

READING TEST

35 Minutes—40 Questions

DIRECTIONS: There are four passages in this test. Each passage is followed by several questions. After reading a passage, choose the best answer to each question and fill in the corresponding oval on your answer document. You may refer to the passages as often as necessary.

Passage I

PROSE FICTION: This passage is adapted from Paule Marshall's short story "Reena" (©1983 by The Feminist Press).

We met—Reena and myself—at the funeral of her aunt who had been my godmother and whom I had also called aunt, Aunt Vi, and loved, for she and her house had been, respectively, a source of understanding and a place of calm for me as a child. Reena entered the church where the funeral service was being held as though she, not the minister, were coming to officiate, sat down among the immediate family up front, and turned to inspect those behind her. I saw her face then.

10 It was a good copy of the original. The familiar mold was there, that is, and the configuration of bone beneath the skin was the same despite the slight fleshiness I had never seen there before, her features had even retained their distinctive touches: the positive set to her mouth, the assertive lift to her nose, the same insistent, unsettling eyes which when she was angry became as black as her skin—and this was total, unnerving, and very beautiful. Yet something had happened to her face. It was different despite its sameness. 20 Aging even while it remained enviably young. Time had sketched in, very lightly, the evidence of the twenty years.

Her real name had been Doreen, a standard for girls among West Indians (her mother, like my parents, was from Barbados), but she had changed it to Reena on her twelfth birthday—"As a present to myself"—and had enforced the change on her family by refusing to answer to the old name. "Reena. With two e's!" she would say and imprint those e's on your mind with the indelible black of her eyes and a thin threatening finger that was like a quill.

She and I had not been friends through our own choice. Rather, our mothers, who had known each other since childhood, had forced the relationship. And from the beginning, I had been at a disadvantage. For Reena, as early as the age of twelve, had had a quality that was unique, superior, and therefore dangerous. She seemed defined, even then, all of a piece, the raw edges of her adolescence smoothed over; indeed, she seemed to have escaped adolescence altogether and made one dazzling leap from childhood into the very arena of adult life.

At thirteen, for instance, she was reading Zola, Hauptmann, Steinbeck, while I was still in the thrall of the Little Minister and Lorna Doone. When I could only barely conceive of the world beyond Brooklyn, she was talking of the Civil War in Spain, lynchings in the South, Hitler in Poland—and talking with the outrage and passion of a revolutionary. I would try, I remember, to console myself with the thought that she was really an adult masquerading as a child, which meant that I could not possibly be her match.

For her part, Reena put up with me and was, by turns, patronizing and impatient. I merely served as the audience before whom she rehearsed her ideas and the yardstick by which she measured her worldliness and knowledge.

"Do you realize that this stupid country supplied Japan with the scrap iron to make the weapons she's now using against it?" she had shouted at me once.

60 I had not known that.

Just as she overwhelmed me, she overwhelmed her family, with the result that despite a half dozen brothers and sisters who consumed quantities of bread and jam whenever they visited us, she behaved like an only child and got away with it. Her father, a gentle man with skin the color of dried tobacco and with the nose Reena had inherited jutting out like a crag from his nondescript face, had come from Georgia and was always making jokes about having married a foreigner—Reena's mother being from the West Indies. When not joking, he seemed slightly bewildered by his large family and so in awe of Reena that he avoided her. Reena's mother, a small, dry, formidably black woman, was less a person to me than the abstract principle of force, power, energy. She was alternately strict and indulgent with Reena and, despite the inconsistency, surprisingly effective.

- 1. Of the persons mentioned in the passage, which of the following had the greatest positive effect on the narrator as a child?
 - A. Reena's minister
 - B. Reena's father
 - C. Aunt Vi's godmother
 - D. Aunt Vi

