



EST I - Literacy Test I

Student's Name _____

National ID _____

Test Center: _____

Duration: 35 minutes

44 Multiple Choice Questions

Instructions:

- Place your answer on the answer sheet. Mark only one answer for each of the multiple choice questions.
- Avoid guessing. Your answers should reflect your overall understanding of the subject matter.

Directions: Questions follow each of the passages below. Some questions ask you how the passage might be changed to improve the expression of ideas. Other questions ask you how the passage might be altered to correct errors in grammar, usage, and punctuation. One or more graphics accompany some passages. You will be required to consider these graphics as you answer questions about editing the passages.

There are three types of questions. In the first type, a part of the passage is underlined. The second type is based on a certain part of the passage. The third type is based on the entire passage.

Read each passage. Then, choose the answer to each question that changes the passage so that it is consistent with the conventions of standard written English. One of the answer choices for many questions is “NO CHANGE.” Choosing this answer means that you believe the best answer is to make no change in the passage.

Questions 1-11 are based on the following passage.

How Pandemics Change Society

The black death, the Spanish flu, and other disease outbreaks have transformed how people live. Will COVID-19 change the world? It will do so, if it is similar to the pandemics of the past. Plagues and viral contagions have regularly [1] improved the course of human civilization. "Things are never the same after a pandemic as they were before," said Dr. Liam Fox, [2] who's studied these outbreaks for a forthcoming book. "The current outbreak will be no exception."

The earliest pandemic [3] has occurred during the Peloponnesian War in 430 B.C. Now believed to have been a form of typhoid fever, that particular plague passed through Libya, Ethiopia, and Egypt before striking the city of Athens.

1. A. NO CHANGE

B. occurred

C. helped

D. witnessed

2. A. NO CHANGE

B. who is studying

C. whose studied

D. who's study

3. A. NO CHANGE

B. occurred

C. had occurred

D. has been occurring

(i)The cause of plague is [4] Yersinia pestis: a bacterium spread by fleas on rodents and it is the same culprit behind one of the worst pandemics in human history: the Black Death. [5] (ii) Routine medical inspections became customary, and hospitals were built throughout Europe to treat the sick. (iii)The Black Death eventually swept throughout Europe and wiped out about 200 million people. (iv) As a result, it forced authorities to institute health measures that remain in place today. (v) Fourteenth-century Venice ordered mandated isolation periods, named quaranta giorni — or "quarantine" in English — to signify the 40 days of isolation imposed on incoming ships.

The Black Death's biggest socioeconomic legacy was its role in ending feudalism. Feudalism was a medieval system that empowered wealthy nobles to grant the use of their land to peasants in exchange for [6] there labor. By wiping out a huge swath of the working population, the Black Death created a labor shortage that gave peasants the [7] leverage to negotiate new working terms effectively bringing about the end of serfdom and paving the way for modern capitalism.

4. A. NO CHANGE

- B. Yersinia pestis: a bacterium spread by fleas on rodents.
- C. Yersinia pestis (a bacterium spread by fleas on rodents)
- D. Yersinia pestis, a bacterium spread by fleas on rodents,

5. To make this paragraph most logical, sentence (ii) should be placed

- A. where it is now.
- B. before sentence i.
- C. after sentence iii.
- D. after sentence iv.

6. A. NO CHANGE

- B. they're
- C. their
- D. this

7. A. NO CHANGE

- B. alternative
- C. strength
- D. investment

The coronavirus has already had a huge and potentially [8] enduring impact on everyday life. Our work and social lives have gone virtual; [9] movie studios, gyms, musicians, and karaoke bars are streaming their content straight into our homes. The outbreak has also revived impassioned debates about the U.S. health-care system, possibly offering [10] a hindrance to those in favor of universal coverage.

8. Which wording best conveys that the coronavirus' effect is long lasting?
- A. NO CHANGE
 - B. fleeting
 - C. sudden
 - D. appalling
9. Which choice is most consistent with the logical flow of the sentence?
- A. NO CHANGE
 - B. we have a growing appetite for video technology such as Zoom and Skype.
 - C. video gaming has reached astounding levels, and we now share the experience from a safe distance.
 - D. the fabric of society has disintegrated, and daily living skills have become harder.
10. A. NO CHANGE
- B. an obstacle to
 - C. a boon for
 - D. a disadvantage to

The Spanish Flu and the economic depression that followed led to a wave of nationalism, authoritarianism, and another world war. [11] Therefore, with the onset of COVID-19, countries should be united against a common viral enemy. "We've forgotten a lot of the lessons that we learned after the Spanish Flu and other pandemics," Spinney says. "We may be about to learn them again."

- 11.** What would most logically follow this sentence while being consistent with the rest of the paragraph?
- A.** Consequently, the pandemic should strengthen the tide of globalization and eradicate xenophobia.
 - B.** Consequently, the pandemic should reverse the tide of globalization and fuel xenophobia.
 - C.** Consequently, humanity will be able to stop the march of globalization to combat this pandemic.
 - D.** Consequently, humanity will rely on improving the economic system and change the course of history.

Questions 12-22 are based on the following passage and supplementary material.

Land Use

Agriculture is the oldest use of land for growing crops and rearing animals. Half of the world's habitable land is used for agriculture. Extensive land use has a major impact on the earth's environment [12] when it reduces wilderness and threatens biodiversity. Reducing the consumption of resource-intensive products and increasing the productivity of land makes it possible to produce food with much smaller inputs [13], and reducing the impact on the environment.

Half of the world's habitable land [14] is used for agriculture. For much of human history, most of the world's land was wilderness: forests, grasslands and shrubbery [15] dominated its' landscapes. Over the last few centuries, this has changed dramatically.

12. A. NO CHANGE

B. so

C. while

D. as

13. A. NO CHANGE

B. and reduce the impact on the environment.

C. and reduce the impact on the environment.

D. reduces the impact on the environment.

14. A. NO CHANGE

B. are used

C. were used

D. is to be used

15. A. NO CHANGE

B. dominated landscapes.

C. dominated its' landscapes.

D. dominated its landscapes.

If we [16] are to break down global land area, we would realize that [17] 10% of the world is covered by glaciers, and a further 19% is barren land – deserts, dry salt flats, beaches, sand dunes, and exposed rocks. This leaves what we call ‘habitable land’. Half of all habitable land is used for agriculture. The remainder is only 37% forests; 11% as shrubs and grasslands; 1% as freshwater coverage; and the remaining 1% – a much smaller share than many suspect – is built-up urban area.

