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 the title story of *Only the Little Bone,* a collection of short stories by David Huddle (©1986 by David Huddle).

My grandfather has made crutches for me. These are sturdy crutches, just the right size. I am delighted with them and launch myself around the house on them.

And take a fall immediately. And continue falling several times a day, great splatting, knocking-into-furniture-and-breaking-things falls that cause everyone in the family to come running. My grandfather has forgotten to put rubber tips on the ends of my crutches. When we figure this out and buy the rubber tips and put them on the crutches, I stop falling. But by then the bone-set that was coming along nicely has slipped, and the doctor has ordered me back to the wheelchair.

The missing crutch-tips are the first clue I have to this peculiar family trait, one that for lack of any better term I must call "flawed competence." We Bryants are a family of able and clever people, industrious, intelligent, determined, and of good will. We are careful in our work. After all, my grandfather measured me on two occasions before he made the crutches. But we usually do something wrong.

Four years later I become increasingly aware of "flawed competence" when I develop a plan for converting our old grown-over tennis court into a basketball court. My grandfather is always interested in plans, and in this planning session, we decide that he will make the hoops, and he will help me make the backboards. Clearing the ground and smoothing the surface will be my tasks. So I rip out honeysuckle and hatchet down a few little scrub cedars. We Bryants are known for setting our minds to things.

Then my grandfather delivers the hoops. They are beautifully designed and constructed, metalwork of a high order for such amateurs as my grandfather and his men. But the hoops are twice as big around as ordinary basketball hoops.

I say, simply, that they are too big. I am not ungrateful, not trying to be hateful, not in my opinion being overly fastidious. I am simply describing a characteristic of the hoops. But my grandfather's feelings are damaged. No, they can't be made smaller, and no, he's not interested in helping me with the backboards now or with any other part of my plan. He's sorry he got involved in the first place. This, too, is a corollary of "flawed competence." We are sensitive, especially about our work, especially about the flawed part of our work.

At the place where I work twenty-eight years after the basketball hoops, I am given a new office, one with a view of the lake. There's a string attached, though, and that is that I have to build my own bookcases. I commence planning with enthusiasm. That's another, less harmful family trait, that attraction to making plans. I measure, I look at other people's shelves, I get someone to help me attach brackets to my office walls.

It is while I am cutting a notch in one of the uprights to allow access to the light-switch that I suddenly think of my grandfather and those basketball hoops. I feel a light sweat break out on my forehead. A pattern of genetic fate reveals itself to me: I'm going to mess up these bookshelves just as my grandfather before me would have messed them up. No doubt I'm sawing the notch in the wrong place.

The whole time I work I wait to see where the screw-up is going to come. I imagine what my colleagues will be saying about me in the hallways. Did you know that Bryant built his shelves so they tilt? Did you know that Bryant's books rejected the color he painted his shelves? But the screw-up doesn't appear. I paint the shelves red, and they look O.K. (Granddaddy Bryant once painted yellow a whole row of company houses he built.) I paint a chair blue and red, and it's a little silly-looking, but it picks up the blue of the carpet and the red of the shelves. The vision isn't nearly as impressive as I thought it would be, but then what vision ever is? We plan-makers are accustomed to things turning out not-quite-as-good-as-we-had-in-mind. Our world view includes the "diminished excellence" component. Diminished excellence is a condition of the world and therefore never an occasion for sorrow, whereas flawed competence comes out of character and therefore is frequently the reason for the bowed head, the furrowed brow. Three months later, when I try to turn the heat off in my office, I discover that I have placed one of the shelf uprights too close to

the radiator to be able to work the valve. The screw-up was there all along, but in this case I am relieved to find it. I am my grandfather's grandson after all.

1. The passage is written from the point of view of:

- **A.** an unidentified narrator observing the relationship over time between a boy and his grandfather.
- **B.** two members of the same family discovering their shared trait through joint activities.
- **C.** a grown man agonizing over the mixed messages he received as a child from older relatives.
- **D.** a boy and the man he becomes considering incidents that illustrate a family trait.

2. Which of the following best describes the author's approach to presenting the story of the narrator's discovery about himself?

- **F.** Revealing the narrator's self-awareness about a trait through a blend of personal reflection and scenes from the narrator's youth and adulthood
- **G.** Starting immediately with a statement of the discovery in the narrator's voice and continuing with scenes that reveal how the discovery came about
- **H.** Describing the physical details of scenes and summarizing their significance in a concluding statement in the narrator's voice
- **J.** Using dialogue in the midst of scenes fraught with tension to indicate what the narrator is experiencing internally

3. Each of the three projects described in the passage reveals:

- **A.** the increasing antagonism between the grandfather and grandson.
- **B.** the errors the narrator makes and the disapproval they bring from others.
- **C.** that such incidents set the stage for the Bryant family traits to emerge.
- **D.** that the narrator is determined to avoid being ungrateful, hateful, or overly fastidious.

