READING TEST

35 Minutes—40 Questions

DIRECTIONS: There are several passages in this test. Each passage is accompanied 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

LITERARY NARRATIVE: This passage is adapted from the novel *The Cat's Table* by Michael Ondaatje (©2011 by Michael Ondaatje).

The ship *Oronsay* is departing from Colombo, Ceylon (a city in what is today Sri Lanka), in the early 1950s.

Michael was eleven years old that night when, green as he could be about the world, he climbed aboard the first and only ship of his life. It felt as if a city had been added to the coast, better lit than any town or village. He went up the gangplank, watching only the path of his feet—nothing ahead of him existed—and continued till he faced the dark harbour and sea. There were outlines of other ships farther out, beginning to turn on lights. He stood alone, smelling everything, then came back through the noise and the crowd to the side that faced land. A yellow glow over the city. Already it felt there was a wall between him and what took place there. Stewards began handing out food and cordials. He ate several sandwiches, and after that he made his way down to his cabin, undressed, and slipped into the narrow bunk. He'd never slept under a blanket before, save once in Nuwara Eliya. He was wide awake. The cabin was below the level of the waves, so there was no porthole. He found a switch beside the bed and when he pressed it his head and pillow were suddenly lit by a cone of light.

He did not go back up on deck for a last look, or to wave at his relatives who had brought him to the harbour. He could hear singing and imagined the slow and then eager parting of families taking place in the thrilling night air. I do not know, even now, why he chose this solitude. Had whoever brought him onto the *Oronsay* already left? In films people tear themselves away from one another weeping, and the ship separates from land while the departed hold on to those disappearing faces until all distinction is lost.

I try to imagine who the boy on the ship was. Perhaps a sense of self is not even there in his nervous stillness in the narrow bunk, in this green grasshopper or little cricket, as if he has been smuggled away accidentally, with no knowledge of the act, into the future.

* * *

What had there been before such a ship in my life? A dugout canoe on a river journey? A launch in Trincomalee harbour? There were always fishing boats on our horizon. But I could never have imagined the grandeur of this castle that was to cross the sea. The longest journeys I had made were car rides to Nuwara Eliya and Horton Plains, or the train to Jaffna, which we boarded at seven a.m. and disembarked from in the late afternoon. We made that journey with our egg sandwiches, a pack of cards, and a small Boy's Own adventure.

But now it had been arranged I would be travelling to England by ship, and that I would be making the journey alone. No mention was made that this might be an unusual experience or that it could be exciting or dangerous, so I did not approach it with any joy or fear. I was not forewarned that the ship would have seven levels, hold more than six hundred people including a captain, nine cooks, engineers, a veterinarian, and that it would contain a small jail and chlorinated pools that would actually sail with us over two oceans. The departure date was marked casually on the calendar by my aunt, who had notified the school that I would be leaving at the end of the term. The fact of my being at sea for twenty-one days was spoken of as having not much significance, so I was surprised my relatives were even bothering to accompany me to the harbour. I had assumed I would be taking a bus by myself and then change onto another at Borella Junction.

There had been just one attempt to introduce me to the situation of the journey. A lady named Flavia Prins, whose husband knew my uncle, turned out to be making the same journey and was invited to tea one afternoon to meet with me. She would be travelling in First Class but promised to keep an eye on me. I shook her hand carefully, as it was covered with rings and bangles, and she then turned away to continue the conversation I had interrupted. I spent most of the hour listening to a few uncles and counting how many of the trimmed sandwiches they ate.

On my last day, I found an empty school examination booklet, a pencil, a pencil sharpener, a traced map of the world, and put them into my small suitcase.

As I got into the car, it was explained to me that after I'd crossed the Indian Ocean and the Arabian Sea and the Red Sea, and gone through the Suez Canal into

the Mediterranean, I would arrive one morning on a small pier in England and my mother would meet me there. It was not the magic or the scale of the journey
85 that was of concern to me, but that detail of how my mother could know when exactly I would arrive in that other country.

And if she would be there.