16. A. NO CHANGE

B. were

C. could

D. decide

17. Which choice gives the most accurate interpretation of the data in the graph?

A. NO CHANGE

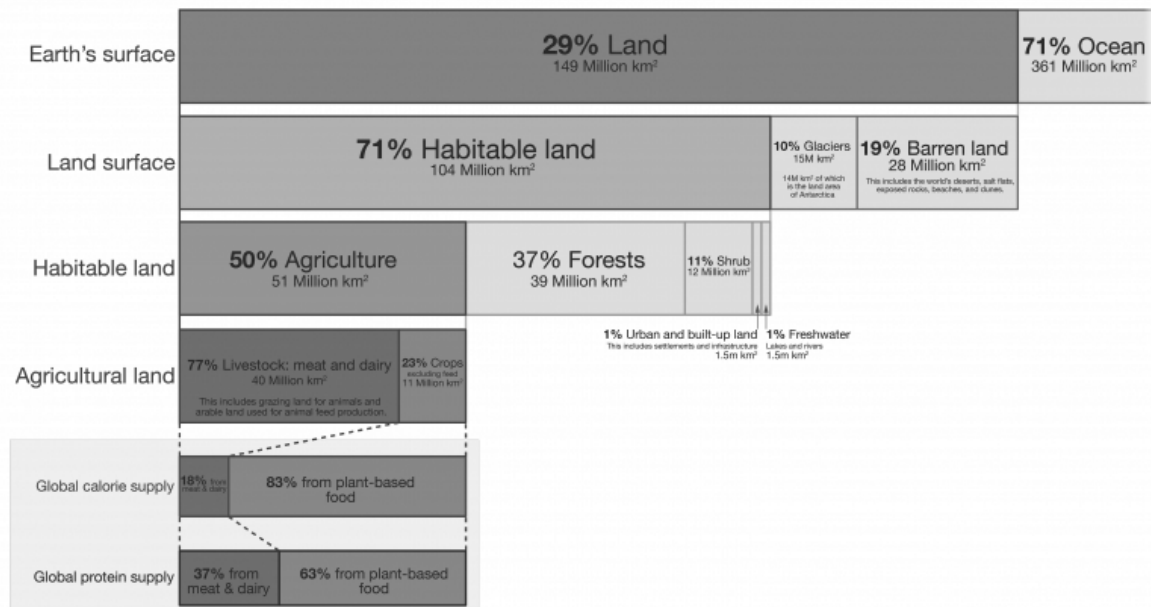
B. 19% of the world is covered by glaciers, and a further 10% is barren land. 29% of what is left is habitable land used for agriculture.

C. There are only 37% forests; 11% shrubs and grasslands; these make up 50% of habitable land.

D. 29% of the world is covered by glaciers, and barren land. They make up 29% of the earth’s surface.

Global land use for food production

Our World in Data



Data source: UN Food and Agriculture Organization (FAO)
OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the authors Hannah Ritchie and Max Roser in 2019.

There is also a [18] highly and unequal distribution of land use between livestock and crops for human consumption. If we combine pastures used for grazing with land used to grow crops for animal feed, livestock accounts for 77% of global farming land. [19] While livestock takes up most of the world's agricultural land it only produces 18% of the world's calories and 37% of total protein.

There are two main uses of agricultural land: arable farming (which is land dedicated to growing crops), and pastureland (which includes meadows and pastures used for livestock rearing). In many countries, land use for livestock grazing is dominant relative to arable farming. For most countries, land dedicated to cropland is typically below 20 percent, with many countries dedicating less than 10 percent. [20] Besides, countries in South Asia and Europe allocate a large share of land area to arable farming. India, Bangladesh, Ukraine and Denmark dedicated more than half of their total land area to cropland in 2015.

18. A. NO CHANGE

B. high, unequal

C. highly, unequal

D. highly unequal

19. A. NO CHANGE

B While livestock takes up most of the world's agricultural land they only produce 18% of the world's calories and 37% of total protein.

C While livestock takes up most of the world's agricultural land, it only produces 18% of the world's calories and 37% of total protein.

D Because livestock takes up most of the world's agricultural land it only produces 18% of the world's calories and 37% of total protein.

20. A. NO CHANGE

B However,

C Moreover,

D (Although,

For most countries, the majority of agricultural land is used as pastureland for [21] nurturing livestock. In contrast to arable farming, land use for livestock in Europe and South Asia, in particular, is typically less than 20 percent. However, most continental regions have countries where pastureland reaches close to half of total land area. In some countries, this can reach up to 70 percent. [22] Livestock farming can take place across a range of diverse climatic and environmental regions.

21. Which word would be better suited for the context?
- A. NO CHANGE
 - B. nursing
 - C. rearing
 - D. growing
22. Which choice would emphasize the fact that livestock farming is less geographically constrained?
- A. NO CHANGE
 - B. Land use for cattle rearing in Europe and South Asia is less than 20 percent.
 - C. The majority of agricultural land is used for livestock rearing in continental regions
 - D. Cattle rear in temperate regions and sheep graze in hilly and semi-arid terrain.

Questions 23-33 are based on the following passage.

Will You Lose Your Job to a Robot?

Automation has become a threat to society, and rapid technological advances are enabling machines to perform a growing number of tasks traditionally done by humans. Law firms now use artificial intelligence (AI) [23] to conduct contract analysis, for hunting down client conflicts, and even craft litigation strategy. McDonald's is replacing drive-thru workers with order-taking AI, and cashiers with self-checkout kiosks. From 1990 to 2007, [24] robots replaced about 670,000 U.S. jobs, mostly in manufacturing; every robot introduced into a local economy claimed 6.2 jobs. That trend will accelerate over the next decade, as advances in mobile technology, AI, data transfer, and computing speed [25] allows robots to act with greater independence. Oxford University researchers [26] concluded and established the result in a major 2013 study that 47 percent of American jobs are at "high risk" of automation within two decades.

23. A. NO CHANGE
B. to conduct contract analysis, hunt for client conflicts, and even craft litigation strategy.
C. to conduct contract analysis, to hunt for client conflicts, and even crafting litigation strategy.
D. conducting contract analysis, hunting for client conflicts, and even crafting litigation strategy.
24. A. NO CHANGE
B. robots have been replacing
C. robots have replaced
D. robots were replacing
25. A. NO CHANGE
B. allowing
C. allowed
D. allow
26. A. NO CHANGE
B. came to the conclusion and established
C. concluded
D. reached a conclusion

Jobs that are mostly at risk are those involving repetitive physical tasks in predictable environments. [27] The Palm Beach County Court recently began using four robots — Wally Bishop, Rosie Tobor, Kitt Robbie, and Speedy — to read court filings, fill out docket sheets, and input data into its case management system. In theory, at least 91 percent of a short-order cook's tasks can be automated using existing technology. It's 100 percent for a dredge operator, plasterer, stucco mason, motion picture projectionist, and logging equipment operator. [28] Similarly, jobs that involve managing people, social interaction, and creative thinking, will see less automation. But even the jobs you'd think are safe aren't. The Guardian Australia newspaper published its first article this year written entirely by a computer. The Indian e-commerce site Myntra recently created one of its best-selling T-shirts by delegating the design [29] for two algorithms that analysed previous designs and invented new ones.

27. The writer is considering inserting this sentence at this point in the passage:

“For instance, some restaurants in China have already begun replacing servers with robots.”

Should he make this insertion?

- A. Yes. Servers are the only jobs that have repetitive tasks.
- B. Yes. It is a supporting detail for the sentence before it.
- C. No. Servers' jobs are not repetitive.
- D. No. Robots cannot perform a server's job.

28. A. NO CHANGE

- B. Conversely,
- C. Moreover,
- D. Accordingly,

29. A. NO CHANGE

- B. about
- C. to
- D. in

Despite the number of people losing their jobs to automation, many prophesy that artificial intelligence is still years away from sending all of humanity on a permanent vacation. [30] History has shown that previous fateful warnings about technology wiping out the need for human labor [31] have proved untrue — although there is often a difficult transition period to new jobs requiring new skills.