4. The boy's approach to the task of converting the tennis court to a basketball court can best be described as:

- **F.** reluctant until his grandfather's plans inspire him.
- **G.** enthusiastic until his grandfather's error puts them both in an awkward position.
- **H.** apprehensive until he discovers his error is not a devastating one.
- **J.** thrilled until he remembers that his grandfather is a poor planner.

5. As he is revealed in the incident of undertaking the construction of the basketball court, the grandfather can best be characterized as:

- **A.** confidently optimistic, then childishly defensive.
- **B.** charmingly patient, then increasingly accusatory.
- **C.** consistently encouraging in spite of setbacks.
- **D.** vocally defensive, then quietly apologetic.

6. The question "Did you know that Bryant built his shelves so they tilt?" (lines 65–66) helps establish that the narrator is anxious because:

- **F.** his coworkers have discovered his incompetence and have made it the subject of office humor.
- **G.** his coworkers resent his having a corner office and punish him with their biting humor.
- **H.** he fears his incompetence is so glaring it will make him the object of ridicule among coworkers.
- **J.** the tilting bookshelves remind him that, like his grandfather, he cannot hide his mistakes.

7. Information in the second paragraph (lines 4–12) reveals that the family's response to the grandfather's error with the crutches is to:

- **A.** find a workable remedy for it.
- **B.** lay the blame on the narrator.
- **C.** praise him for more successful projects.
- **D.** fix what wasn't wrong in the first place.

8. It can most reasonably be inferred from the sixth paragraph (lines 36–46) that the statement that the basketball hoops "can't be made smaller" (line 40) is:

- **F.** a fact stated by the grandfather apologetically.
- **G.** an opinion stated by the grandfather indignantly.
- **H.** a claim the narrator makes to humiliate a relative.
- **J.** a conclusion the narrator reaches after hard labor.

9. It can most reasonably be inferred that the narrator's discovery that an error has been made in constructing the bookshelves is for him a source of:

- **A.** embarrassment in the face of coworkers who anticipated it.
- **B.** comfort because it reveals a trait that he shares with his family.
- **C.** frustration because it will require a remedy that will be tedious to carry out.
- **D.** relief because it gives him an excuse to seek the assistance of coworkers in finishing the project.

10. In the last paragraph, a comparison is made between "diminished excellence" and "flawed competence." From the narrator's point of view, the conditions are different because the one is:

- **F.** a source of sorrow while the other is a source of pride.
- **G.** based in the family while the other is based in the self.
- **H.** inherent in the environment while the other is inherent in the individual.
- **J.** a sign that the individual can improve the world while the other is a sign that the individual can't.

Passage II

SOCIAL SCIENCE: This passage is adapted from Dava Sobel's book *Longitude* (©1995 by Dava Sobel).

To learn one's longitude at sea, one needs to know what time it is aboard ship and also the time at the home port or another place of known longitude—at that very same moment. The two clock times enable the navigator to convert the hour difference into a geographical separation. Since the Earth takes twenty-four hours to complete one full revolution of three hundred sixty degrees, one hour marks one twenty-fourth of a spin, or fifteen degrees. And so each hour's time difference between the ship and the starting point marks a progress of fifteen degrees of longitude to the east or west. Every day at sea, when the navigator resets the ship's clock to local noon when the sun reaches its highest point in the sky, and then consults the home-port clock, every hour's discrepancy between them translates into another fifteen degrees of longitude.

Those same fifteen degrees of longitude also correspond to a distance traveled. At the Equator, where the girth of the Earth is greatest, fifteen degrees stretch fully one thousand miles. North or south of that line, however, the mileage value of each degree decreases. One degree of longitude equals four minutes of time the world over, but in terms of distance, one degree shrinks from sixty-eight miles at the Equator to virtually nothing at the poles.

Precise knowledge of the hour in two different places at once—a longitude prerequisite so easily accessible today from any pair of cheap wristwatches—was utterly unattainable up to and including the era of pendulum clocks. On the deck of a rolling ship, such clocks would slow down, or speed up, or stop running altogether. Normal changes in temperature encountered en route from a cold country of origin to a tropical trade zone thinned or thickened a clock's lubricating oil and made its metal parts expand or contract with equally disastrous results. A rise or fall in barometric pressure, or the subtle variations in the Earth's gravity from one latitude to another, could also cause a clock to gain or lose time.

For lack of a practical method of determining longitude, every great captain in the Age of Exploration became lost at sea despite the best available charts and compasses. Untold numbers of sailors died when their destinations suddenly loomed out of the sea and took them by surprise. In a single such accident on October 22, 1707, at the Scilly Isles near the southwestern tip of England, nearly two thousand men lost their lives.

The quest for a solution to the problem of longitude persisted over four centuries and across the whole continent of Europe. The British Parliament, in its famed Longitude Act of 1714, set the highest bounty of all, naming a prize equal to several million dollars in today's currency for a "Practicable and Useful" means of determining longitude.

