

SECTION 1

Time – 65 minutes 52 Ouestions

Turn to Section 1 of your answer sheet to answer the questions in this section.

Directions: For these questions, determine the solution to each question presented and choose the best answer choice of those provided. Be sure to fill in the respective circle on your answer sheet.

Questions 1-10 are based on the following passage.

The following is adapted from E.M. Forster's A Room With a View, originally published in 1908.

A few days after the engagement was announced Mrs. Honeychurch made Lucy and her Fiasco come to a little garden-party in the neighborhood, for naturally she wanted to show people that her daughter was marrying a presentable man.

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Cecil was more than presentable; he looked distinguished, and it was very pleasant to see his slim figure keeping step with Lucy, and his long, fair face responding when Lucy spoke to him. People congratulated Mrs.

Honeychurch, which is, I believe, a social blunder, but it pleased her, and she introduced Cecil rather indiscriminately to some stuffy dowagers.

At tea a misfortune took place: a cup of coffee was upset over Lucy's figured silk, and though Lucy feigned indifference, her mother feigned nothing of the sort but dragged her indoors to have the frock treated by a sympathetic maid. They were gone some time, and Cecil was left with the dowagers. When they returned he was not as pleasant as he had been.

"Do you go to much of this sort of thing?" he asked when they were driving home.

"Oh, now and then," said Lucy, who had rather enjoyed herself

"Is it typical of country society?"

"I suppose so. Mother, would it be?"

"Plenty of society," said Mrs. Honeychurch, who was trying to remember the hang of one of the dresses.

Seeing that her thoughts were elsewhere, Cecil bent towards Lucy and said:

30 "To me it seemed perfectly appalling, disastrous, portentous."

"I am so sorry that you were stranded."

"Not that, but the congratulations. It is so disgusting, the way an engagement is regarded as public property—a kind of waste place where every outsider may shoot his vulgar sentiment. All those old women smirking!"

"One has to go through it, I suppose. They won't notice us so much next time."

"But my point is that their whole attitude is wrong. An engagement—horrid word in the first place—is a private matter, and should be treated as such."

Yet the smirking old women, however wrong individually, were racially correct. The spirit of the generations had smiled through them, rejoicing in the engagement of Cecil and Lucy because it promised the continuance of life on earth. To Cecil and Lucy it promised something quite different—personal love. Hence Cecil's irritation and Lucy's belief that his irritation was just.

"How tiresome!" she said. "Couldn't you have escaped to 50 tennis?"

"I don't play tennis—at least, not in public. The neighborhood is deprived of the romance of me being athletic. Such romance as I have is that of the Inglese Italianato."

55 "Inglese Italianato?"

"E un diavolo incarnato! You know the proverb?"

She did not. Nor did it seem applicable to a young man who had spent a quiet winter in Rome with his mother. But Cecil, since his engagement, had taken to affect a cosmopolitan naughtiness which he was far from possessing

cosmopolitan naughtiness which he was far from possessing.

"Well," said he, "I cannot help it if they do disapprove of me. There are certain irremovable barriers between myself and them, and I must accept them."

"We all have our limitations, I suppose," said wise Lucy.

"Sometimes they are forced on us, though," said Cecil, who saw from her remark that she did not quite understand his position.

"How?"

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"It makes a difference doesn't it, whether we fully fence ourselves in, or whether we are fenced out by the barriers of others?"

She thought a moment, and agreed that it did make a difference.

"Difference?" cried Mrs. Honeychurch, suddenly alert. "I 75 don't see any difference. Fences are fences, especially when they are in the same place."

"We were speaking of motives," said Cecil, on whom the interruption jarred.

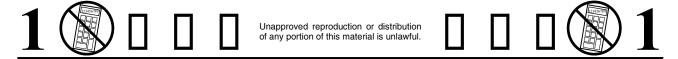
"My dear Cecil, look here." She spread out her knees and perched her card-case on her lap. "This is me. That's Windy Corner. The rest of the pattern is the other people. Motives are all very well, but the fence comes here."

"We weren't talking of real fences," said Lucy, laughing. "Oh, I see, dear—poetry."

