$
(D) $\angle XDY$
(E) $\angle XEY$

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 9
Time — 20 minutes
19 Questions

Turn to Section 9 (page 7) of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five words or sets of words labeled A through E. Choose the word or set of words that, when inserted in the sentence, best fits the meaning of the sentence as a whole.

Example:

Hoping to ------- the dispute, negotiators proposed a compromise that they felt would be ------- to both labor and management.

(A) enforce . . useful
(B) end . . divisive
(C) overcome . . unattractive
(D) extend . . satisfactory
(E) resolve . . acceptable   Ⓐ Ⓑ Ⓒ Ⓓ ●

1. Efforts are finally being made to ------- the traffic congestion that plagues the downtown area.

   (A) engage   (B) alleviate   (C) transport
   (D) regenerate   (E) trivialize

2. Though outwardly -------, the speaker was actually quite disturbed by the tumultuous crowd.

   (A) apprehensive   (B) agitated   (C) furious
   (D) serene   (E) considerate

3. K'ang-hsi, emperor of China from 1661 to 1722, expressed his private thoughts with a ------- rarely found in the usually ------- rulers of great empires.

   (A) peacefulness . . placid
   (B) forthrightness . . reserved
   (C) fairness . . dilatory
   (D) meticulousness . . accessible
   (E) peevishness . . irritable

4. Farming had been profitable on the Great Plains for many decades, but by 1938 ------- agricultural practices and years of inadequate precipitation had ------- the land.

   (A) conscientious . . despoiled
   (B) incompetent . . sustained
   (C) shrewd . . debilitated
   (D) innovative . . fertilized
   (E) imprudent . . denuded

5. Cathedrals usually take decades, even centuries, to complete; thus, no one expected the National Cathedral to be built with -------.

   (A) dispatch   (B) presumption   (C) durability
   (D) deliberation   (E) reverence

6. New York designer Anna Sui creates eclectic clothes that represent an ------- of playful, 1970's funky styles fused with an edgy, urban sensibility.

   (A) induction   (B) amalgam   (C) immersion
   (D) occlusion   (E) estrangement

GO ON TO THE NEXT PAGE

The two passages below are followed by questions based on their content and on the relationship between the two passages. Answer the questions on the basis of what is <u>stated</u> or <u>implied</u> in the passages and in any introductory material that may be provided.

Questions 7-19 are based on the following passages.

The following passages discuss the controversy that surrounded Napster, a service that allowed users to download recordings of music from the Internet at no cost. Both passages were written in 2000 by former songwriters.

Passage 1

In 1950, when I was seventeen, Jerry Lieber and I had our first song recorded. Over the next 50 years, Jerry and I composed many now-familiar songs, like "Hound Dog,"
Line "Jailhouse Rock," and "Love Potion No. 9," in many
5 different musical styles, from rhythm and blues to jazz and rock. Our songs were recorded by many great artists, including Ray Charles, Elvis Presley, the Beatles, the Rolling Stones, Peggy Lee, Jimi Hendrix, and the Coasters. But whatever the style and whoever the artist, there has
10 been one constant: the songs that I have written have been my bread and butter. Writing a song—the music and the lyrics—can take anywhere from ten minutes (as in the case of "Hound Dog") to five years. But no matter how long it takes, it is always a gamble. A songwriter makes
15 nothing until a song is marketed in the form of a recording for sale to the public, and unless that record of the song sells, a songwriter gets nothing for it. Each time a Napster user downloads a copy of a song that I have composed, I am deprived of the royalty that my work should have
20 earned me.

Some say that making music available free of charge on the Web "frees" artists from the control of the recording industry. Many say that since making music is an art, artists like me should do it simply for the love of it. But how free
25 can artists be to do what we love if we must spend most of our days doing something else to make a living? Where would I be today if anyone could have recorded "Hound Dog," and anyone else could have copied that recording, without paying Jerry Lieber and me? I might have occa-
30 sionally written some music for fun, but I would not have had the luxury to compose full time. Who knows what songs I might not have written? I fear for the seventeen-year-old songwriter looking forward to a career in the music business today. Napster and companies like it are
35 threatening not only my retirement, but the future of music itself. In fact, by taking the incentive out of songwriting, Napster may be pushing us closer to a time when there won't be any songs left to swap.