In the 19th century, farmers rendered [32] out of fashion by mechanized agriculture found their way to new, better-paying jobs in factories.

30. Which choice is most logically inserted at this point in the paragraph?

A. NO CHANGE

B. Consequently, these people have been uneasy about the idea that automation would replace human workers.

C. The economy will not have time to create new professions to absorb the tens of millions of workers displaced by automation.

D. People’s predictions vary, and there is a lot of grim prognostication about a "robot apocalypse.”

31. A. NO CHANGE

B. has proved

C. will have proved

D. will prove

32. A. NO CHANGE

B. obsolete

C. redundant

D. asinine

When industrial automation in the 20th century threatened factory workers, [33] this created an ever-growing pool of unemployable humans who could not compete economically with machines. If history is any guide, According to 2013 study," we could also expect that 8 to 9 percent of 2030 labor demand will be in new types of occupations that have not existed before."

33. Which of the following would be most consistent with the ending of the paragraph?
- A. NO CHANGE
 - B. industrial automation re-shaped the global workforce, and a dangerously uncertain future subjected people to dismissal from their jobs.
 - C. AI had a high impact on the workforce because it is capable of outperforming humans.
 - D. a wave of nonexistent jobs, soon flourished.

Questions 34-44 are based on the following passage.

Private Investigators in Fiction and Fact

After I graduated from college and was looking for a job, a newspaper employment ad caught my eye. It sounded interesting, so I sent in a résumé. I later discovered that the job was for a store detective. [34] Duties including watching for shoplifters and tracking the legally or ethically questionable actions of store employees.

The interview was my first hint that real-life private investigators were not like the characters one encountered in movies or mystery novels such as [35] Raymond Chandler's Philip Marlowe or Dashiell Hammett's Sam Spade whose tough exteriors belie their soft-hearted natures. [36] Not only do they track down criminals, but they also solve crimes in the most dangerous of circumstances.

34. A. NO CHANGE
- B. Duties including watching for shoplifters, and tracking the legally or ethically questionable actions of store employees.
- C. Duties included watching for shoplifters and tracking the legally or ethically questionable actions of store employees.
- D. Duties including watching for shoplifters and tracking the legally, or ethically questionable actions of store employees.
35. A. NO CHANGE
- B. Raymond Chandler's Philip Marlowe, or Dashiell Hammett's Sam Spade whose tough exteriors belie their soft-hearted natures.
- C. Raymond Chandler's Philip Marlowe or Dashiell Hammett's Sam Spade, whose tough exteriors belie their soft-hearted natures.
- D. Raymond Chandler's, Philip Marlowe, or Dashiell Hammett's, Sam Spade, whose tough exteriors belie their soft-hearted natures.
36. A. NO CHANGE
- B. They not only track down criminals, but they also solve crimes in the most dangerous of circumstances.
- C. Not only tracking down criminals, but they also solve crimes in the most dangerous of circumstances.
- D. They not only track down criminals, but also they solve crimes in the most dangerous of circumstances.

These heroic figures adhere to an incorruptible code of personal morality that enables them to [37] succumb to the most formidable obstacles as they apprehend criminals and restore order to society. ___ That is one vision of detective work. Another image comes out of a more playful tradition of mystery writing that includes characters such as [38] Sherlock Holmes the fictional genius who solves complex crimes—sometimes without leaving his comfortable armchair. Holmes approaches crime as if it was a crossword puzzle missing a few essential letters that, once supplied, [39] make the motive for a crime and the identity of its perpetrator clear to all concerned. Using his wits and courage, he invariably [40] searches for the needed evidence and quickly solves the crime.

37. A. NO CHANGE

- B. usher
- C. surmount
- D. conceal

38. A. NO CHANGE

- B. Sherlock Holmes the fictional genius who solves complex crimes— sometimes, without leaving his comfortable armchair.
- C. Sherlock Holmes the fictional genius who solves complex crimes, sometimes without leaving his comfortable armchair.
- D. Sherlock Holmes, the fictional genius who solves complex crimes— sometimes without leaving his comfortable armchair.

39. A. NO CHANGE

- B. made
- C. makes
- D. making

40. Which word would have a bigger effect when used in this context?

- A. NO CHANGE
- B. expunges
- C. scrutinizes
- D. effaces

[41] [1] In fact, all this is a far cry from the world of real-life detectives. [2] Modern private investigators sometimes do monitor potential shoplifters, but more often are involved in actual investigations. [3] Typical assignments might include [42] to do background checks on people or tracking down missing persons. [4] The work of real-life detectives differs from the way their work is portrayed in books and movies. [5] The modern-day private investigator, however, spends less time on his or her feet and considerably more time on the computer. [43] Because the work is routine, the end result of such inquiries might lead to the reuniting of siblings separated since childhood or to the criminal investigation of a company's business practices.

Even at its most exciting, the work of modern-day private investigators is rarely glamorous. It is much more likely to involve the careful analysis of data than a high-speed car chase. Today's private detectives typically [44] perform tasks that are a romantic's dream, full of action and excitement. But for those who like to solve puzzles, for those who like to find what's missing or figure out what someone may be up to, real private investigation still appeals to the detective in all of us.

41. The main idea of this paragraph is stated in two sentences. Which are they?
- A. Sentence 2 and 4
 - B. Sentence 1 and 3
 - C. Sentence 1 and 4
 - D. Sentence 4 and 5
42. A. NO CHANGE
- B. doing background checks
 - C. to doing background checks
 - D. done background checks
43. A. NO CHANGE
- B. Although
 - C. Moreover,
 - D. Knowing
44. Which choice is most consistent with the argument made in the first sentence of the paragraph?
- A. NO CHANGE
 - B. perform tasks that can vary from one day to the next.
 - C. carry out detail oriented, methodical, and often mundane tasks.
 - D. spend days or weeks watching and shadowing subjects with a lot of action.



EST I - Literacy Test II

Student's Name _____

National ID _____

Test Center: _____

Duration: 65 minutes

52 Multiple Choice Questions

Instructions:

- Place your answer on the answer sheet. Mark only one answer for each of the multiple choice questions.
- Avoid guessing. Your answers should reflect your overall understanding of the subject matter.

The following passage is an excerpt from Jane Eyre by Charlotte Brönte about a young orphan girl and her experience in the household she grew up in.

John Reed was a schoolboy of fourteen years old; four years older than I, for I was but ten: large and stout for his age, with a dingy and unwholesome skin; 5 thick lineaments in a spacious visage, heavy limbs and large extremities. He gorged himself habitually at table, which made him bilious, and gave him a dim and bleared eye and flabby 10 cheeks. He ought now to have been at school; but his mama had taken him home for a month or two, "on account of his delicate health." Mr. Miles, the master, affirmed that he would do very 15 well if he had fewer cakes and sweetmeats sent him from home; but the mother's heart turned from an opinion so harsh, and inclined rather to the more refined idea that John's sallowness was 20 owing to over-application and, perhaps, to pining after home.