- It can reasonably be inferred from the passage that Mrs. Honeychurch is
 - (A) particularly fond of Cecil.
 - (B) an expert seamstress with a knack for dress-making.
 - (C) concerned with presenting a respectable image to society.
 - (D) disinterested in attending the engagement party.
- **2.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 1-5 ("A few ... man")
 - (B) Lines 9-12 ("People ... dowagers")
 - (C) Lines 17-18 ("They were ... dowagers")
 - (D) Lines 26-27 ("Plenty of ... dresses")
- 3. As used in line 36, "sentiment" most nearly means
 - (A) nostalgia.
 - (B) emotion.
 - (C) opinion.
 - (D) tenderness.
- **4.** Which situation is most similar to the one described in lines 6-12?
 - (A) A distinguished war hero returning to his hometown
 - (B) A leader making concessions to his subjects
 - (C) A prized show dog being paraded before judges
 - (D) A criminal facing judgment in a court of law

- **5.** The passage most strongly suggests that Cecil found the engagement party "disastrous" (line 30) because
 - (A) he judged the other guests at the party to be uninteresting.
 - (B) he was angered by the intrusion into his relationship with Lucy.
 - (C) he prefers playing tennis to other forms of social interaction
 - (D) he would rather communicate in Italian than in English.
- **6.** As used in line 59, "affect" most nearly means
 - (A) cause.
 - (B) feign.
 - (C) influence.
 - (D) impress.
- 7. Lucy's response to Cecil in line 64 primarily serves to
 - (A) show Lucy's worldly sophistication.
 - (B) express Lucy's resignation to the narrowness of country society.
 - (C) demonstrate Lucy's growing resentment of the differences between Cecil's outlook and hers.
 - (D) indicate Lucy's assent to Cecil's opinions.
- **8.** Cecil brings up fences (lines 69-70) in order to
 - (A) highlight his feeling that he is different from others in the community.
 - (B) express his frustration at being excluded from polite society.
 - (C) demand greater respect for his desire for privacy and seclusion.
 - (D) reveal an epiphany about the separations among human beings.
- **9.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 39-41 ("An engagement ... such")
 - (B) Lines 51-53 ("The neighborhood ... athletic")
 - (C) Lines 62-63 ("There are ... them")
 - (D) Lines 81-82("Motives are ... here")

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- **10.** The comic effect of the final part of the passage (lines 74-84) comes from
 - (A) Lucy's enjoyment of the spirited exchange between Cecil and Mrs. Honeychurch.
 - (B) Cecil's growing irritation with Mrs. Honeychurch and Lucy's opinions.
 - (C) Lucy's teasing Cecil by pretending not to understand his point.
 - (D) Mrs. Honeychurch's obliviousness and inattention to the conversation.

Questions 11-21 are based on the following passage.

Human beings are in the process of dramatically reshaping the Earth's ecosystems. As far back as the 19th century, some scientists have noted that the current era is defined mainly by the impact of human activity. Now, there is an emerging consensus among Earth scientists that we have indeed entered a new period of geological time, the *Anthropocene epoch*.

Scientists who study the history of the Earth usually divide geological time according to major changes to the biology and climate of the Earth. For instance, the ancient *Cambrian period*, some 500 million years ago, is distinguished by a sudden explosion in the diversity of life, including the emergence of the ancestors of many modern species. More recently, the *Pleistocene epoch*, which ended about ten thousand years ago, is notable for the glaciers that swept over much of the Earth. The new Anthropocene epoch would be distinguished from all earlier times in Earth's history by the dramatic impacts of human activity on the Earth.

Though Earth scientists debate exactly when the Anthropocene began, there is a clear consensus that human changes to the environment are real and extreme. For one, many life forms have become, and are becoming, extinct as a result of human activity. For this reason, some paleontologists argue that the human impacts of the Anthropocene began at the end of the last Ice Age, around ten thousand years ago. The fossil record indicates that around that time, many large animals, like woolly mammoths and giant sloths, went extinct shortly after humans arrived in their ranges. Their sudden disappearance suggests that habitat destruction and overhunting by humans may have contributed to their demise. Indeed, many large animals, like elephants and gorillas, are endangered for those same reasons today.

35 The pace of human-caused extinctions has only increased in the past several hundred years. The growth and spread of human populations, caused by advances in seafaring technology and agriculture, has led to overexploitation of fragile ecosystems, introduction of invasive species, and 40 pollution, causing many extinctions. Scientists have estimated the rate of extinction by studying the fossil record, monitoring existing species, and using statistical models to

estimate the number of undiscovered species that have been lost. Estimates vary, but most scientists believe that diverse species are going extinct at hundreds or thousands of times the natural rate. The International Union for the Conservation of Nature, for instance, has found that, of species surveyed on its "Red List," about a fifth of all mammals and reptiles and nearly a third of amphibians are in danger of extinction.