Passage 2

In the absence of laws that turn thoughts into things,
40 how will we be assured payment for the work we do with our minds? Must the creatively talented start looking for day jobs?

Nope. Most white-collar jobs already consist of mind work. The vast majority of us live by our wits now,
45 producing "verbs"—that is, ideas—rather than "nouns" like automobiles or toasters. Doctors, architects, executives, consultants, receptionists, and lawyers all manage to survive economically without "owning" their cognition. I take further comfort in the fact that the human species
50 managed to produce pretty decent creative work during the 5,000 years that preceded 1710, when the Statute of Anne, the world's first modern copyright law, passed the British parliament. Sophocles, Dante, da Vinci, Botticelli, Michelangelo, Shakespeare, Newton, Cervantes, Bach—
55 all found reasons to get out of bed in the morning without expecting to own the works they created.

The Grateful Dead, for whom I once wrote songs, learned by accident that if we let fans tape concerts and freely reproduce those tapes—"stealing" our intellectual
60 "property" just like those heinous Napsterians—the tapes would become a marketing virus that would spawn enough Deadheads to fill any stadium in America. Even though Deadheads had free recordings that were often more entertaining than the band's commercial albums, fans still went
65 out and bought records in such quantity that most of them went platinum.

Despite the ubiquity of VCR's, more people go to the movies than ever, and videocassette rentals and sales account for more than half of Hollywood's revenues. The
70 recording industry is unalterably convinced that the easy availability of freely downloadable commercial songs will bring about the apocalypse, and yet since downloadable music began flooding the Net, CD sales have risen by 20 percent. Finally, after giving up copy protection, the
75 software industry expected that widespread piracy would surely occur. And it did. Even so, the software industry is booming. Why? Because the more a program is pirated, the more likely it is to become a standard.

All these examples point to the same conclusion:
80 noncommercial distribution of information increases the sale of commercial information. This is precisely contrary to what happens in a physical economy. When you're selling nouns, there is an undeniable relationship between scarcity and value. But in an economy of verbs, the inverse
85 applies. There is a relationship between familiarity and value. For ideas, fame is fortune. And nothing makes you famous faster than an audience willing to distribute your work for free.

7. The "great artists" (line 6) in Passage 1 and "The Grateful Dead" (line 57) in Passage 2 both serve to illustrate the two authors'

(A) broad ranges of musical taste
(B) appreciation of musical talent
(C) understanding of songs that appeal to young people
(D) ironic views of what constitutes "quality" in popular music
(E) direct experience with professional songwriting

8. The authors of both passages would most likely agree that

(A) VCR's have increased the public's interest in movies
(B) few people today are able to make a living solely through music
(C) companies such as Napster will ultimately harm the music industry
(D) commercial music sales are necessary to sustain a professional songwriter
(E) artists should free themselves from the demands of the marketplace

9. The "gamble" (line 14) represents a risk that is primarily

(A) financial
(B) artistic
(C) legal
(D) technological
(E) psychological

10. The author of Passage 2 would probably contend that the claim made in lines 17-20 ("Each time . . . me") of Passage 1 is primarily

(A) shortsighted, since downloading free music will ultimately increase an artist's commercial sales
(B) cynical, since most people do believe that artists should be compensated for their efforts
(C) unreasonable, since people cannot be forced to buy music they do not find appealing
(D) discouraging, since downloading drives a wedge between technological innovation and artistic creation
(E) patronizing, because it assumes that people do not understand the function of the Internet

11. The author of Passage 1 presents an argument in lines 24-26 ("But how . . . living?") that can most accurately be called

(A) historical
(B) political
(C) pragmatic
(D) idealistic
(E) facetious

12. Which best summarizes the "fear" (line 32) of the author of Passage 1 ?

(A) Young songwriters will become less devoted to mastering their craft than were songwriters of the past.
(B) Adolescent songwriters will become less popular than they have been in the past.
(C) The increasing demand for music will cause the royalties paid for individual songs to decline.
(D) Young songwriters will no longer be able to earn their living by writing songs.
(E) Technological innovations will one day render music as we now know it obsolete.