John had not much affection for his mother and sisters, and an antipathy to me. He bullied and punished me; not 25 two or three times in the week, nor once or twice in the day, but continually: every nerve I had feared him, and every morsel of flesh in my bones shrank when he came near. There were 30 moments when I was bewildered by the terror he inspired, because I had no appeal whatever against either his menaces or his inflictions; the servants did not like to offend their young master by taking my part against him, and Mrs. 35 Reed was blind and deaf on the subject: she never saw him strike or heard him abuse me, though he did both now and then in her very presence, more 40 frequently, however, behind her back.

Habitually obedient to John, I came up to his chair: he spent some three minutes in thrusting out his tongue at me as far

as he could without damaging the roots: 45 I knew he would soon strike, and while dreading the blow, I mused on the disgusting and ugly appearance of him who would presently deal it. I wonder if he read that notion in my face; for, all at 50 once, without speaking, he struck suddenly and strongly. I tottered, and on regaining my equilibrium retired back a step or two from his chair.

"That is for your impudence in 55 answering mama awhile since," said he, "and for your sneaking way of getting behind curtains, and for the look you had in your eyes two minutes since, you rat!"

60 Accustomed to John Reed's abuse, I never had an idea of replying to it; my care was how to endure the blow which would certainly follow the insult.

"What were you doing behind the 65 curtain?" he asked.

"I was reading."

"Show the book."

I returned to the window and fetched it thence.

70 "You have no business to take our books; you are a dependent, mama says; you have no money; your father left you none; you ought to beg, and not to live here with gentlemen's children like us, 75 and eat the same meals we do, and wear clothes at our mama's expense. Now, I'll teach you to rummage my bookshelves: for they *are* mine; all the house belongs to me, or will do in a few 80 years. Go and stand by the door, out of the way of the mirror and the windows."

I did so, not at first aware what was his intention; but when I saw him lift and poise the book and stand in act to hurl it, 85 I instinctively started aside with a cry of

alarm: not soon enough, however; the volume was flung, it hit me, and I fell, striking my head against the door and cutting it. The cut bled, the pain was sharp: my terror had passed its climax; other feelings succeeded.

90

“Wicked and cruel boy!” I said. “You are like a murderer—you are like a slave-driver—you are like the Roman emperors!”

95

I had read Goldsmith’s History of Rome, and had formed my opinion of Nero, Caligula, etc. Also I had drawn parallels in silence, which I never thought thus to have declared aloud.

100

1. Which of the following statements best expresses the main idea of the passage?
 - A. John Reed openly expresses his dislike for the main character.
 - B. The main character is unwelcome in the household and constantly suffers from harassment.
 - C. The main character regularly seeks to engage in mischief.
 - D. The main character was harmed by John Reed.
2. John Reed tone in the beginning of the passage is that of
 - A. ambivalence and caution.
 - B. resignation and compliance.
 - C. rage and indignation.
 - D. naivety and optimism.

3. Which choice best provides evidence for the answer to the previous question?
 - A. Lines 41-44 (“Habitually” ... “roots”)
 - B. Lines 51-53 (“I”...“chair”)
 - C. Lines 60-63 (“Accustomed”... “insult”)
 - D. Lines 89-91 (“The”... “succeeded”)
4. In lines 1-6, the author most likely mentions these details to
 - A. discredit John Reed’s actions delineated later in the passage.
 - B. accentuate John Reed’s wickedness and subsequent actions.
 - C. describe a character’s appearance as an introduction.
 - D. draw a contrast between John Reed and the main character.
5. The main character mentions “the Roman emperors” in lines 94-95 to imply that
 - A. John Reed shares traits with previous historical tyrants.
 - B. John Reed is powerful and unforgiving.
 - C. the main character both fears and despises John Reed.
 - D. John Reed views himself as a ruler.
6. Which choice best provides evidence for the answer to the previous question?
 - A. Lines 85-89 (“I”... “it”)
 - B. Lines 93-95 (“Wicked”...“emperors”)
 - C. Lines 96-98 (“I”... “etc”)
 - D. Lines 98-100 (“Also”... “aloud”)

7. Lines 96-97 mention that the main character has read “Goldsmith’s History of Rome” in order to
- A. highlight the main character’s erudite integrity.
 - B. expose the main character’s ambivalent character.
 - C. express her interest in history and literature.
 - D. speculate the main character’s position within the household.
8. As used in line 3, “stout” most nearly means
- A. determined.
 - B. tough.
 - C. fat.
 - D. firm.
9. In line 12, the phrase “on account of his delicate health” is placed in quotation marks
- A. to emphasize John Reed’s weak physique.
 - B. to contradict the sentence that follows.
 - C. as an opportunity to empathize with John Reed.
 - D. as a stylistic device to express sarcasm and disdain.
10. As used in line 45, “strike” most nearly means
- A. ignite.
 - B. hit.
 - C. seem.
 - D. agree on.

The following passage is taken from Kepler by Walter W. Bryant discussing Kepler's relationship with Tycho, a fellow astronomer.

The association of Kepler with Tycho was one of the most important landmarks in the history of astronomy. The younger man hoped, by the aid of Tycho's planetary observations, to obtain better support for some of his fanciful speculative theories, while the latter, who had certainly not gained in prestige by leaving Denmark, was in great need of a competent staff of assistants. Of the two it would almost seem that Tycho thought himself the greater gainer, for in spite of his reputation for brusqueness and want of consideration, he not only made light of Kepler's apology in the matter of Reymers, but treated him with uniform kindness in the face of great rudeness and ingratitude. He begged him to come "as a welcome friend," though Kepler, very touchy on the subject of his own astronomical powers, was afraid he might be regarded as simply a subordinate assistant. An arrangement had been suggested by which Kepler should obtain two years' leave of absence from Gratz on full pay, which, because of the higher cost of living in Prague, should be supplemented by the Emperor; but before this could be concluded, Kepler threw up his professorship, and thinking he had thereby also lost the chance of going to Prague, applied to Maestlin and others of his Tübingen friends to make interest for him with the Duke of Wurtemberg and secure the professorship of medicine. Tycho, however, still urged him to come to Prague, promising to do his utmost to secure for him a permanent appointment, or in any event to see that he was not the loser by coming.

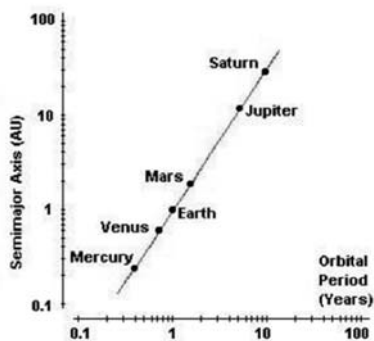
Kepler was delayed by illness on the way, but ultimately reached Prague, accompanied by his wife, and for some time lived entirely at Tycho's expense, writing by way of return essays against Reymers and another man, who had claimed the credit of the Tyconic system. This Kepler could do with a clear conscience, as it was only a question of priority and did not involve any support of the system, which he deemed far inferior to that of Copernicus. The following year saw friction between the two astronomers, and we learn from Kepler's abject letter of apology that he was entirely in the wrong. It was about money matters, which in one way or another embittered the rest of Kepler's life, and it arose during his absence from Prague. On his return in September, 1601, Tycho presented him to the Emperor, who gave him the title of Imperial Mathematician, on condition of assisting Tycho in his calculations, the very thing Kepler was most anxious to be allowed to do: for nowhere else in the world was there such a collection of good observations sufficient for his purpose of reforming the whole theory of astronomy.