This ongoing, rapid loss of species has been described as a mass extinction, as severe as the event that wiped out the dinosaurs 65 million years ago. To some ecologists, this steep decline in biodiversity suggests that the Anthropocene epoch began in the 17th and 18th centuries, when the rate of

extinction shot up dramatically.

Human activity is also altering the climate as a whole. Since the Industrial Revolution of the 18th and 19th centuries, humans have significantly altered the atmosphere by mining and burning fossil fuels such as coal, oil, and natural gas. Some byproducts of the use of these fuels, like carbon dioxide, are greenhouse gases that trap solar energy on Earth. To assess the impact of these greenhouse gases on the Earth, scientists have had to investigate the history of the Earth's climate. Ice cores, samples of ice layers that have trapped atmospheric chemicals over time, have supplied scientists with millennia of year-by-year information about greenhouse gas concentrations and atmospheric temperature. Evidence from ice cores clearly show that the Industrial Revolution brought about a sudden jump in carbon dioxide in the atmosphere, along with an increase in temperatures. A scientific consensus exists that this ongoing rise in temperatures has resulted in warming of the oceans, rising sea levels, and more frequent extreme weather events. Thus, some climatologists propose that the Anthropocene's onset occurred with the Industrial Revolution and its effects on Earth's atmosphere.

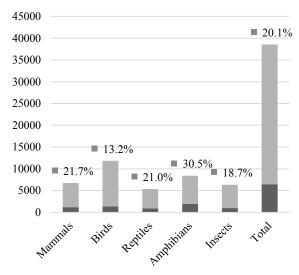
Whenever the Anthropocene is judged to have begun, its impact is undeniable. Human activity has changed the face of the planet; the global ecosystem has been and is being reshaped, the composition of the atmosphere has been altered, and even weather patterns are changing in response to human activity. The consequences of these changes will affect life on Earth for millions of years to come, leaving a mark of human activity that may well outlive humanity itself.

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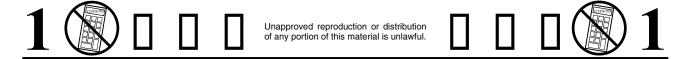
Number of Species by Class on IUCN Red List and Conservation Status



- Percentage of assessed species considered threatened
- Number of species assessed on Red List
- Number of Threatened Species
- 11. The main purpose of the passage is to
 - (A) respond to controversial claims made by rival scientists.
 - (B) argue for potential solutions to the problems posed by climate change.
 - (C) describe human impacts on the Earth's environment.
 - (D) account for recent changes in global biodiversity.
- 12. The author's tone is best described as that of
 - (A) a dejected defeatist.
 - (B) a concerned observer.
 - (C) a jaded skeptic.
 - (D) an uncertain specialist.
- 13. The second paragraph primarily serves to
 - (A) explain how scientists divide geological time.
 - (B) provide a broad description of the Earth's history.
 - (C) describe the origins of the majority of the Earth's biodiversity.
 - (D) compare the current geological epoch to the Cambrian period.

- 14. As used in line 12, "explosion" most nearly means
 - (A) shattering.
 - (B) catastrophe.
 - (C) growth.
 - (D) outburst.
- **15.** The main rhetorical effect of lines 50-52 ("This ongoing ... ago") is to
 - (A) suggest that the dinosaurs did not become extinct due to natural causes.
 - (B) make clear the extreme nature of the current extinction event.
 - (C) imply that humans themselves are now in danger of extinction.
 - (D) emphasize humanity's connections to earlier forms of life on earth.
- **16.** Based on the passage, which choice best describes the relationship between carbon dioxide and ice cores?
 - (A) Carbon dioxide destroys ice cores, leading to a loss of a source of information.
 - (B) Ice cores remove carbon dioxide from the atmosphere, reducing its effects on the climate.
 - (C) Carbon dioxide is extracted from ice cores and used to fuel industrial processes.
 - (D) Ice cores can be studied to track changes in atmospheric carbon dioxide levels.
- **17.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 60-62 ("Some byproducts ... Earth")
 - (B) Lines 64-67 ("Ice cores ... temperature")
 - (C) Lines 73-76 ("Thus some ... atmosphere")
 - (D) Lines 82-84 ("The consequences ... itself")
- 18. As used in line 84, "mark" most nearly means
 - (A) grade.
 - (B) symbol.
 - (C) target.
 - (D) trace.