13. The primary purpose of Passage 1 is to

(A) challenge a traditional ethical stance
(B) describe a complex technological process
(C) examine an adolescent impulse
(D) urge a radical course of action
(E) argue against a particular practice

14. The quotation marks used in line 22 of Passage 1 and lines 59-60 of Passage 2 both serve to

(A) highlight unique musical theories
(B) acknowledge respected authorities
(C) mock the practices of the music industry
(D) express skepticism about the aptness of particular terms
(E) define unusual phrases for an audience of nonspecialists

15. The use of the phrase "pretty decent" in Passage 2 (line 50) conveys

(A) solemn detachment
(B) cheerful celebration
(C) ironic understatement
(D) lingering doubt
(E) reluctant approval

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16. The tone of the author of Passage 2 in lines 59-60 ("stealing . . . Napsterians") is best described as

    (A) ebullient
    (B) somber
    (C) quizzical
    (D) irate
    (E) satirical

17. The attitude of the author of Passage 2 toward the "marketing virus" (line 61) is largely

    (A) positive, because it helped make the Grateful Dead more popular
    (B) positive, because it made the Grateful Dead's worldview more sophisticated
    (C) neutral, because it had little ultimate effect on music critics' views of the Grateful Dead
    (D) negative, because it caused the Grateful Dead to focus on monetary gain rather than on artistic integrity
    (E) negative, because it created too many fans who could not fully appreciate the Grateful Dead's musical innovations

18. The author of Passage 2 discusses VCR's and software in lines 67-77 ("Despite the . . . booming") primarily to

    (A) illustrate the vast influence of technology in contemporary life
    (B) cite the experiences of other industries to bolster his primary argument about music
    (C) offer a personal experience that supports his economic analysis
    (D) discourage readers from purchasing CD's and commercial software
    (E) show the wide scope of the entertainment industry today

19. What might the author of Passage 2 claim would result from the hypothetical situation posed by the author of Passage 1 in lines 26-29 ("Where would . . . me?") ?

    (A) Artistic freedom
    (B) Musical elitism
    (C) Increased renown
    (D) Financial injury
    (E) Technical knowledge

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

SECTION 10
Time — 10 minutes
14 Questions

Turn to Section 10 (page 7) of your answer sheet to answer the questions in this section.

Directions: For each question in this section, select the best answer from among the choices given and fill in the corresponding circle on the answer sheet.

The following sentences test correctness and effectiveness of expression. Part of each sentence or the entire sentence is underlined; beneath each sentence are five ways of phrasing the underlined material. Choice A repeats the original phrasing; the other four choices are different. If you think the original phrasing produces a better sentence than any of the alternatives, select choice A; if not, select one of the other choices.

In making your selection, follow the requirements of standard written English; that is, pay attention to grammar, choice of words, sentence construction, and punctuation. Your selection should result in the most effective sentence—clear and precise, without awkwardness or ambiguity.

EXAMPLE:

Laura Ingalls Wilder published her first book
and she was sixty-five years old then.

(A) and she was sixty-five years old then
(B) when she was sixty-five
(C) at age sixty-five years old
(D) upon the reaching of sixty-five years
(E) at the time when she was sixty-five

Ⓐ ● Ⓒ Ⓓ Ⓔ

1. Solar energy, for which there are many potential uses, can be <u>beneficial so that it</u> will produce energy without generating pollution.

(A) beneficial so that it
(B) beneficial because it
(C) beneficial, although it
(D) beneficial in order that it
(E) beneficial because they

2. In her letter, Ms. Kopel <u>stated that she had</u> proof that the treasurer had stolen some of the money.

(A) stated that she had
(B) stated about having
(C) made a statement of having
(D) gave a statement that she had
(E) had a statement there about having

3. As economic conditions improve, the officers of the company <u>maintaining that it will be able to improve sales by</u> increasing exports to other countries.

(A) maintaining that it will be able to improve sales by
(B) maintaining that it, able by improving sales and
(C) maintain that it will improve sales and
(D) maintain that it will be able to improve sales by
(E) maintains that improving sales by

4. <u>For the most part, in the actions of how an animal behaves, instinct is the main determinant.</u>

(A) For the most part, in the actions of how an animal behaves, instinct is the main determinant.
(B) Generally, an animal's behavior and actions are mostly instinctual ones.
(C) An animal's actions, as to behavior, are by and large instinctively determined.
(D) An animal's actions are largely determined by instinct.
(E) Animals mainly have their instinct as a determinant for behavior.