The Emperor's interest was still mainly with astrology, but he liked to think that his name would be handed down to posterity in connection with the new Planetary Tables in the same way as that of Alphonso of Castile, and he made liberal promises to pay the expenses. Tycho's other principal assistant, Longomontanus, did not stay long after giving up the Mars observations to Kepler, but instead of working at the new lunar theory, suddenly left to take up a professorship of astronomy in his native Denmark.

Very shortly afterwards Tycho himself died of acute distemper; Kepler began to prepare the mass of manuscripts for publication, but, as everything was

95 claimed by the Brahe family, he was not
 allowed to finish the work. He
 succeeded to Tycho's post of principal
 mathematician to the Emperor, at a
 reduced official salary, which owing to
 the emptiness of the Imperial treasury
 was almost always in arrears. In order to
 meet his expenses he had recourse to the
 casting of nativities, for which he
 100 gained considerable reputation and
 received very good pay. He worked by
 the conventional rules of astrology, and
 was quite prepared to take fees for so
 doing, although he had very little faith
 105 in them, preferring his own fanciful
 ideas.

Kepler's Third Law



Source: Kevin Brown

11. In line 7, the author describes Kepler's theories as "fanciful" and "speculative" to indicate that
- A. his theories were conventional.
 - B. his theories were based on facts.
 - C. Kepler often used his imagination in science.
 - D. Kepler was wary of his theories.
12. According to the passage, Kepler's personality could best be described as
- A. selfish and unrelenting.
 - B. timid and unobtrusive.
 - C. proud and obstinate.
 - D. hypocritical and defensive.

13. Which choice best provides evidence for the answer to the previous question?
- A. Lines 17-19 ("but ... "ingratitude")
 - B. Lines 19-24 ("He"... "assistant")
 - C. Lines 31-38 ("Kepler"... "medicine")
 - D. Lines 56-61 ("The"... "wrong")
14. As used in line 14, "want" most nearly means
- A. yearning.
 - B. desire.
 - C. need.
 - D. lack.
15. According to the passage, all of the following statements are true EXCEPT
- A. Kepler obtained two years of paid leave from Gratz endorsed by the Emperor.
 - B. Kepler and Tycho experienced friction due to financial tension.
 - C. Tycho attempted to persuade Kepler to join him in Prague.
 - D. Due to an ailment, Kepler did not reach Prague on time.
16. According to the passage, Kepler suffered most of his life from
- A. being financially unstable.
 - B. a lack of opportunities.
 - C. disrespectful colleagues.
 - D. constant dismissals from work.

17. The passage is most likely written for an audience that
- A. is mildly familiar with astronomers.
 - B. has no prior background on astronomers.
 - C. is conducting thorough historical research on key astronomers.
 - D. is uninterested in astronomers.
18. The Emperor most likely endorsed Kepler and other astrologists because
- A. he believed it was essential for an emperor to participate in science.
 - B. he wanted his name to go down in history alongside the future scientific discoveries.
 - C. he had extra finances available in his treasury.
 - D. he insisted that no discoveries should be made without his knowledge.
19. Which choice best provides evidence for the answer to the previous question?
- A. Lines 24-30 (“An” ... “Emperor”)
 - B. Lines 74-80 (“The” ... “expenses”)
 - C. Lines 88-93 (“Very” ... “work”)
 - D. Lines 103-107 (“He” ... “ideas”)
20. As used in line 94, “post” most nearly means
- A. station.
 - B. pole.
 - C. mail.
 - D. position.
21. The graph helps support which of the following arguments?
- A. Despite Kepler’s “fanciful” theories, he was ultimately successful in discovering orbital law.
 - B. Kepler only focused on one aspect of his theories and was unable to branch further.
 - C. With the help of the Emperor, Kepler formed his third law in science.
 - D. Kepler’s law was out of the focus of astronomy.

The first edited passage is from Birds of the Indian Hills by Douglas Dewar which discusses Himalayan bird habitat.

Passage 2 taken from Birds in Town and Village by W. H. Hudson is about exotic birds found in Britain.

Passage 1

Himalayan birds inhabit what is perhaps the most wonderful tract of country in the world. The Himalayas are not so much a chain of mountains as a mountainous
5 country, some eighty miles broad and several hundred long—a country composed entirely of mountains and valleys with no large plains or broad plateaux.

10 There is a saying of an ancient Sanskrit poet which, being translated into English, runs: “In a hundred ages of the gods I could not tell you of the glories of Himachal.” This every writer on things
15 Himalayan contrives to drag into his composition. Some begin with the quotation, while others reserve it for the last, and make it do duty for the epigram which stylists assure us should terminate
20 every essay.

There are some who quote the Indian sage only to mock him. Such assert that the beauties of the Himalayas have been greatly exaggerated—that, as regards
25 grandeur, their scenery compares unfavorably with that of the Andes, while their beauty is surpassed by that of the Alps. Not having seen the Andes, I am unable to criticize the assertion regarding
30 the grandeur of the Himalayas, but I find it difficult to imagine anything finer than their scenery.

As regards beauty, the Himalayas at their best surpass the Alps, because they
35 exhibit far more variety, and present everything on a grander scale.

The Himalayas are a kind of Dr. Jekyll and Mr. Hyde. They have two faces—the fair and the plain. In May they are at their
40 worst. Those of the hillsides which are not afforested are brown, arid, and desolate, and the valleys, in addition to being unpleasantly hot, are dry and dusty. The foliage of the trees lacks freshness,
45 and everywhere there is a remarkable absence of water, save in the valleys through which the rivers flow. On the other hand, September is the month in which the Himalayas attain perfection or
50 something approaching it. The eye is refreshed by the bright emerald garment which the hills have newly donned. The foliage is green and luxuriant. Waterfalls, cascades, mighty torrents and rivulets
55 abound. Himachal has been converted into fairyland by the monsoon rains.

A remarkable feature of the Himalayas is the abruptness with which they rise from the plains in most places. In some parts
60 there are low foothills; but speaking generally the mountains that rise from the plain attain a height of 4000 or 5000 feet.

Passage 2

There are countries with a less fertile soil and a worse climate than ours, yet richer
65 in bird life. Nevertheless, England is not poor; the species are not few in number, and some are extremely abundant. Unfortunately many of the finer kinds have been too much sought after;
70 persecuted first for their beauty, then for their rarity, until now we are threatened with their total destruction. As these kinds become unobtainable, those which stand next in the order of beauty and
75 rarity are persecuted in their turn; and in a country as densely populated as ours, where birds cannot hide themselves from human eyes, such persecution must eventually cause their extinction.
80 Meanwhile the bird population does not decrease. Every place in nature, like every property in Chancery, has more

than one claimant to it—sometimes the claimants are many—and so long as the dispute lasts all live out of the estate. For there are always two or more species subsisting on the same kind of food, possessing similar habits, and frequenting the same localities. It is consequently impossible for man to exterminate any one species without indirectly benefiting some other species, which attracts him in a less degree, or not at all. This is unfortunate, for as the bright kinds, or those we esteem most, diminish in numbers the less interesting kinds multiply, and we lose much of the pleasure which bird life is fitted to give us. When we visit woods, or other places to which birds chiefly resort, in districts uninhabited by man, or where he pays little or no attention to the feathered creatures, the variety of the bird life encountered affords a new and peculiar delight. There is a constant succession of new forms and new voices; in a single day as many species may be met with as one would find in England by searching diligently for a whole year.