1. The passage can most reasonably be described as being divided into two sections that, taken together, explore:
   - **A.** Michael's first week on the *Oronsay* as told from two perspectives, one being that of Michael's mother.
   - **B.** elements of Michael's journey as told from two perspectives, one being that of Michael as a young boy.
   - **C.** two outcomes of Michael's journey, both presented from the perspective of Michael as an adult.
   - **D.** Michael's relationship with his family, presented from the perspective of two of Michael's relatives.

2. The description of the *Oronsay* as having seven levels, nine cooks, a veterinarian, a small jail, and chlorinated pools (lines 52–56) most strongly supports which of the following statements about the *Oronsay* or its passengers?
   - **F.** "It felt as if a city had been added to the coast" (lines 3–4).
   - **G.** "The cabin was below the level of the waves, so there was no porthole" (lines 18–19).
   - **H.** "I do not know, even now, why he chose this solitude" (lines 26–27).
   - **J.** "But now it had been arranged I would be travelling to England by ship" (lines 47–48).

3. As it is used in lines 65–66, the phrase "introduce me to the situation of the journey" most nearly means:
   - **A.** list for the narrator the people he will likely meet on his trip.
   - **B.** explain to the narrator what his mother knows about his trip.
   - **C.** draw for the narrator a map of the exact route of his trip.
   - **D.** prepare the narrator in general for the circumstances of his trip.

4. Based on the passage, Michael's relatives arrange for and approach Michael's journey to England in a manner that can best be described as:
   - **F.** fearful and tense.
   - **G.** excited and frantic.
   - **H.** meticulous and generous.
   - **J.** understated and matter-of-fact.

5. The passage makes clear that once Michael boards the *Oronsay*, he feels that the city he is leaving has become:
   - **A.** morally corrupt.
   - **B.** physically shut off from him.
   - **C.** aesthetically beautiful.
   - **D.** figuratively lifted and carried with him.

6. The main point of the second paragraph (lines 22–31) is for the narrator to analyze the circumstance of:
   - **F.** Michael's relatives leaving the harbor as soon as Michael had boarded the *Oronsay*.
   - **G.** Michael enjoying listening to families singing but refusing to join in with them.
   - **H.** Michael not returning to the deck to wave goodbye to his relatives.
   - **J.** Michael's relatives weeping as the *Oronsay* departed.

7. The interaction between Michael and Flavia Prins that is described in the passage most strongly suggests that although Prins has promised to keep an eye on Michael during his journey, she is:
   - **A.** fairly indifferent to him and not particularly focused on his well-being.
   - **B.** likely going to retract her promise as a result of Michael's rude behavior during tea.
   - **C.** planning to make sure someone else provides him with constant attention and care.
   - **D.** intending to ignore him, if not make certain that his journey is difficult.

8. In the passage, Michael is metaphorically referred to as:
   - **F.** a smuggler.
   - **G.** rings and bangles.
   - **H.** green grass.
   - **J.** a little cricket.

9. The passage indicates that Michael's journey to England will require:
   - **A.** relying on the expertise of a team of captains.
   - **B.** disembarking the *Oronsay* midjourney.
   - **C.** avoiding traveling on the Red Sea.
   - **D.** spending twenty-one days at sea.

10. It can most reasonably be inferred from the passage that the narrator counts the sandwiches his uncles eat (lines 73–75) mainly because the narrator:
    - **F.** wants to know how many sandwiches he will be given to eat once he boards the ship.
    - **G.** hopes that his uncles like the sandwiches.
    - **H.** feels bored as the adults converse.
    - **J.** is nervous around his loud uncles.

Passage II

SOCIAL SCIENCE: Passage A is adapted from "The Unified Theory of Gumbo" by Lolis Eric Elie (©2012 by Smithsonian Institution). Passage B is adapted from "The Borscht Belt" by Julia Ioffe (©2012 by Condé Nast).

Passage A by Lolis Eric Elie

As the Cajun craze had its way with America in the 1980s, I began to hear tourists, visitors and transplants to New Orleans praising this or that gumbo for its thickness and darkness. This was strange to me. Gumbo was supposed to be neither thick nor dark. Even more important, "dark" and "thick" were being used not as adjectives, but as achievements. It was as if making a dark gumbo was a culinary accomplishment on par with making a featherlight biscuit or a perfectly barbecued beef brisket. Naturally, I viewed these developments with suspicion and my suspicion focused on the kitchen of Commander's Palace and its celebrated chef, Paul Prudhomme.