5. Today more and more women are becoming doctors, lawyers, engineers, chemists, <u>or other professions</u>.

(A) or other professions
(B) or they work in other professions
(C) or at work in other professional fields
(D) or professionals in other fields
(E) or in other professional fields

6. Beginning photographers may choose from among several camera types, <u>there is one which is</u> best for their particular interests.

(A) there is one which is
(B) of which there is one
(C) one of which is
(D) and one is
(E) one is

7. In the belief that crossword puzzles stimulated her mind, <u>Dolores will spend hours on them every week</u>.

(A) Dolores will spend hours on them every week
(B) Dolores would spend hours on them every week
(C) hours of every week are spent on them by Dolores
(D) they occupied hours of every week for Dolores
(E) every week will find Dolores spending hours on them

8. <u>Enzymes are among the oldest known chemical compounds, as they actually are nonliving protein molecules.</u>

(A) Enzymes are among the oldest known chemical compounds, as they actually are nonliving protein molecules.
(B) Among the oldest known chemical compounds, the nonliving protein molecules are actually called enzymes.
(C) Enzymes, among the oldest known chemical compounds, actually are nonliving protein molecules.
(D) Enzymes actually are nonliving protein molecules, being among the oldest known chemical compounds.
(E) Actually, enzymes being nonliving protein molecules, they are among the oldest known chemical compounds.

9. When someone shops by mail or through the Internet, <u>you will be following</u> a tradition begun by the American colonists, who purchased almost everything from Europe.

(A) you will be following
(B) it is following
(C) you will follow
(D) he or she follows
(E) it follows

10. Brought to the United States at the age of thirteen to receive a Western education, <u>his first book discusses Lee Yan Phou's childhood in China</u>.

(A) his first book discusses Lee Yan Phou's childhood in China
(B) Lee Yan Phou's childhood in China is the subject of his first book
(C) the subject of his first book is Lee Yan Phou's childhood in China
(D) Lee Yan Phou discusses his childhood in China in his first book
(E) Lee Yan Phou, whose childhood was in China, discusses this in his first book

11. Mayor Julia Wilson's daughter told us that <u>she had decided not to run for reelection</u>, even though there is still much to do to improve the downtown district.

(A) she had decided not to run for reelection
(B) the decision was that her mother would not run to be reelected
(C) her mother had decided not to run for reelection
(D) she decided that she will not run to be reelected
(E) it was decided about her not running for reelection

12. <u>Although the superintendent has begun to increase the maintenance staff in the schools,</u> she is still being deluged with calls of complaint.

(A) Although the superintendent has begun to increase the maintenance staff in the schools
(B) Although beginning to increase, as superintendent, the maintenance staff in the schools
(C) The superintendent, beginning to increase the maintenance staff in the schools
(D) The superintendent has begun to increase the maintenance staff in the schools, and
(E) The superintendent, beginning to increase the maintenance staff in the schools, however

13. When we read, we first form innumerable <u>impressions</u> <u>and then those impressions are evaluated</u> as we read on.

   (A) impressions and then those impressions are evaluated
   (B) impressions and then evaluate those impressions
   (C) impressions, evaluating those impressions then
   (D) impressions, then we evaluate those impressions
   (E) impressions, we evaluate those impressions then

14. <u>The eerie songs of humpback whales, often lower in</u> <u>pitch and longer than birds,</u> are intriguing to scientists partly because whales have no functional vocal cords.

   (A) The eerie songs of humpback whales, often lower in pitch and longer than birds,
   (B) The eerie songs of humpback whales, which are often lower in pitch and last longer than birds,
   (C) Humpback whales' eerie songs, often pitched lower and longer than that of birds,
   (D) The eerie songs of humpback whales, often lower in pitch and lasting longer than those of birds,
   (E) Often being lower in pitch and lasting longer than birds, the eerie songs of humpback whales

S T O P
If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.