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- 19. The passage most strongly suggests that
 - (A) some life forms are going extinct before being discovered by humans.
 - (B) all extinctions currently taking place result from human activity.
 - (C) modern extinctions are destroying the biodiversity generated in the Cambrian period.
 - (D) the recent increase in the extinction rate occurred as a result of human-caused climate change.
- **20.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 10-14 ("For instance ... species")
 - (B) Lines 27-30 ("The fossil record ... ranges")
 - (C) Lines 40-44 ("Scientists ... lost")
 - (D) Lines 56-60 ("Human ... activity")

- **21.** Based on information from the passage and the graphic, which of the following statements can reasonably be inferred?
 - (A) Birds are less susceptible to human-driven extinction than other animals because they can fly to new habitats.
 - (B) About 20% of all assessed species are currently threatened with extinction.
 - (C) Mammals are the animals most sensitive to human impacts on the environment.
 - (D) About 18% of known insect species have recently gone extinct.

Questions 22-31 are based on the following passage.

The following is adapted from "Television and the Public Interest," a speech delivered by Newton N. Minow to TV executives in 1961. Minow was the chairman of the Federal Communications Commission, which regulates television and other forms of communication in the United States.

Certainly, I hope you will agree that ratings should have little influence where children are concerned. The best estimates indicate that during the hours of 5 to 6 P.M. sixty per cent of your audience is composed of children under twelve. And most young children today, believe it or not, spend as much time watching television as they do in the schoolroom.

I repeat—let that sink in, ladies and gentlemen—most young children today spend as much time watching television as they do in the schoolroom. It used to be said that there were three great influences on a child: home, school, and church. Today, there is a fourth great influence, and you ladies and gentlemen in this room control it.

If parents, teachers, and ministers conducted their responsibilities by following the ratings, children would have a steady diet of ice cream, school holidays, and no Sunday school. What about your responsibilities? Is there no room on television to teach, to inform, to uplift, to stretch, to enlarge the capacities of our children? Is there no room for programs deepening their understanding of children in other lands? Is there no room for a children's news show explaining something to them about the world at their level of understanding? Is there no room for reading the great literature of the past, for teaching them the great traditions of freedom? There are some fine children's shows, but they are drowned out in the massive doses of cartoons, violence, and more violence. Must these be your trademarks? Search your consciences and see if you cannot offer more to your young beneficiaries whose future you guide so many hours each and every day.

Now what about adult programming and ratings? You know, newspaper publishers take popularity ratings too. And the answers are pretty clear: it is almost always the comics, followed by advice to the lovelorn columns. But, ladies and gentlemen, the news is still on the front page of all newspapers; the editorials are not replaced by more comics; and the newspapers have not become one long collection of advice to the lovelorn. Yet newspapers do not even need a license from the government to be in business; they do not use public property. But in television, where your responsibilities as public trustees are so plain, the moment that the ratings indicate that westerns are popular there are

new imitations of westerns on the air faster than the old coaxial cable could take us from Hollywood to New York. Broadcasting cannot continue to live by the numbers. Ratings ought to be the slave of the broadcaster, not his master, and you and I both know that the rating services themselves would agree.

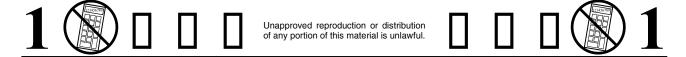
Let me make clear that what I am talking about is balance. I believe that the public interest is made up of many interests. There are many people in this great country and you must serve all of us. You will get no argument from me if you say that, given a choice between a western and a symphony, more people will watch the western. I like westerns too, but a steady diet for the whole country is obviously not in the public interest. We all know that people would more often prefer to be entertained than stimulated or informed. But your obligations are not satisfied if you look only to popularity as a test of what to broadcast. You are not only in show business; you are free to communicate ideas as well as relaxation.

And as Governor Collins said to you yesterday when he encouraged you to editorialize—as you know the FCC has now encouraged editorializing for years—we want you to do this; we want you to editorialize, take positions. We only ask that you do it in a fair and a responsible manner. Those stations that have editorialized have demonstrated to you that the FCC will always encourage a fair and responsible clash of opinion.