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2. In order to ensure that her family would call her Reena, and not Doreen, Reena would:
- I. point at them threateningly.
 - II. start crying loudly.
 - III. shout and stamp her feet.
 - IV. stare meaningfully.
- F. I and II only
 - G. I and IV only
 - H. II and IV only
 - J. I, II, and IV only
3. It can reasonably be inferred from the passage that Reena's mother, as compared with Reena's father, was a:
- A. more strict and much funnier parent.
 - B. more retiring and less authoritative parent.
 - C. more forceful and effective parent.
 - D. less argumentative and more gentle parent.
4. Reena's talking about which of the following subjects intimidated the narrator?
- I. Hitler in Poland
 - II. The Civil War in Spain
 - III. The thrall of the Little Minister
- F. I only
 - G. II only
 - H. III only
 - J. I and II only
5. As it is described in the first paragraph, Reena's entrance into the church suggests that Reena is a woman who:
- A. is quite confident.
 - B. is used to officiating at funerals.
 - C. is deeply unhappy.
 - D. has changed remarkably.
6. Reena apparently had the sort of character that her father found it necessary to:
- F. discipline her severely.
 - G. keep her at a distance.
 - H. praise her constantly.
 - J. humor her endlessly.
7. The narrator's point of view is that of:
- A. a child.
 - B. an adolescent.
 - C. a psychologist.
 - D. an adult.
8. The statement that Reena had a half dozen brothers and sisters yet "behaved like an only child and got away with it" (lines 64-65) supports the narrator's feeling that Reena:
- F. was completely and utterly selfish.
 - G. had been her best friend for years.
 - H. did not like her brothers and sisters.
 - J. could overwhelm just about anyone.
9. According to the narrator, adolescence is a stage usually characterized by:
- A. raw edges.
 - B. abstract principles.
 - C. dazzling leaps.
 - D. impatient patronizing.
10. The fifth paragraph (lines 52-56) suggests that Reena's relationship with the narrator was primarily characterized by:
- F. Reena's patience with the narrator.
 - G. Reena's exploitation of the narrator.
 - H. the narrator's devotion to Reena.
 - J. the narrator's increasing worldliness.

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Passage II

SOCIAL SCIENCE: This passage is adapted from Jack Weatherford's *Indian Givers: How the Indians of America Transformed the World* (©1988 by Jack McIver Weatherford).

Egalitarian democracy and liberty as we know them today owe little to Europe. They are not Greco-Roman derivatives somehow revived by the French in the eighteenth century. They entered modern western thought as American Indian notions translated into European language and culture.

In language, custom, religion, and written law, the Spaniards descended directly from ancient Rome, yet they brought nothing resembling a democratic tradition with them to America. The French and Dutch who settled parts of North America also settled many other parts of the world that did not become democratic. Democracy did not spring up on French-speaking Haiti any more than in Southern Africa, where the British and Dutch settled about the same time that they settled in North America.

Even the Netherlands and Britain, the two showcases for European democracy, had difficulty grafting democracy onto monarchical and aristocratic systems soaked in the strong traditions of class privilege. During the reign of George III of Great Britain, while the United States was fighting for its independence, only one person in twenty could vote in England. And in Ireland no Catholic could hold office or vote. In their centuries of struggle to suppress the Irish, the British possibly encumbered their own democratic development.

American anglophiles occasionally point to the signing of the Magna Carta by King John on the battlefield of Runnymede in 1215 as the start of civil liberties and democracy in the English-speaking world. This document, however, merely moved slightly away from monarchy and toward oligarchy by increasing the power of the aristocracy. It continued the traditional European vacillation between government by a single strong ruler and by an oligarchic class. An oligarchy is not an incipient democracy, and a step away from monarchy does not necessarily mean a step toward democracy. In the same tradition, the election of the pope by a college of cardinals did not make the Vatican into a democratic institution, nor did the Holy Roman Empire become a democracy merely because a congress of aristocrats elected the emperor.

When the Dutch built colonies in America, power in their homeland rested securely in the hands of the aristocracy and the burghers, who composed only a quarter of the population. A city such as Amsterdam fell under the rule of a council of thirty-six men, none of whom was elected; instead each council member inherited his office and held it until death.

Henry Steele Commager wrote that during the Enlightenment "Europe was ruled by the wellborn, the rich, the privileged, by those who held their places by

divine favor, inheritance, prescription, or purchase." The philosophers and thinkers of the Enlightenment became quite complacent and self-congratulatory because the "enlightened despots" such as Catherine of Russia and Frederick of Prussia read widely and showed literary inclinations. Too many philosophers became court pets and because of that believed that Europe was moving toward enlightened democracy. As Commager explained it, Europe only imagined the Enlightenment, but America enacted it. This Enlightenment grew as much from its roots in Indian culture as from any other source.