22. The tone of the author in Passage 1 is one of

- A. mild interest and openness.
- B. awe and subjectivity.
- C. disdain and judgement.
- D. scientific objectivity.

23. Which choice best provides evidence for the answer to the previous question?

- A. Lines 14-16 (“This” ... “composition”)
- B. Lines 21-22 (“There”...“him”)
- C. Lines 22-28 (“Such”... “Alps”)
- D. Lines 28-32 (“Not”... “scenery”)

24. The author of Passage 1 most likely uses a saying from an ancient Sanskrit poet to

- A. outline the Himalaya’s beauty.
- B. draw attention to the author’s erudite nature.
- C. enlighten the reader on little known literature.
- D. emphasize how the Himalayas are perceived from a certain perspective.

25. When the author mentions Dr. Jekyll and Mr. Hyde, he most likely expects the readers to

- A. recognize key literary characters in order to understand the analogy.
- B. research the two mentioned name to become more cultured.
- C. cause discordance between the science of the mountains and literary characters.
- D. test to what extent readers are familiar with classical literature.

26. All of the following are mentioned about the Himalayas EXCEPT that

- A. the Himalayas are a mountain range.
- B. a poet has written about its beauty.
- C. the Himalayas can be both arid and fertile.
- D. the mountains mostly consist of low foothills.

27. As used in line 19, “terminate” most nearly means

- A. cut.
- B. downsize.
- C. end.
- D. stop.

- 28.** The main idea of Passage 2 is to
- A.** discuss the presence of rare birds in England and the reason for their diminishing numbers.
 - B.** convince the reader that despite England’s bad climate, rare birds still live there.
 - C.** persuade the reader of the existence of rare species that persist year round.
 - D.** explain to the reader that it is often difficult to sight rare bird species in England.
- 29.** How does the style of Passage 1 differ from Passage 2?
- A.** Passage 1 is more narrative while Passage 2 is expository.
 - B.** Passage 1 seeks to judge set codes while Passage 2 is more argumentative.
 - C.** Passage 1 is rhetorical while Passage 2 is based on assertions.
 - D.** Passage 1 is based on abstract ideas while Passage 2 focuses on the concrete.
- 30.** Which of the following statements best describes the author of Passage 2’s perception of the human population’s effect on birds?
- A.** With growing cities, birds will always be in sight.
 - B.** The rapid growing population in cities is causing bird species to die out.
 - C.** Humans benefit species with their growing presence.
 - D.** Humans share many habitats with birds.
- 31.** Which choice best provides evidence for the answer to the previous question?
- A.** Lines 65-67 (“Nevertheless” ... “abundant”)
 - B.** Lines 75-79 (“and”...“extinction”)
 - C.** Lines 89-93 (“It”... “all”)
 - D.** Lines 99-105 (“When”... “delight”)
- 32.** As used in line 98, “fitted” most nearly means
- A.** provided.
 - B.** positioned.
 - C.** matched.
 - D.** qualified.

The following edited passage is taken from Knight of Art: Stories of Italian Painters by Amy Steedman on Andrea Del Sarto's upbringing before becoming a famous painter.

Nowhere in Florence could a more honest man or a better worker be found than Agnolo the tailor. True, there were once evil tales whispered about him when he first opened his shop in the little street. It was said that he was no Italian, but a foreigner who had been obliged to flee from his own land because of a quarrel he had had with one of his customers. People shook their heads and talked mysteriously of how the tailor's scissors had been used as a deadly weapon in the fight. But before long these stories died away, and the tailor, with his wife Constanza, lived a happy, busy life, and brought up their six children carefully and well.

Now out of those six children five were just the ordinary commonplace little ones such as one would expect to meet in a tailor's household, but the sixth was like the ugly duckling in the fairy tale—a little, strange bird, unlike all the rest, who learned to swim far away and soon left the old commonplace home behind him.

The boy's name was Andrea. He was such a quick, sharp little boy that he was sent very early to school, and had learned to read and write before he was seven years old. As that was considered quite enough education, his father then took him away from school and put him to work with a goldsmith.

It is early days to begin work at seven years old, but Andrea thought it was quite as good as play. He was always perfectly happy if he could have a pencil and paper, and his drawings and designs were really so wonderfully good that his master grew to be quite proud of the child and showed the work to all his customers.

Next door to the goldsmith's shop there lived an old artist called Barile, who began to take a great interest in little Andrea. Barile was not a great painter, but still there was much that he could teach the boy, and he was anxious to have him as a pupil. So it was arranged that Andrea should enter the studio and learn to be an artist instead of a goldsmith.

For three years the boy worked steadily with his new master, but by that time Barile saw that better teaching was needed than he could give. So after much thought the old man went to the great Florentine artist Piero di Cosimo, and asked him if he would agree to receive Andrea as his pupil. "You will find the boy no trouble," he urged. "He has wonderful talent, and already he has learned to mix his colors so marvelously that to my mind there is no artist in Florence who knows more about color than little Andrea." Cosimo shook his head in unbelief. The boy was but a child, and this praise seemed absurd. However, the drawings were certainly extraordinary, and he was glad to receive so clever a pupil.

But little by little, as Cosimo watched the boy at work, his unbelief vanished and his wonder grew, until he was as fond and proud of his pupil as the old master had been. "He handles his colors as if he had had fifty years of experience," he would say proudly, as he showed off the boy's work to some new patron.

And truly the knowledge of drawing and coloring seemed to come to the boy without any effort. Not that he was idle or trusted to chance. He was never tired of work, and his greatest joy on holidays was to go off and study the drawings of the great Michelangelo and Leonardo da Vinci. Often he would spend the whole day copying these drawings with the greatest care, never tired of learning more and more.

33. The author references the “ugly duckling” in line 22 as a(n)
- A. simile.
 - B. metaphor.
 - C. onomatopoeia.
 - D. personification.
34. Young Andrea was most content when
- A. studying at school.
 - B. surrounded by pencils and papers.
 - C. reading and writing.
 - D. among his family.
35. Which choice best provides evidence for the answer to the previous question?
- A. Lines 13-17 (“But” ... “well”)
 - B. Lines 26-30 (“He”...“old”)
 - C. Lines 34-36 (“It”... “play”)
 - D. Lines 36-41 (“He”... “customers”)
36. As used in line 27, “sharp” most nearly means
- A. harsh.
 - B. intense.
 - C. distinct.
 - D. smart.
37. According to the passage, what is the best explanation as to why young Andrea was taken out of school?
- A. Andrea was not doing well in school.
 - B. Andrea’s education was not important enough to have him continue.
 - C. It was uncommon for children of goldsmiths to receive higher education.
 - D. Andrea’s father did not support his education.
38. According to the passage, how did Cosimo initially feel about taking young Andrea as a pupil?
- A. Cosimo was hesitant and did not entirely believe Barile’s praise.
 - B. Cosimo was fond of Andrea and was awed by his skills.
 - C. Cosimo was proud of Andrea’s work.
 - D. Cosimo was entirely against Andrea becoming his pupil.
39. Which choice best provides evidence for the answer to the previous question?
- A. Lines 65-66 (“The” ... “absurd”)
 - B. Lines 70-74 (“But”...“been”)
 - C. Lines 74-77 (“He”... “patron”)
 - D. Lines 78-80 (“And”... “effort”)
40. According to the passage, what was special about Andrea as an up-and-coming painter?
- A. Andrea was respectful and listened to those who knew more than him.
 - B. Andrea was a quick learner and did not tire from drawing.
 - C. Andrea was originally a goldsmith.
 - D. Andrea was a timid child who loved to learn.
41. As used in line 80, “idle” most nearly means
- A. meaningless.
 - B. trivial.
 - C. lazy.
 - D. unemployed.