22. The main purpose of the passage is to

- (A) compare and contrast various television show genres.
- (B) call for higher standards in television programming.
- (C) denounce television as a harmful pastime for children.
- (D) note that other forms of media are as important as television.
- The author primarily seeks to convince his audience of his point by
 - (A) suggesting that television could be incorporated into school curricula.
 - (B) mentioning the profits to be gained from drawing child audiences.
 - (C) raising fears that television networks could lose in competition with newspapers.
 - (D) making appeals to morality and a sense of civic obligation.

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- **24.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 5-7 ("And most ... schoolroom")
 - (B) Lines 27-30 ("Search your ... day")
 - (C) Lines 38-40 ("Yet newspapers ... property")
 - (D) Lines 56-58 ("We all ... informed")
- **25.** The author mentions the potential consequences of "following the ratings" (lines 14-17) in order to
 - (A) note that children do not necessarily know what is best for them.
 - (B) imply that parents and teachers are sometimes overly restrictive.
 - (C) suggest that television should educate children about healthy diets.
 - (D) lament the laxness of parents and teachers during his era.
- 26. As used in line 16, "steady" most nearly means
 - (A) calm.
 - (B) firm.
 - (C) consistent.
 - (D) rooted.
- **27.** In the fourth paragraph (lines 31-48), the author states that, unlike television networks, newspapers
 - (A) can be easily transported and enjoyed anywhere.
 - (B) pander to their audiences in order to stay in business.
 - (C) require a license from the government to operate.
 - (D) emphasize information over entertainment.

- **28.** The author suggests that television networks can improve their content by
 - (A) making an effort to develop and air more westerns.
 - (B) consulting the operators of the rating services.
 - (C) creating programming that informs and encourages national discourse.
 - (D) airing shows that encourage adults rather than children to tune in.
- **29.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Line 31 ("Now what ... ratings")
 - (B) Lines 46-48 ("Ratings ought ... agree")
 - (C) Lines 52-54 ("You will ... western")
 - (D) Lines 62-65 ("And as ... positions")
- **30.** As used in line 58, "satisfied" most nearly means
 - (A) convinced.
 - (B) fulfilled.
 - (C) sated.
 - (D) dispelled.
- **31.** Which is the following situations is most analogous to the situation presented in lines 25-27 ("There are...violence")?
 - (A) An enjoyable piece of music cannot be heard due to loud construction work nearby.
 - (B) A few healthy items at a buffet are surrounded by unhealthy, but tasty, options.
 - (C) An elected representative suppresses the viewpoints of her ideological opponent.
 - (D) A small number of protestors disrupt a large event taking place on a campus.

Questions 32-42 are based on the following passages.

Passage 1

20

The origins of life on Earth are shrouded in mystery. Scientists agree that life arose almost 4 billion years ago from non-living chemicals, a process called *abiogenesis*. However, many competing hypotheses exist to explain how this might have happened. Because Earth is the only planet in the universe known to harbor life, studying the unique chemical environment of early Earth can allow us to develop a deeper understanding of the causes of abiogenesis.

During the earliest phase of Earth's existence, the *Hadean eon*, conditions on the newly formed planet were very different from those found today. The young Earth was intensely hot, with highly active volcanoes and frequent meteorite impacts. Unlike today's atmosphere, which is predominantly made of nitrogen and oxygen, the Hadean atmosphere is thought to have consisted mainly of carbon dioxide, hydrogen, water vapor, and volcanic gases. Thanks to the intense pressure of this thick atmosphere, liquid water oceans probably existed despite the boiling temperatures on Earth's surface.

Although these conditions would be totally inhospitable to modern life, this unique environment could have produced many of the building blocks of life. Scientists have discovered this by replicating the conditions of the Hadean eon in laboratories. The earliest and most famous of these experiments, conducted by Stanley Miller in the 1950s, involved passing electricity through the particular mixture of gases in the early Earth's atmosphere. Miller found that electricity, such as that delivered by lightning strikes, could have triggered chemical reactions in the Hadean atmosphere producing amino acids, the building blocks of proteins, as well as the nitrogenous bases and sugars that make up nucleic acids such as DNA and RNA. More recent experiments using ultraviolet light, a major component of sunlight, have found that it too could have caused organic compounds to form on Earth during the Hadean eon.

This has led to speculation on the part of many scientists that these molecules, once synthesized in the early Earth's oceans, could have become organized into self-replicating structures that developed into life as we know it. Nucleic acids, for instance, can both carry genetic information and catalyze chemical reactions; simple nucleic acids thus could have replicated themselves and even created proteins from amino acids, like modern life forms do. Indeed, many scientists now believe that today's life descends from an "RNA world" that formed in this way.