When Americans try to trace their democratic heritage back through the writings of French and English political thinkers of the Enlightenment, they often forget that these people's thoughts were heavily shaped by the democratic traditions and the state of nature of the American Indians. The concept of the "noble savage" derived largely from writings about the American Indians, and even though the picture grew romanticized and distorted, the writers were only romanticizing and distorting something that really did exist. The Indians did live in a fairly democratic condition, they were egalitarian, and they did live in greater harmony with nature.

The modern notions of democracy based on egalitarian principles and a federated government of overlapping powers arose from the unique blend of European and Indian political ideas and institutions along the Atlantic coast between 1607 and 1776. Modern democracy as we know it today is as much the legacy of the American Indians, particularly the Iroquois and the Algonquians, as it is of the British settlers, of French political theory, or of all the failed efforts of the Greeks and Romans.

The discovery of new forms of political life in America freed the imaginations of Old World thinkers to envision utopias, socialism, communism, anarchism, and dozens of other social forms. Scarcely any political theory or movement of the last three centuries has not shown the impact of this great political awakening that the Indians provoked among the Europeans.

11. According to the passage, two Native American peoples who contributed greatly to the development of modern democracy were the:

- A. Iroquois and the Cherokee.
- B. Iroquois and the Algonquians.
- C. Algonquians and the Seminoles.
- D. Cherokee and the Cheyenne.

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12. The author of the passage would most likely agree with which of the following statements?
- F. European political thinkers of the sixteenth century created the notion of a completely egalitarian society.
 - G. The efforts of the Spaniards to create a democratic society in the New World failed due to the unfavorable climate of the New World.
 - H. American Indians generally are not given as much credit as they deserve with regard to their contribution to modern democratic political theory.
 - J. The roots of modern democracy can be traced directly back to the Holy Roman Empire.
13. Historian Henry Steele Commager's belief that "Europe only imagined the Enlightenment, but America enacted it" (lines 62–63) refers to the idea, presented in the passage, that:
- A. European political thinkers wrote a great deal about democracy and liberty, but democracy and liberty did not really manifest themselves until European and Native American political ideas met in the New World.
 - B. European political thinkers lived utopian lives that prevented them from seeing the monarchical excesses of European society.
 - C. the Dutch and Spanish political thinkers had a history of democratic traditions, but they were not able to translate their ideas into a workable democracy in America.
 - D. Native Americans, when introduced to the democratic ideals of European political thinkers, readily adopted the Europeans' political philosophies.
14. One of the main ideas of the passage is that:
- F. democracy and liberty are political ideas derived primarily from the Greeks and Romans of the ancient world.
 - G. the French and the Dutch who settled in America were the primary sources of democracy in the New World.
 - H. modern democracy evolved from the interaction of Native American and European political thought in colonial America.
 - J. Native Americans were initially opposed to the democratic traditions that the Europeans brought to the New World.
15. It can be inferred from the sixth paragraph (lines 51–65) that historian Henry Steele Commager would agree with the statement that, during the Enlightenment, Europe was mainly ruled by:
- A. a democratic majority.
 - B. a college of cardinals.
 - C. the aristocratic class.
 - D. the intellectual elite.
16. The passage argues that at the time of European contact with Native Americans in the 1600s, the political systems of Native Americans could best be characterized as being:
- F. essentially nonexistent.
 - G. ruled by a few Indian chiefs who were similar to Europe's "enlightened despots."
 - H. a monarchical system of government.
 - J. fairly democratic and egalitarian.
17. The passage specifies that the law of which of the following countries descended directly from that of ancient Rome?
- A. Britain
 - B. France
 - C. The Netherlands
 - D. Spain
18. According to the fourth paragraph (lines 28–43), the signing of the Magna Carta:
- I. increased the power of the English aristocracy.
 - II. decreased the power of the English monarchy.
 - III. created the first truly democratic government in England.
- F. I only
 - G. I and II only
 - H. I and III only
 - J. II and III only
19. According to the passage, the attitude of some philosophers of the Enlightenment toward European monarchs and their governments was often:
- A. not critical enough, because the philosophers were on too friendly terms with the monarchs.
 - B. not critical enough, because the philosophers needed to justify European expansion in North America.
 - C. too critical, because the philosophers personally disliked the monarchs.
 - D. too critical, because the philosophers didn't understand Greco-Roman ideas well enough to develop sound theories.
20. According to the passage, at the same time they settled in North America, the British and the Dutch also settled in:
- I. Haiti.
 - II. South Africa.
 - III. Greece.
- F. I only
 - G. II only
 - H. I and II only
 - J. I and III only