Prudhomme hails from Cajun Country, near Opelousas, Louisiana. He refers to his cooking not so much as Cajun, but as "Louisiana cooking," and thus reflective of influences beyond his home parish. For years I blamed him for the destruction of the gumbo universe. Many of the chefs and cooks in New Orleans restaurants learned under him or under his students. Many of these cooks were not from Louisiana, and thus had no homemade guide as to what good gumbo was supposed to be. As I saw it then, these were young, impressionable cooks who lacked the loving guidance and discipline that only good home training can provide.

My reaction was admittedly nationalistic, since New Orleans is my nation. The Cajun incursion in and of itself didn't bother me. We are all enriched immeasurably when we encounter other people, other languages, other traditions, other tastes. What bothered me was the tyrannical influence of the tourist trade. Tourist trap restaurants, shops, cooking classes, and at times it seemed the whole of the French Quarter, were given over to providing visitors with what they expected to find. There was no regard for whether the offerings were authentic New Orleans food or culture. Suddenly andouille sausage became the local standard even though most New Orleanians had never heard of it. Chicken and andouille gumbo suddenly was on menus all over town. This was the state of my city when I moved back here in 1995.

Passage B by Julia Ioffe

As a self-appointed guardian of authentic Russian fare, Maksim Syrnikov, who has spent the past two decades studying traditional Russian cuisine, has a problem: Russians don't hold Russian food in particularly high esteem. When they eat out, they favor more exotic cuisines, like Italian or Japanese. The tendency to find foreign food more desirable is a prejudice that goes back centuries—to a time when the Russian aristocracy spoke French, not Russian. Russian food is pooh-poohed as unhealthy and unsophisticated.

Among the many things that annoy Syrnikov is the fact that a good number of the despised Russian dishes aren't even Russian. "I did an informal survey of eighteen- to twenty-five-year-olds in Moscow and St. Petersburg, and asked them, 'Name some traditional Russian dishes,'" Syrnikov told me. "What they named was horrible: borscht, which is Ukrainian, and potatoes, which are an American plant. In the middle of the eighteenth century, there were *riots* because people didn't want to grow potatoes." He insists that real Russian food contained no potatoes, no tomatoes, few beets, and little meat. Instead, there were a lot of grains, fish, and dairy, as well as honey, cucumbers, turnips, cabbage, apples, and the produce of Russia's vast forests—mushrooms and berries. Because of the climate, little of this was eaten fresh; it was salted, pickled, or dried for the long winter. Most of Russia ate this way until the twentieth century.

By exploring the Russian food that existed before potatoes, Syrnikov hopes to help Russians reacquaint themselves with the country's agrarian roots, and to convince them that their national cuisine can be just as flavorful as anything they might find in a sushi bar. He spends his time travelling through the countryside in search of old recipes, trying them himself, and blogging about his experiences. Often, he is brought in as a consultant on projects to make a restaurant authentically Russian. Recently, he hatched a plan for a user-generated database of folk recipes. "My idea is to send out a call across all of Russia," he told me. "If you have a grandmother who makes *shanishki*"—disk-shaped pastries—"take a picture of them, write down the recipe. To me, it's absolutely obvious that, if we don't wake up and find out from these old women and set it down on paper, in twenty years we won't have anyone to ask. Russian culture will lose a very significant part of itself."

Questions 11–13 ask about Passage A.

11. The author of Passage A mentions "a featherlight biscuit" and "a perfectly barbecued beef brisket" (lines 9–10) primarily to:

- **A.** contrast their deliciousness with the inferior taste of a dark and thick gumbo.
- **B.** offer additional examples of New Orleans cuisine that was, in the author's view, being corrupted.
- **C.** illustrate the types of authentic New Orleans food that tourists used to gravitate toward.
- **D.** provide examples of what the author views as real culinary successes, in contrast to dark gumbo.

12. It can reasonably be inferred that the author of Passage A thinks that in comparison to authentic Cajun cuisine, Prudhomme's "Louisiana cooking":

F. demands less creativity.
G. requires more discipline.
H. is much easier to master.
J. reflects broader influences.

13. The author of Passage A most directly indicates that he originally attributed the ruin of the gumbo universe to which of the following?