Passage 2

It turns out that the conditions for life to arise may actually be quite common throughout the universe. At the very least, the building blocks of life as we know it—amino acids, simple sugars, and other organic compounds—seem to show up wherever we point our telescopes.

For instance, organic molecules form quite readily in the clouds of dust and gas that hang between and around stars. A number of studies have found that certain organic molecules, called PAHs, may be present in nebulae and star systems all over the universe. These molecules, made up of rings of carbon and hydrogen, have structures that might allow them to help RNA strands self-assemble in the oceans of planets; NASA scientists estimate that these molecules contain as much as 20% of the universe's carbon and may have formed shortly after the universe began.

Scientists have also found organic molecules closer to home, within our own galaxy and solar system. In the massive nursery of new star systems at the heart of the Milky Way, a simple form of sugar has been detected. The formation of this sugar is a key step in the creation of the more complex sugars in nucleic acids. This suggests that the raw materials for nucleic acids, and perhaps other key components of life, might be commonly incorporated into forming star systems. This certainly seems to have happened around our Sun. A number of Solar System bodies, such as the Murchison meteorite, have crashed to Earth bearing nitrogenous bases and amino acids that were formed in space, and comets currently orbiting our Sun have been found to carry amino acids as well. If the early Earth was seeded with organic molecules, either during its formation or by meteorite and comet impacts, it is plausible that this could have paved the way for abiogenesis to take place soon thereafter.

Taken together, this evidence suggests that the building blocks of life appear throughout the Milky Way galaxy and elsewhere in the universe. Earth's status as the cradle of life may not be so special after all.

32. The main purpose of Passage 1 is to

- (A) argue that Earth is the only planet in the universe that could support life.
- (B) explain how the conditions of the early Earth could have given rise to life.
- (C) describe a period of Earth's history that was very different from the modern day.
- (D) propose a method for creating artificial life in a laboratory.



- 33. As used in line 26, "particular" most nearly means
 - (A) fastidious.
 - (B) individual.
 - (C) detailed.
 - (D) specific.
- **34.** The purpose of lines 32-35 ("More recent...eon") is primarily to
 - (A) refute the idea that lightning strikes were responsible for creating organic compounds.
 - (B) emphasize the importance of the Sun to the origins of life.
 - (C) suggest an alternative energy source for the formation of organic compounds.
 - (D) propose that organic compounds may have originated in outer space.
- **35.** Passage 1 suggests that many scientists believe that modern life descends from an "RNA world" (line 45) because
 - (A) RNA can perform some of the functions needed to sustain a living organism.
 - (B) RNA organisms would have been uniquely suited to the conditions of the Hadean eon.
 - (C) RNA molecules were produced in Stanley Miller's experiments.
 - (D) RNA is more stable than other nucleic acids.
- **36.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 13-16 ("Unlike today's ... gases")
 - (B) Lines 20-22 ("Although these ... life")
 - (C) Lines 27-32 ("Miller found ... RNA")
 - (D) Lines 39-43 ("Nucleic acids ... do")
- 37. It can reasonably be inferred from Passage 2 that
 - (A) living organisms must have come to Earth from elsewhere in the Universe.
 - (B) the environment of the early Earth would have destroyed organic compounds.
 - (C) our Solar System is unique in containing organic compounds.
 - (D) abiogenesis could have taken place when the universe was fairly young.

- **38.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 47-50 ("At the ... telescopes")
 - (B) Lines 55-60 ("These molecules ... began")
 - (C) Lines 69-70 ("This certainly ... sun")
 - (D) Lines 79-81 ("Taken together ... universe")
- **39.** As used in line 51, "readily" most nearly means
 - (A) preparedly.
 - (B) easily.
 - (C) willingly.
 - (D) freely.
- **40.** Based on Passage 2, which choice best describes the relationship between PAHs and RNA?
 - (A) PAHs can be combined to form RNA molecules in the presence of water.
 - (B) PAHs can provide support for the synthesis of RNA molecules.
 - (C) PAHs are a necessary precursor for the synthesis of RNA molecules.
 - (D) PAHs make possible the synthesis of RNA molecules even in nebulae in deep space.
- **41.** With which of the following claims would the authors of Passages 1 and 2 most likely both agree?
 - (A) Life arose on Earth from non-living organic compounds.
 - (B) Earth's environment is uniquely conducive to the formation of organic compounds.
 - (C) Earth is certainly not the only planet on which life exists
 - (D) Life on Earth could only have begun with an RNA world.
- **42.** How would the author of Passage 2 most likely respond to the claim made in lines 5-8 ("Because Earth ... abiogenesis") of Passage 1?
 - (A) Life probably developed in a nebula elsewhere before arriving on Earth.
 - (B) Scientists do not know exactly what the early Earth's atmosphere was like.
 - (C) The chemical precursors of life can form in a wide variety of environments.
 - (D) Modern organisms would not have been able to survive on the Hadean Earth.