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Passage III

HUMANITIES: This passage is adapted from Annie Dillard's *The Writing Life* (©1989 by Annie Dillard).

When you write, you lay out a line of words. The line of words is a miner's pick, a woodcarver's gouge, a surgeon's probe. You wield it, and it digs a path you follow. Soon you find yourself deep in new territory. Is it a dead end, or have you located the real subject? You will know tomorrow, or this time next year.

You make the path boldly and follow it fearfully. You go where the path leads. At the end of the path, you find a box canyon. You hammer out reports, dispatch bulletins.

The writing has changed, in your hands, and in a twinkling, from an expression of your notions to an epistemological tool. The new place interests you because it is not clear. You attend. In your humility, you lay down the words carefully, watching all the angles. Now the earlier writing looks soft and careless. Process is nothing; erase your tracks. The path is not the work. I hope your tracks have grown over; I hope birds ate the crumbs; I hope you will toss it all and not look back.

The line of words is a hammer. You hammer against the walls of your house. You tap the walls, lightly, everywhere. After giving many years' attention to these things, you know what to listen for. Some of the walls are bearing walls; they have to stay, or everything will fall down. Other walls can go with impunity; you can hear the difference. Unfortunately, it is often the bearing wall that has to go. It cannot be helped. There is only one solution, which appalls you, but there it is. Knock it out. Duck.

Courage utterly opposes the bold hope that this is such fine stuff the work needs it, or the world. Courage, exhausted, stands on bare reality: this writing weakens the work. You must demolish the work and start over. You can save some of the sentences, like bricks. It will be a miracle if you can save some of the paragraphs, no matter how excellent in themselves or hard-won. You can waste a year worrying about it, or you can get it over with now. (Are you a woman, or a mouse?)

The part you must jettison is not only the best-written part; it is also, oddly, that part which was to have been the very point. It is the original key passage, the passage on which the rest was to hang, and from which you yourself drew the courage to begin.

Putting a book together is interesting and exhilarating. It is sufficiently difficult and complex that it engages all your intelligence. It is life at its most free. Your freedom as a writer is not freedom of expression in the sense of wild blurting; you may not let it rip. It is life at its most free, if you are fortunate enough to be able to try it, because you select your materials, invent your task, and pace yourself.

The obverse of this freedom, of course, is that your work is so meaningless, so fully for yourself alone, and so worthless to the world, that no one except you cares whether you do it well, or ever. You are free to make several thousand close judgment calls a day. Your freedom is a by-product of your days' triviality.

Here is a fairly sober version of what happens in the small room between the writer and the work itself. It is similar to what happens between a painter and a canvas.

First you shape the vision of what the projected work of art will be. The vision, I stress, is no marvelous thing: it is the work's intellectual structure and aesthetic surface. It is a chip of mind, a pleasing intellectual object. It is a vision of the work, not of the world. It is a glowing thing, a blurred thing of beauty. Its structure is at once luminous and translucent; you can see the world through it.

Many aspects of the work are still uncertain, of course; you know that. You know that if you proceed you will change things and learn things, that the form will grow under your hands and develop new and richer lights. But that change will not alter the vision or its deep structures; it will only enrich it. You know that, and you are right.

But you are wrong if you think that in the actual writing, or in the actual painting, you are filling in the vision. You cannot fill in the vision. You cannot even bring the vision to light. You are wrong if you think you can in any way take the vision and tame it to the page. The page is jealous and tyrannical; the page is made of time and matter; the page always wins. The vision is not so much destroyed, exactly, as it is, by the time you have finished, forgotten.