A. Tourists monopolizing New Orleans's entire French Quarter
B. The Cajun craze that took hold of the United States in the 1980s
C. The sudden prevalence of chicken and andouille gumbo in the 1990s
D. The pervasive influence of Prudhomme on New Orleans restaurants

Questions 14–17 ask about Passage B.

14. The author of Passage B most strongly indicates that Syrnikov believes Russians tend not to favor their national cuisine mainly because:

F. they are embarrassed by their country's agrarian history and want to distance themselves from it.
G. the prejudices held by Russia's ruling class long ago led to a ban on traditional Russian cuisine.
H. they consider food from other countries to be more appealing and more refined.
J. only old women know how to make traditional Russian dishes like *shanishki*.

15. The author of Passage B describes some of Syrnikov's common activities in lines 75–81 primarily to:

A. suggest that Syrnikov feels overwhelmed by the scope and number of his projects.
B. emphasize Syrnikov's dedication to helping Russians rediscover their true culinary roots.
C. imply that Syrnikov plans to open his own authentic Russian restaurant after completing his research.
D. downplay Syrnikov's lack of culinary training by focusing on his experience with traditional folk recipes.

16. According to Passage B, Syrnikov makes which of the following claims regarding potatoes?

F. Potatoes were once a staple ingredient in traditional Russian cuisine.
G. Potatoes were grown throughout Russia until the twentieth century.
H. Potatoes were unpopular in eighteenth-century Russia.
J. Potatoes actually originated in Ukraine, not in Russia.

17. As he is presented in Passage B, Syrnikov most clearly indicates that he believes failing to record traditional Russian folk recipes will:

A. force Russian cuisine to reinvent itself.
B. ruin his existing database of folk recipes.
C. result in a significant loss of Russian culture.
D. lead younger generations of Russians to learn folk recipes from their grandmothers.

Questions 18–20 ask about both passages.

18. Which of the following statements best captures a main difference in the focus of the two passages?

F. Passage A focuses on the author's interactions with Prudhomme, while Passage B focuses on Syrnikov's frustration with the ignorance of the general Russian public.
G. Passage A focuses on how the tourist trade affected New Orleans cuisine, while Passage B focuses on how communities are working together to preserve authentic Russian fare.
H. Passage A focuses on the author's prejudice against food from non-Cajun cultures, while Passage B focuses on Syrnikov's attempt to spread awareness about what Russian cuisine truly is.
J. Passage A focuses on the author's struggle with public perception of authentic New Orleans food, while Passage B focuses on Syrnikov's efforts to correct misconceptions about Russian cuisine.

19. With regard to their own region's authentic cuisine, both New Orleans transplants in Passage A and modern Russians in Passage B are characterized as being:

A. perplexed.
B. disdainful.
C. misinformed.
D. knowledgeable.

20. Both passages support the idea that learning how to cook traditional and authentic regional food is best accomplished by:

F. gleaning knowledge from cooks native to the area.
G. studying under professional chefs in a restaurant.
H. traveling and learning about other cultures' foods.
J. receiving hands-on training in a culinary school.

Passage III

HUMANITIES: This passage is adapted from the article "An Interview with C. E. Morgan" by Thomas Fabisiak (©2010 by University of North Carolina-Chapel Hill).

All the Living is C. E. Morgan's debut novel. Set in rural Kentucky in the 1980s, her novel follows a young couple's struggles as they take responsibility for a family farm.

Thomas Fabisiak: In what way does the fact that your descriptive work in *All the Living* focuses on landscape make it a political act?

C. E. Morgan: I think it's akin to the moral force that's there in fiction in the presentation of character. Fiction asks us to bring sustained attention to the Other; when a reader chooses to continue reading a novel, regardless of the likability of a character, the sustained attention to that character has moral ramifications. Landscape writing—most especially when it's done at length and in a style that deviates from prose norms, so that its very presentation is interruptive or "estranging" as the formalists might have said—encourages the reader to stop, reread, listen, imagine, reconsider, admire, appreciate with new eyes. The reader might complain that this kind of writing draws attention to itself, but this kind of writing doesn't merely draw attention to its own aesthetic strategies—it also draws attention to land. The land is imperiled; we know that. Land is always imperiled wherever the human puts his or her foot. The attention paid to landscape in a narrative is, I believe, attention that's paid to land itself, not just to marks on a page. Deep appreciation can result from an engagement with that kind of beauty, and that can manifest in action. That is how it might be seen as a political act to do this kind of writing (particularly about a region, such as this one, rural Kentucky, that is continuously being ravaged by corporations that consumers unwittingly feed).