Questions 43-52 are based on the following passage.

In general, democracies organize and carry out their elections in one of two ways. In first-past-the-post (FPTP) elections, voters choose individual candidates for office, and the candidate with the most votes wins. Elections in this kind of system are also called "winner-take-all." In a democracy with proportional representation (PR), parties, not individuals, win seats in a legislature according to the percent of votes they receive in an election. Parties then form coalitions with each other to gain control of the government. Which system a country uses tends to greatly affect its politics; each has its merits and disadvantages.

These two types of election tend to foster very different styles of political debate. First-past-the-post elections tend to lead to more moderate political discussions at the national level. In elections for the presidency of the United States, for example, candidates need support from every part of the country. They cannot alienate large groups by expressing extreme views, so they must be moderate in order to have broad appeal. This moderation has its downsides, however. For one, uncommon opinions tend to be left out of public discussion. This can result in an elected government that may not fully represent citizens' views. Extreme parties are also reduced to the role of spoilers in national elections: unable to win, but able to hurt larger parties with similar, but more moderate, viewpoints. During the US election for president in 1992, a far-right candidate, Ross Perot, drew votes from the sitting president, the center-right George H.W. Bush. This may have allowed the center-left candidate, Bill Clinton, to win the presidency.

Proportional representation, for better or worse, allows more extreme viewpoints to be represented at the national level. This can be a good thing, allowing minority groups and small, single-issue parties to have a voice in government. However, these small parties can cause problems when they join ruling coalitions. They can force the government to focus on niche agendas by threatening to leave the coalition if ignored. In some cases, radical parties that actively oppose or threaten democracy, like fascist or communist parties, can gain seats in PR elections. This occurred most famously in Germany's Weimar Republic in the 1930s, when democratic elections gave the Nazi Party the opportunity to take power.

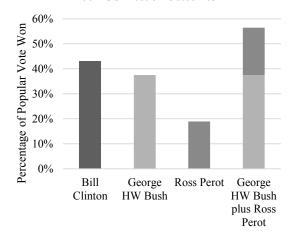
30

Each electoral system also results in different levels of voter participation. First-past-the-post systems generally result in lower overall voter participation. This could be because the rules of FPTP elections discourage voters who support candidates or parties who are not likely to win. Because votes for a losing candidate count for nothing in an

FPTP election, votes for opposition parties are effectively wasted. In elections for US Senate seats and the US presidency, for instance, many states are consistently won by candidates from one party. Opposition voters in these states have little reason to show up at the polls. However, some political scientists argue that because voters vote for specific candidates in FPTP elections, those elected officials are more personally accountable to the citizens that voted for them. This sense of accountability could lead to more citizen engagement between elections.

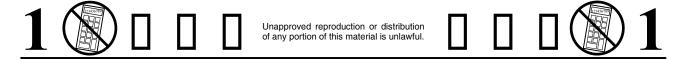
Proportional representation, on the whole, encourages higher levels of participation. Because voters will be represented even if they are in the minority, there are far fewer wasted votes in PR elections. Perhaps for this reason, voter turnout is much higher, on average, in countries that use a PR system. On the other hand, voters in PR elections generally vote for parties rather than individuals. Because the parties appoint legislators to their seats, politicians may feel more accountable to their parties than to voters. This can lead officials to focus on within-party politics rather than the wishes of the people.