21. As it is used in line 47, the word *engages* most nearly means:
- A. demands.
 - B. defeats.
 - C. envisions.
 - D. ensures.
22. The author compares the interaction between writers and their work to that in all of the following occupations EXCEPT:
- F. surgeon.
 - G. miner.
 - H. painter.
 - J. musician.

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23. The author suggests that the best-written part of a piece of writing is often, ironically, the part of a piece of writing that the writer:
- A. finds most painful.
 - B. must throw away.
 - C. feels is most dramatic.
 - D. produced in a wild burst.
24. Which of the following best states the main point of the passage?
- F. Writers need to be aggressive and intellectual.
 - G. The path is really the same thing as the work.
 - H. Writing is a humbling and transforming experience.
 - J. In writing, it is crucial that you consider your audience.
25. The main emphasis of the third paragraph (lines 11–20) regarding the nature of the act of writing is on:
- A. why writers need to learn humility.
 - B. keeping the line of words from being altered.
 - C. how a writer's perception of her work changes.
 - D. how writing expresses notions of the self.
26. As it is used in line 9, the phrase *hammer out* most nearly means:
- F. break.
 - G. write.
 - H. erase.
 - J. remove.
27. An analogy made in the passage is that sentences are to writing as:
- A. courage is to bare reality.
 - B. bearing walls are to vision.
 - C. bricks are to building.
 - D. painting is to freedom.
28. The author claims that putting a book together is life at its most free because:
- F. you select your own materials, task, and pace.
 - G. you can fully express your inner self.
 - H. nothing is more intellectually demanding.
 - J. you create something valued by the entire world.
29. The author of the passage describes the vision as:
- I. a chip of mind.
 - II. the by-product of your day's triviality.
 - III. a glowing thing.
- A. II only
 - B. III only
 - C. I and II only
 - D. I and III only
30. The author asserts that it will be a miracle if, during the course of revision, the writer is able to salvage:
- F. some of the bricks.
 - G. any of the words.
 - H. some of the paragraphs.
 - J. all of the path.

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Passage IV

NATURAL SCIENCE: This passage is adapted from Frank Close, Michael Marten, and Christine Sutton's *The Particle Explosion* (©1987 by Frank Close, Michael Marten, and Christine Sutton).

The detector is a kind of ultimate microscope, which records what happens when a [subatomic] particle strikes another particle, either in a fixed target such as a lump of metal or a chamber filled with a gas or liquid, or in an on-coming beam in a collider. The 1950s and 60s were the age of the bubble chamber, so called because electrically charged particles moving through it produce trails of tiny bubbles in the liquid filling the chamber. [But today most] experiments are based on electronic detectors.

Detectors rarely record *all* the particle collisions that occur in a particular experiment. Usually collisions occur thousands of times a second and no equipment can respond quickly enough to record all the associated data. Moreover, many of the collisions may reveal mundane 'events' that are relatively well understood. So the experimenters often define beforehand the types of event that may reveal the particles they are trying to find, and program the detector accordingly. This is what a major part of the electronics in a detector is all about. The electronics form a filter system, which decides within a split second whether a collision has produced the kind of event that the experimenters have defined as interesting and which should therefore be recorded by the computer. Of the thousands of collisions per second, only one may actually be recorded. One of the advantages of this approach is its flexibility: the filter system can always be reprogrammed to select different types of event.

Often, computer graphics enable the events to be displayed on computer monitors as images, which help the physicists to discover whether their detector is functioning in the correct way and to interpret complex or novel events.

Imaging has always played an important role in particle physics. In earlier days, much of the data was actually recorded in photographic form—in pictures of tracks through cloud chambers and bubble chambers, or even directly in the emulsion of special photographic film. Many of these images have a peculiar aesthetic appeal, resembling abstract art. Even at the subatomic level nature presents images of itself that reflect our own imaginings.

The essential clue to understanding the images of particle physics is that they show the *tracks* of the particles, not the particles themselves. What a pion, for instance, really looks like remains a mystery, but its passage through a substance—solid, liquid, or gas—can be recorded. Particle physicists have become as adept at interpreting the types of track left by different particles as the American Indians were at interpreting the tracks of an enemy.