Thomas Fabisiak: In addition to landscape, though, *All the Living* also involves a sustained focus on work, and specifically on work on the land, farming, taking care of animals, etc. Together these suggest an overarching pastoral quality. Without wanting you to interpret *All the Living* for readers, because you've told me that you hate imposing yourself into people's encounters with the book, I'm wondering if you could say something about your focus on work, and whether and to what extent it is related to the focus on landscape more generally. One thing that occurred to me repeatedly as I was reading the book was that, as a writer, you work very meticulously, and take "your work" as seriously, perhaps, as "the work" itself in the sense of the finished book, etc. Would I be wrong to think that there may be a latent ethical, if not political, component to this aspect of your writing as well, both in your own commitment to hard work and in the ongoing presence of the theme of work in the novel?

C. E. Morgan: Well, while there are many novels I admire that depict working-class labor (*Anna Karenina* and *In the Skin of the Lion* and *Germinal* are the first that spring to mind), the presence of work—agrarian or domestic—in *All the Living* was not a self-conscious choice. For that matter, even though I conceptualize landscape writing as overtly political, that doesn't mean I self-consciously insert it in a text where it doesn't belong. With *All the Living*, I don't feel I made choices in the first draft of the novel. It felt like the book just came, and it came with an inborn temperament, tenor, and set of characters and concerns. I obeyed the book. Or perhaps, because a text is not a willful or sentient being (though it sometimes feels like it!), it might be more accurate to say I obeyed the hazy, deepest part of the brain, which bypasses the intellect as it constructs meaning via image, myth, poetry: our essential languages.

For myself, though you're right that I work intensely on any project when I have one, I don't think of my writing as a job. I think of it as a vocation, and as such, there's a huge gulf between what I do and capitalist notions of productivity, though the work is disseminated in the marketplace through a capitalist framework. I'm very wary of rigorous work ethic for the sake of rigorous work ethic—this idea that a writer should produce a novel every year or two years, that they should be punching a clock somehow. A lot of people seem to buy into that; it's hard not to in this culture. But I don't want to produce just to produce. I don't want to write just to write, or publish just to get a paycheck. I see no value in that. Frankly, the world doesn't need more books; it needs better books. Vocation is tied up with notions of service, and as an artist you serve people by giving them your best, the work you produce that you truly believe to be of value, not just what you're capable of producing if you work ten hours a day every day for forty years.

21. The structure of the passage can best be described as an interview in which the interviewee:

A. defends herself against harsh commentary by the interviewer.
B. challenges the interviewer, urging him to ask her relevant questions.
C. turns questions asked to her back to the interviewer, inviting a casual dialogue.
D. responds to the interviewer's questions with involved, abstract answers.

22. In the passage, Morgan argues that, for the reader, landscape writing might feel particularly "interruptive or 'estranging'" (line 12) when it is presented:

F. in an otherwise plot-driven novel.
G. by an unskilled or inexperienced writer.
H. at length and in an unconventional prose style.
J. in the opening pages of a novel.

23. Based on the passage, how would Morgan respond to a reader's complaint that landscape writing "draws attention to itself" (line 16)?

A. She would agree but claim that landscape writing also draws attention to land.
B. She would agree but claim that if the writer had been focused, landscape writing should be engaging.
C. She would disagree, arguing that landscape writing focuses solely on drawing attention to land.
D. She would disagree, arguing that some readers are simply not willing to read landscape writing.

24. In the passage, Morgan most strongly suggests that a reader's attention to the land while reading a landscape narrative might lead the reader to:

F. act to protect the land.
G. forget that the land is in peril.
H. misinterpret the writer's purpose.
J. research the writer's academic background.