42. The passage mentions all the following about Andrea EXCEPT that
- A. he was different from the rest of the family.
 - B. he was exceptional at mixing colors.
 - C. he had little tolerance for criticism.
 - D. he studied off great works by Michelangelo and Leonardo da Vinci.

The following edited passage is taken from Insectivorous Plants by Charles Darwin on leaves and temperature.

In my observations on *Drosera rotundifolia*, the leaves seemed to be more quickly inflected over animal substances, and to remain inflected for a longer period during very warm than during cold weather. I wished, therefore, to ascertain whether heat alone would induce inflection, and what temperature was the most efficient. Another interesting point presented itself, namely, at what degree life was extinguished; for *Drosera* offers unusual facilities in this respect, not in the loss of the power of inflection, but in that of subsequent re-expansion, and more especially in the failure of the protoplasm to become aggregated, when the leaves after being heated are immersed in a solution of carbonate of ammonia.

As the hair-like tentacles are extremely thin and have delicate walls, and as the leaves were waved about for some minutes close to the bulb of the thermometer, it seems scarcely possible that they should not have been raised very nearly to the temperature which the instrument indicated. From the eleven last observations we see that a temperature of 130 °F never causes the immediate inflection of the tentacles, though a temperature from 120 °F to 125 °F quickly produces this effect. But the leaves are paralyzed only for a time by a temperature of 130 °F, as afterwards, whether left in simple water or in a solution of carbonate of ammonia, they become inflected and their protoplasm undergoes aggregation. This great difference in the effects of a higher and lower temperature may be compared with that from immersion in strong and weak solutions of the salts of ammonia; for the former do not excite movement,

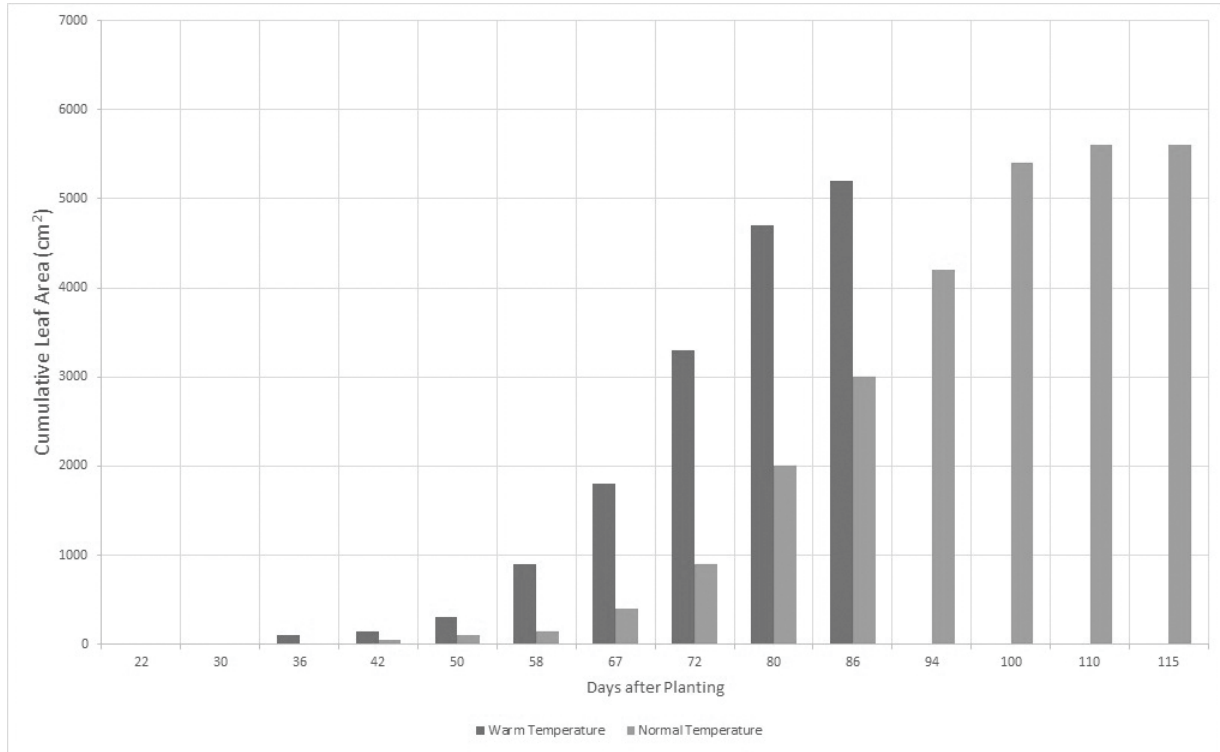
whereas the latter act energetically. A temporary suspension of the power of movement due to heat is called by Sachs heat-rigidity; and this in the case of the sensitive-plant (*Mimosa*) is induced by its exposure for a few minutes to humid air, raised to 120 °F -122 °F. It deserves notice that the leaves of *Drosera*, after being immersed in water at 130 °F, are excited into movement by a solution of the carbonate so strong that it would paralyze ordinary leaves and cause no inflection.

The exposure of the leaves for a few minutes even to a temperature of 145 °F does not always kill them; as when afterwards left in cold water, or in a strong solution of carbonate of ammonia, they generally, though not always, become inflected; and the protoplasm within their cells undergoes aggregation, though the spheres thus formed are extremely small, with many of the cells partly filled with brownish muddy matter. In two instances, when leaves were immersed in water, at a lower temperature than 130 °F, which was then raised to 145 °F, they became during the earlier period of immersion inflected, but on being afterwards left in cold water were incapable of re-expansion. Exposure for a few minutes to a temperature of 145 °F sometimes causes some few of the more sensitive glands to be speckled with the porcelain-like appearance; and on one occasion this occurred at a temperature of 140 °F. On another occasion, when a leaf was placed in water at this temperature of only 140 °F, and left therein till the water cooled, every gland became like porcelain. Exposure for a few minutes to a temperature of 150 °F generally produces this effect, yet many glands retain a pinkish color, and many present a speckled appearance. This high temperature never causes true inflection; on the contrary, the tentacles commonly become reflexed, though to a less degree