1992 US Election Outcomes



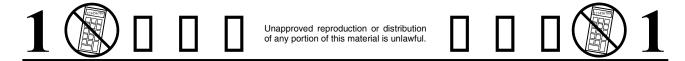
■ Votes for Clinton ■ Votes for Bush ■ Votes for Perot

GO ON TO THE NEXT PAGE



- **43.** The passage primarily focuses on which of the following aspects of democracy?
 - (A) The advantages of democracy over other forms of governance
 - (B) The historical development of democratic ideals
 - (C) The potential failings of democratic systems
 - (D) The electoral systems used in democratic nations
- 44. As used in line 17, "alienate" most nearly means
 - (A) isolate.
 - (B) divert.
 - (C) reject.
 - (D) offend.
- **45.** Based on the passage, which choice best describes the relationship between proportional representation elections and political extremism?
 - (A) Proportional representation elections suppress extremism by making politicians accountable to the people.
 - (B) Proportional representation elections allow extremists to have a voice in government.
 - (C) Proportional representation elections permit extremist politicians to siphon votes from mainstream parties.
 - (D) Proportional representation elections do not impact extremist participation in politics.
- **46.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 5-8 ("In a democracy ... election")
 - (B) Lines 23-25 ("Extreme ... counterparts")
 - (C) Lines 30-32 ("Proportional ... level")
 - (D) Lines 63-64 ("On the other ... individuals")
- **47.** The author most likely mentioned the 1992 US presidential election in lines 25-28 in order to
 - (A) lament the defeat of the author's preferred candidate in an election.
 - (B) demonstrate the impact that spoilers can have on elections.
 - (C) show how unlikely extreme candidates are to win seats in first-past-the-post systems.
 - (D) question the conventional wisdom regarding US presidential elections

- 48. As used in line 57, "engagement" most nearly means
 - (A) betrothal.
 - (B) appointment.
 - (C) involvement.
 - (D) conflict.
- **49.** The author argues that first-past-the-post elections tend to have lower voter turnout than proportional representation elections because
 - (A) votes for the loser in an first-past-the-post election do not affect the makeup of the government.
 - (B) politicians in first-past-the-post systems do not entirely share their constituents' ideologies.
 - (C) politicians in proportional representation systems are directly accountable to their constituents.
 - (D) small parties in first-past-the-post systems can destabilize coalitions with more frequent elections.
- **50.** Which choice provides the best evidence for the answer to the previous question?
 - (A) Lines 21-22 ("This can ... views")
 - (B) Lines 34-37 ("However ... ignored")
 - (C) Lines 44-49 ("This could ... wasted")
 - (D) Lines 52-57 ("However ... elections")
- **51.** Which situation is most similar to the one described in lines 64-68 ("Because the ... people")?
 - (A) A city councilman fielding a barrage of questions from citizens at a town hall meeting
 - (B) A CEO who answers to her company's board of directors, not its shareholders
 - (C) A scientist submitting a research paper for review by his colleagues
 - (D) A company which looks at consumer trends to make decisions about future products



- **52.** It can reasonably be inferred from the passage and graphic that
 - (A) A candidate can win the US presidency without earning a majority of votes.
 - (B) Ross Perot would have won the 1992 election had George HW Bush not been a candidate.
 - (C) Spoilers are typically the deciding factor in US presidential elections.
 - (D) Bill Clinton's performance in the 1992 election was solely due to Ross Perot's candidacy.

STOP

If you complete the problem set before time elapses, you may review your responses for this section.

Do not view or begin working on any other sections.

ANSWERS

SECTION 1

SECTION 1: READING

- 1. C
- 2. A
- 3. C
- 4. C
- 5. B
- 6. B
- 7. D
- 8. A
- 9. C
- 10. D
- 11. C
- 12. B
- 13. A

- 14. C
- 15. B
- 16. D
- 17. B
- 18. D
- 19. A
- 20. C
- 21. B
- 22. B
- 23. D
- 24. B
- 25. A
- 26. C

- 27. D
 - 28. C
 - 29. D
 - 30. B
 - 31. B
 - 32. B
 - 33. D
 - 34. C
 - 35. A
 - 36. D
 - 37. D
 - 38. B
 - 39. B

- 40. B
- 41. A
- 42. C
- 43. D
- 44. D
- 45. B
- 46. C
- 47. B
- 48. C
- 49. A 50. C
- 51. B
- 52. A

SECTION 2: MATH (NO-CALCULATOR)

- 1. B
- 2. C
- 3. A 4. B
- 5. C

- 6. B
- 7. D
- 8. A
- 9. C
- 10. A

- 11. C
- 12. D
- 13. C
- 14. A
- 15. B

- 16. $4 \le y \le 6$
- 17. 9
- 18. 4
- 19. 5
- 20. 6