25. As it is used in line 22, the word *marks* most nearly refers to:

A. creases and smudges.
B. words and symbols.
C. notches and ticks.
D. lines and boundaries.

26. As it is used in line 24, the phrase "that kind of beauty" most specifically refers to the beauty of the:

F. human being.
G. intellect.
H. political act.
J. land.

27. The passage makes clear that, from a previous exchange with Morgan, Fabisiak knows that Morgan does not like to do which of the following?

A. Interpret *All the Living* for her readers
B. Tell her readers that, like the characters in *All the Living*, she lives in Kentucky
C. Work ten hours a day every day
D. Discuss which regions of the United States she plans to write about

28. The passage most strongly suggests that Morgan focuses on depicting which types of work in her novel *All the Living* ?

F. Corporate or agrarian
G. Agrarian or domestic
H. Domestic or creative
J. Creative or corporate

29. Morgan directly compares a writer being expected to produce a novel every year or two years to the act of having to:

A. work overtime.
B. assemble products in a factory.
C. punch a clock.
D. sell goods on commission.

30. In the passage, Morgan makes clear her perspective that an artist is serving people when that artist takes which of the following approaches to his or her work?

F. Continually offering new work that the artist knows people will want to buy
G. Regularly studying others' work and learning from it
H. Creating and presenting work that the artist believes to be valuable
J. Modifying the focus of the work when people's interest in it wanes

Passage IV

NATURAL SCIENCE: This passage is adapted from *Free Radicals* by Michael Brooks (©2011 by Michael Brooks).

As the twentieth century began, Robert Millikan was fast approaching forty. All around him, physics was at its most exhilarating, yet Millikan had done practically nothing. So he decided to measure *e*, the charge on the electron.

Millikan's idea was simple. A droplet of water that had been given an electric charge would be attracted to a metal plate which carried an opposite charge. He arranged his apparatus so that the electrical attraction pulled the droplet up, while gravity pulled it down. This gave him a way to measure *e*. First he would find the mass of the droplet. Then he would measure the voltage needed for the attraction to the metal plate to cancel out the downward pull of gravity. From those two pieces of information he could get a measure of the charge on the droplet.

The experiment was far from simple to carry out, however. Finding that the water droplets tended to evaporate before any measurements could be made, Millikan set to the task of trying the same trick with oil droplets.

In 1910, at the age of forty-two, he finally published a value for *e*. It was meant to be his career-defining publication. Eventually, it was—but Millikan still had years of difficult and dirty work ahead of him.

The Austrian physicist Felix Ehrenhaft refuted Millikan's results with a similar set of experiments that seemed to show that electrical charge can be infinitely small. There is no fundamental, minimum unit of charge, Ehrenhaft said; there is no 'electron'. The series of experiments the desperate Millikan then performed were to cast a lasting shadow over his scientific integrity.

According to biologist Richard Lewontin, Millikan 'went out of his way to hide the existence of inconvenient data'. David Goodstein, a physics professor, says Millikan 'certainly did not commit scientific fraud'. So where does the truth lie?

The debate hangs on a phrase in Millikan's 1913 paper refuting Ehrenhaft and showing that every measurement of electric charge gives a value of *e* or an integer multiple of *e*. In his 1913 paper, Millikan says that his data table '*contains a complete summary of the results obtained on all of the 58 different drops upon which complete series of observations were made*'. The statement is written in italics, as if to give it special weight. The notebooks for the 1913 paper show that Millikan actually took data on 100 oil droplets. Did Millikan cherry-pick the data in order to confirm his original result and crush Ehrenhaft underfoot?

He certainly had motive. In Millikan's 1910 paper he had made the 'mistake' of full disclosure with statements such as, 'Although all of these observations gave values of *e* within 2 percent of the final mean, the uncertainties of the observations were such that . . . I felt obliged to discard them'. This admirable honesty about the selection of data points had given Ehrenhaft ammunition that he used enthusiastically in his long feud with Millikan. Perhaps, with the italicised statement, Millikan was making sure that he gave his foe no more.

That would certainly explain something that is otherwise inexplicable. Millikan aborted the experimental run on twenty-five of the droplets in the work reported in the 1913 paper. According to Goodstein, Millikan preferred to use droplets that showed a change in charge, gaining or losing an electron (as he saw it) during the measurement. Millikan may also have judged some droplets to be too small or too large to yield reliable data, Goodstein says. If they were too large, they would fall too rapidly to be reliably observed. Too small, and their fall (and thus the charge result) would be affected by random collisions with air molecules. Goodstein interprets the italicised statement as an assertion that there were only fifty-eight 'complete enough' sets of data.