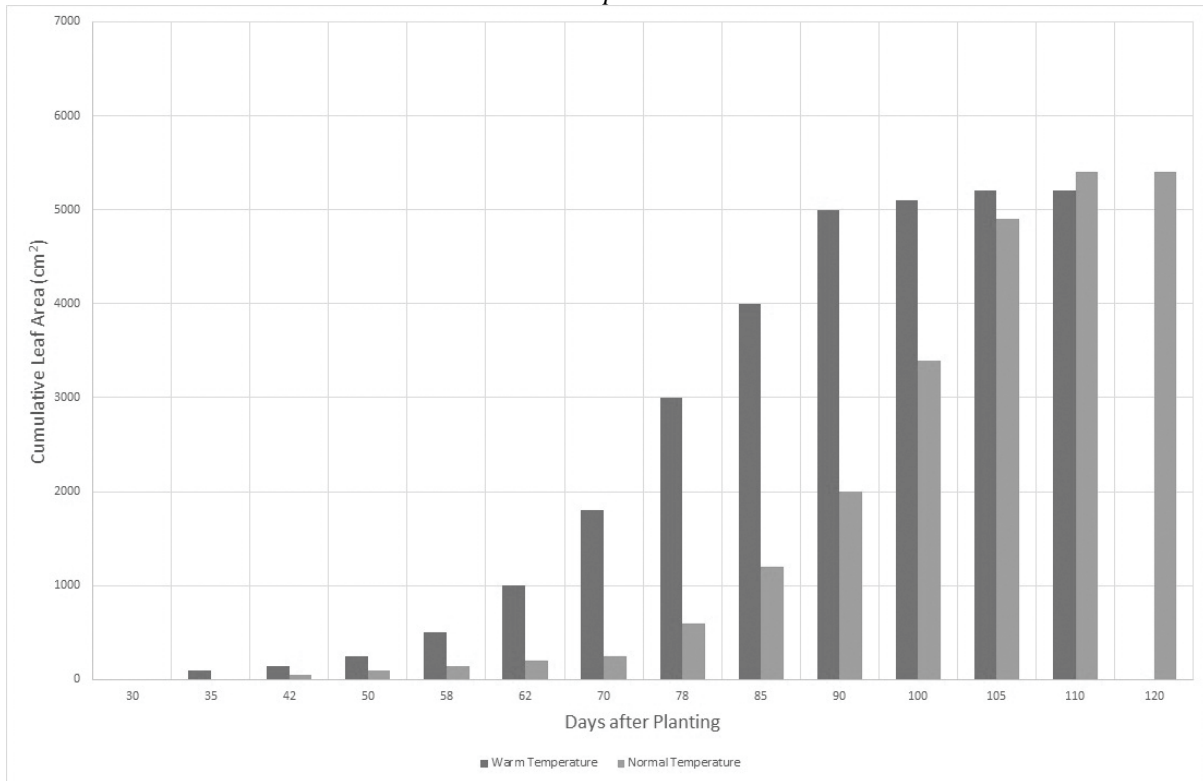
than when immersed in boiling water;
95 and this apparently is due to their passive
power of elasticity. After exposure to a
temperature of 150 °F, the protoplasm, if
subsequently subjected to carbonate of
ammonia, instead of undergoing
100 aggregation, is converted into
disintegrated or pulpy discolored matter.
In short, the leaves are generally killed
by this degree of heat; but owing to
differences of age or constitution, they
105 vary somewhat in this respect. In one
anomalous case, four out of the many
glands on a leaf, which had been
immersed in water raised to 156 °F,
escaped being rendered porcellanous;
110 and the protoplasm in the cells close
beneath these glands underwent some
slight, though imperfect, degree of
aggregation.

- 43.** The main idea of this passage is to
- A.** explore the effect of temperature on leaves.
 - B.** discover the movements of leaves when exposed to certain temperatures.
 - C.** reject a proposed hypothesis on inflected leaves.
 - D.** bolster a hypothesis on leaf movement.
- 44.** Which choice best provides evidence for the answer to the previous question?
- A.** Lines 1-6 (“In” ... “weather”)
 - B.** Lines 6-9 (“I”... “efficient”)
 - C.** Lines 45-51 (“A”... “122 oF”)
 - D.** Lines 69-75 (“In”... “re-expansion”)

- 45.** The passage mentions all the following in the experiments EXCEPT
- A.** the process of aggregation.
 - B.** exposure to different temperatures.
 - C.** the immersion of leaves in water.
 - D.** the effect of the sun on the leaves.
- 46.** According to the passage, what is different about Drosera leaves?
- A.** 130oF causes inflection of the leaves.
 - B.** Drosera leaves shrivel when exposed to intense heat.
 - C.** Drosera leaves thrive in certain intense solutions in comparison to other leaves.
 - D.** Drosera leaves are unaccustomed to heat compared to other leaves.
- 47.** Which choice best provides evidence for the answer to the previous question?
- A.** Lines 33-39 (“But” ... “aggregation”)
 - B.** Lines 51-57 (“It”... “inflection”)
 - C.** Lines 90-91 (“This”... “inflection”)
 - D.** Lines 102-105 (“In”... “respect”)
- 48.** As used in line 46, “suspension” most nearly means
- A.** halt.
 - B.** removal.
 - C.** elimination.
 - D.** exclusion.



Experiment 1



Experiment 2

*Weekly progress in cumulative leaf area based on temperature.
Source: Hatfield and Prueger*

49. Which of the following best summarizes the relationship of the first paragraph to the rest of the passage?
- A. Challenge followed by debate
 - B. Specific instance followed by generalization
 - C. Postulation followed by trial
 - D. Prediction followed by analysis
50. The overall tone of the passage is best described as
- A. indifferent.
 - B. objective.
 - C. emotional.
 - D. biased.
51. Comparing both graphs, which category remains relatively high as time passes?
- A. In both experiments, cumulative area during normal temperatures remains relatively high.
 - B. In both experiments, cumulative area during warm temperatures remains relatively high.
 - C. In experiment 1, cumulative area during warm temperatures remains higher than cumulative area for normal temperatures in experiment 2.
 - D. Both experiments do not suggest any high categories as time passes.
52. As used in line 101, “matter” most nearly means
- A. content.
 - B. importance.
 - C. affair.
 - D. subs

EST I Literacy Test 1

Answer Key

(Writing and Language Section)

Question	Answer		Question	Answer
1	A		23	B
2	A		24	A
3	B		25	D
4	D		26	C
5	D		27	B
6	C		28	B
7	A		29	C
8	A		30	A
9	A		31	A
10	C		32	B
11	A		33	D
12	D		34	C
13	B		35	C
14	A		36	A
15	D		37	C
16	B		38	D
17	A		39	A
18	D		40	C
19	C		41	C
20	B		42	B
21	C		43	B
22	A		44	C

EST I Literacy Test 1

Answer Key

(Reading Section)

Passage 1

1. b
2. b
3. c
4. c
5. a
6. d
7. a
8. c
9. d
10. b

Passage 2

11. c
12. c
13. b
14. d
15. a
16. a
17. c
18. b
19. b
20. d
21. a

Passage 3

22. b
23. d
24. a
25. a
26. d

27. c
28. a
29. a
30. b
31. b
32. d

Passage 4

33. a
34. b
35. d
36. d
37. b
38. a
39. a
40. b
41. c
42. c

Passage 5

43. a
44. b
45. d
46. c
47. b
48. a
49. c
50. b
51. a
52. d