English clockmaker John Harrison, a mechanical genius who pioneered the science of portable precision timekeeping, devoted his life to this quest. He accomplished what Newton had feared impossible: He invented a clock that would carry the true time from the home port, like an eternal flame, to any remote corner of the world.

With no formal education or apprenticeship to any watchmaker, Harrison nevertheless constructed a series of virtually friction-free clocks that required no lubrication and no cleaning, that were made from materials impervious to rust, and that kept their moving parts perfectly balanced in relation to one another, regardless of how the world pitched or tossed about them. He did away with the pendulum, and he combined different metals inside his works in such a way that when one component expanded or contracted with changes in temperature, the other counteracted the change and kept the clock's rate constant.

His every success, however, was parried by members of the scientific elite, who distrusted Harrison's magic box. The commissioners charged with awarding the longitude prize changed the contest rules whenever they saw fit, so as to favor the chances of astronomers over the likes of Harrison and his fellow "mechanics." But the utility and accuracy of Harrison's approach triumphed in the end. In 1773 he claimed his rightful reward. His followers shepherded Harrison's intricate, exquisite invention through the design modifications that enabled it to be mass produced and enjoy wide use.

To retrace this story in an age when a network of satellites can nail down a ship's position within a few feet in just a moment or two—is to see the globe anew.

11. The function of the first paragraph in relation to the passage as a whole is to:

- **A.** orient the reader to the subject of longitude by explaining how longitude is determined at sea.
- **B.** explain the political significance of developing an accurate way of determining longitude.
- **C.** establish that longitude calculations are necessary to determine time in two different places at once.
- **D.** introduce a discussion of how knowledge of Earth's position relative to the Sun was gained in the process of advances in timekeeping.

12. Which of the following best describes the way the fifth paragraph (lines 48–54) functions in the passage as a whole?

- **F.** It puts into historical perspective the difficulty of solving the longitude problem and introduces the subject of Britain's longitude prize.
- **G.** It translates the technical terminology used elsewhere in the passage into language that is more widely understood.
- **H.** It sheds light on why it took longer for a solution to the longitude problem to emerge in Europe than in other parts of the world.
- **J.** It diminishes the importance of the lives that were lost in the efforts to solve the longitude problem.

13. It can reasonably be inferred from the passage that before Harrison's efforts, other individuals trying to solve the longitude problem had failed to:

- **A.** consider clocks as the potential instrument of calculation.
- **B.** agree on why longitude decreases in value at increasing distances from Earth's equator.
- **C.** improve upon the features of clocks that made them unreliable at sea.
- **D.** understand the ways that charts and compasses could be used in connection with timepieces to calculate longitude.

14. The reference to the catastrophe at Scilly (lines 45–47) is used to illustrate the point made in the passage that:

- **F.** charts and compasses were poorly made in the 1700s.
- **G.** England more than other countries stood to gain from a solution to the problem of determining longitude.
- **H.** captains were contributing to the problem of lost lives by resisting a solution to the problem of determining longitude.
- **J.** Harrison's accomplishments addressed shortcomings of navigation whose consequences were vast in scale.

15. Information in the second paragraph (lines 17–25) establishes that one degree of longitude translates into a distance of:

- **A.** sixty-eight miles at Earth's equator but less on either side of Earth's equator.
- **B.** sixty-eight miles at Earth's equator but more on either side of Earth's equator.
- **C.** one thousand miles the world over.
- **D.** virtually nothing at Earth's equator, increasing to a maximum of sixty-eight miles at the poles.

16. Which of the following statements best describes the metals used in Harrison's clock?

- **F.** The metals were identical so that they would respond consistently to changes in conditions at sea.
- **G.** The metals were different so that their changes in response to conditions at sea would counteract each other.
- **H.** The metals that remained stable in response to temperature changes were encased in metals that were impervious to rust.
- **J.** The metals expanded and contracted in ways that were counteracted by changes in the parts made of wood.

17. The passage suggests that Harrison's principal competitors in the race to develop a means of determining longitude were:

- **A.** the great captains in the Age of Exploration.
- **B.** members of the British Parliament.
- **C.** trained clockmakers with formal educations.
- **D.** individuals in the scientific community.

18. According to the passage, there was a delay between the time when Harrison arrived at a solution to the problem of longitude and when he received his reward because his:

- **F.** invention predated the Longitude Act of 1714.
- **G.** clock was only one of many successful solutions to emerge simultaneously.
- **H.** opponents obstructed his efforts to claim the prize money.
- **J.** supporters abandoned him in order to exploit his invention for their own financial gain.

19. Lines 82–84 indicate that others took over Harrison's work in order to:

- **A.** secure a wider range of applications for an instrument that had been used only at sea.
- **B.** take credit for his remarkable accomplishments.
- **C.** diminish the significance of his clock by having it mass-produced.
- **D.** turn his design into one that could be practically produced for more users.

20. The passage indicates that instruments for determining longitude now include:

- **F.** modified pendulum clocks.
- **G.** satellites.
- **H.** a network of ships.
- **J.** barometers.