But Goodstein undoes his defence by stating that in order to make the 'too large' or 'too small' distinction, *all* the data would need to have been taken in the first place.

Millikan certainly did not convince his peers straight away. The arguments with Ehrenhaft rumbled on long enough for Millikan's Nobel Prize to be delayed for three years—it eventually came in 1923.

But here's the point: Millikan was right about the electron and its charge. Few laboratories managed to replicate Ehrenhaft's results, but students now replicate Millikan's results all across the world. No one now believes that the fundamental unit of charge is anything other than Millikan's *e*.

To get his Nobel Prize, Millikan had to play hard and fast with what we might call 'accepted practice'.

31. The main purpose of the passage is to use the example of Millikan to show:

A. how a theory becomes accepted.
B. that some well-accepted scientific ideas have a sullied past.
C. the challenges scientists faced in measuring *e*.
D. that some scientists get credit for work that is not their own.

32. Based on the passage, the debate between Millikan and Ehrenhaft is best described as:
   F. tense; their professional reputations were at stake.
   G. unprofessional; they sabotaged each other's experiments.
   H. collegial; each wanted to push the other to create a stronger theory.
   J. indirect; although their work intersected along some lines, they were primarily working in different fields.

33. The passage indicates that the debate regarding Millikan's integrity centers on:
   A. others' ability to replicate the results of Ehrenhaft's experiments more readily than those of Millikan's experiments.
   B. Millikan's decision to switch from using water droplets to oil droplets.
   C. certain statements Millikan made about the apparatus he used in his experiments.
   D. a discrepancy between data in Millikan's 1913 paper and information in his notebooks.

34. It can reasonably be inferred that the passage author considers Millikan's decision to offer full disclosure in his 1910 paper as:
   F. an understandable mistake that most scientists rightfully avoid.
   G. an admirable choice with an unfortunate consequence.
   H. a strategic decision that paid off in the end.
   J. a naive decision revealing desperation.

35. The passage indicates that in his experiment to measure *e*, Millikan switched from water to oil droplets because:
   A. other physicists had found that oil droplets were easier to work with.
   B. with oil he found it easier to form droplets with little variation in size.
   C. oil droplets allowed him to take accurate measurements more consistently.
   D. oil droplets could be reused for other experiments.

36. In the passage, the primary purpose of the ninth paragraph (lines 62–76) is to:
   F. present Goodstein's defense of Millikan's choices regarding the data reported in Millikan's 1913 paper.
   G. argue against Goodstein's interpretation of Millikan's motives.
   H. summarize the current prevailing view of Millikan's methods.
   J. offer an overview of Millikan's explanation of how he organized and presented his data.

37. The passage indicates that Ehrenhaft's experiments led him to make which of the following assertions in refuting the claims in Millikan's 1910 paper?
   A. There is no electron.
   B. Millikan's value for *e* is too low.
   C. Millikan failed to take prevailing scientific theories into account.
   D. The value of *e* varies with the substance one is measuring.

38. Based on the passage, the author's assertion that Millikan's experiments "were to cast a lasting shadow over his scientific integrity" (lines 32–33) is best described as:
   F. an opinion based on casual assumptions about scientists working in the early 1900s.
   G. an opinion based on the passage author's efforts to imagine himself in Millikan's position.
   H. a reasoned judgment based on consideration of the debate sparked by these experiments.
   J. a fact that Millikan clearly explains in his notebooks.

39. The passage author references Lewontin and Goodstein in the sixth paragraph (lines 34–38) primarily in order to:
   A. identify two leading arguments about Millikan's methodology.
   B. explain how a scientist's background might influence his or her opinion of Millikan's findings.
   C. emphasize that current experiments on the electron contradict Millikan's findings.
   D. highlight the difficulty Millikan's contemporaries had in replicating Millikan's experiments.

40. As it is used in line 39, the phrase *hangs on* most nearly means:
   F. continues.
   G. depends on.
   H. sticks with.
   J. blames on.

END OF TEST 3

STOP! DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

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