A number of simple clues immediately narrows down the possibilities. For instance, many detectors are based around a magnet. This is because the tracks of electrically-charged particles are bent in a magnetic field. A curving track is the signature of a charged particle. And if you know the direction of the magnetic field, then the way that the track curves—to left or right, say—tells you whether the particle is positively or negatively charged. The radius of curvature is also important, and depends on the particle's velocity and mass. Electrons, for instance, which are very lightweight particles, can curve so much in a magnetic field that their tracks form tight little spirals.

Most of the subatomic zoo of particles have brief lives, less than a billionth of a second. But this is often long enough for the particle to leave a measurable track. Relatively long-lived particles leave long tracks, which can pass right through a detector. Shorter-lived particles, on the other hand, usually decay visibly, giving birth to two or more new particles. These decays are often easily identified in images: a single track turns into several tracks.

Neutral particles present more of a headache to experimenters. Particles without an electric charge leave no tracks in a detector, so their presence can be deduced only from their interactions or their decay products. If you see two tracks starting at a common point, apparently arising from nowhere, you can be almost certain that this is where a neutral particle has decayed into two charged particles.

Our perception of nature has deepened not only because the accelerators have increased in power, but also because the detection techniques have grown more sophisticated. The quality of particle imagery and the range of information it provides have both improved over the years.

31. The main idea of the passage is that:
- A. most particle collisions are "mundane" events.
 - B. bubble chambers were constructed to capture high-energy particles.
 - C. the technology for detecting particle images is improving.
 - D. the detection of particle images has direct application to the study of nuclear energy.
32. The passage states that magnets affect atomic particles by:
- F. influencing the direction particles travel.
 - G. turning particles into negatively charged electrons.
 - H. increasing the life of particles.
 - J. causing positive and negative particles to collide.

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33. The passage states that which of the following particles leaves a long track?
- A. A positively charged particle
 - B. A negatively charged particle
 - C. A short-lived particle
 - D. A long-lived particle
34. As it is used in line 46, the word *pion* precisely refers to:
- F. an image.
 - G. a track.
 - H. a particle.
 - J. a molecule.
35. According to the passage, which of the following CANNOT be tracked electronically by experimenters?
- A. Electrically charged particles
 - B. Pion particles
 - C. Negatively charged particles
 - D. Neutral particles
36. Which of the following statements would the authors most likely agree with?
- F. Most tracking of electrically charged particles is difficult and inaccurate.
 - G. Tracking of electrically charged particles is still primitive because of unclear photographs.
 - H. Short-lived particles are easier to track than long-lived particles.
 - J. Electrically charged particles can be tracked with the right equipment and careful observation.
37. What, according to the passage, is one effect of charged particles passing through a bubble chamber?
- A. Collisions of the particles as they are stopped by the bubbles
 - B. Computer images that can be greatly enhanced
 - C. Photographs of the actual particles
 - D. Patterns of tiny bubbles in the liquid filling the chamber
38. The passage suggests that the greatest difference between experiments done with a bubble chamber and those done with electronic detectors is that:
- F. bubble chambers are much better at tracking the particles.
 - G. electronic detectors can track pions.
 - H. electronic detectors are more selective of the particle events.
 - J. electronic detectors can photograph the particles themselves.
39. How does the analogy likening the detector to the microscope function in the passage?
- A. It suggests that the detector, like the microscope, reveals to scientists a part of reality not easily seen.
 - B. It presents the differences and similarities in the way a detector works compared to a microscope.
 - C. It proves that all instruments are ultimately the same in the way that they function in a laboratory.
 - D. It introduces the argument in the passage that all detectors, whether microscope, bubble chamber, or collider, present images that resemble abstract art.
40. What is the main idea of the second paragraph (lines 11-29)?
- F. Even the best detectors still miss most of the important collisions in an experiment.
 - G. New technology allows scientists to select the collisions they want to record.
 - H. Despite the new technology, detectors still record mostly mundane events.
 - J. Scientists can now use computers to record virtually all the collisions in an experiment.

END OF TEST 3

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