PERFECTION

Directions (1-6): Given below a short passage has been given. Read the following passage carefully and answer the questions.

When I’m birdwatching, I have a particular experience all too frequently. Fellow birders will point to the tree canopy and ask if I can see a bird hidden among the leaves. I scan the treetops with binoculars but, to everyone’s annoyance, I see only the absence of a bird. Our mental worlds are lively with such experiences of absence, yet it’s a mystery how the mind performs the trick of seeing nothing. How can the brain perceive something when there is no something to perceive? For a neuroscientist interested in consciousness, this is an alluring question. Studying the neural basis of ‘nothing’ does, however, pose obvious challenges. Fortunately, there are other – more tangible – kinds of absences that help us get a handle on the hazy issue of nothingness in the brain. That’s why I spent much of my PhD studying how we perceive the number zero.Zero has played an intriguing role in the development of our societies. Throughout human history, it has floundered in civilisations fearful of nothingness, and flourished in those that embraced it. But that’s not the only reason it’s so **_____(A)_____** .

In striking similarity to the perception of absence, zero's representation as a number in the brain also remains unclear. If my brain has specialised mechanisms that have evolved to count the owls perched on a branch, how does this system abstract away from what's visible, and signal that there are no owls to count? The mystery shared between the perception of absences and the conception of zero may not be coincidental. When your brain recognises zero, it may be recruiting fundamental sensory mechanisms that govern when you can – and cannot – see something. If this is the case, theories of consciousness that emphasise the experience of absence may find a new use for zero, as a tool with which to explore the nature of consciousness itself. Zero began its life as an imprint on wet clay. Around 5,000 years ago in

Mesopotamia, the Sumerian people devised a revolutionary method for number-writing. Instead of inventing new symbols for ever-increasing numbers, they designed a system whereby the position of a symbol inside a number corresponded to that symbol's value.

If this seems confusing, it's probably because the idea is so familiar it becomes **obfuscated** by explanation. Consider the numbers 407 and 47. Both contain a '4' yet, in each, '4' represents different values (400 and 40, respectively). The way we interpret this symbol correctly is from the column it sits in within its number (the hundreds or tens, for example). While this may seem like a mere change in format, the consequences of such positional notation were vast: it allowed for rapid recording of large numbers and simple methods of calculation. At some point, a problem emerged: what were the Sumerians to do when a particular column had no number in it, as in the number 407? It was here that zero was born: Sumerians placed a diagonal wedge between two numbers to signify 'nothing in this place'.

Despite the power afforded by positional notation and a mathematical symbol for nothing, it met with resistance and even derision as it made its way out of the Middle East.

Greek civilisations left limited records corresponding to zero's use, and they maintained use of a non-positional numerical system, much like Roman numerals. In fact, the Greek aristocracy – those who studied mathematical frameworks – actively shunned the use of zero. Greece was a land of geometry, and its scholars sought to describe the world using lines, points and angles. The concept of 'nothing' had no obvious home. Their love of logic was equally obstructive: how could nothing be something? Aristotle concluded that nothingness itself did not – could not – exist.

Throughout human history, it has floundered in civilisations fearful of nothingness, and flourished in those that embraced it. But that's not the only reason it's so _____**(A)**_____ .

Question 1:

Which of the following can be appropriately fit in the **blank A?**

I. mortifying

II. beguiling

III. enchanting

(a) Only I

(b) Both II and III

(c) Only III

(d) Both I and III

(e) All I, II and III

Question 2:

Which of the following is/ are the **True** statement (s) as per the given passage?

I. The Sumerians used a special number instead of a symbol to represent zero.

II. The concept of zero has been both rejected and embraced throughout history.

III. The invention of zero had no impact on mathematical calculations.

(a) Both II and III

(b) Only I

(c) Both I and II

(d) Only II

(e) All I, II and III

Question 3:

Which of the following best describes the primary challenge in studying the neural basis of perceiving "nothing" or absence, as discussed in the passage?

(a) The lack of advanced neuroimaging technology to capture brain activity during perception.

(b) The difficulty in isolating the concept of "nothing" from other cognitive processes.

(c) The inherent paradox of studying a phenomenon that lacks a physical correlate.

(d) The variability in individual experiences of perceiving absence.

(e) None of the above

Question 4:

What is/ are can be conveyed from the given passage?

I. The perception of zero is linked to the brain's ability to perceive absence.

II. The author's difficulty in seeing camouflaged birds stems from a neurological deficit.

III. Positional number systems are exclusive to the Sumerians.

(a) only I

(b) both I and III

(c) only III

(d) both I and II

(e) None of the above

Question 5:

What is the tone of the given passage?

I. acerbic

II. contemplative

III. intriguing

(a) Only II

(b) Both I and III

(c) Both II and III

(d) Both I and II

(e) All I, II and III

Question 6:

In the following question, a bolded word is provided, followed by four options, each presenting a pair of words. Select the option that includes a **synonym** and **antonym** of the highlighted word, respectively. Mark **"E"** if none of the options corresponds to the context.

If this seems confusing, it’s probably because the idea is so familiar it becomes **obfuscated** by explanation.

(a) dissipated, nuanced

(b) clouded, touted

(c) obscured, impaired

(d) muddled, elucidated

(e) None of the above

Direction (7-8): Two people are talking about a certain topic. We need to read the conversation and answer the following question based on it.

Question 7:

L: They offered me the senior role, but it's double the workload without a commensurate pay raise. How is this equitable?
P: While the remuneration isn't ideal, consider it a stepping stone. You'll garner invaluable experience that's pivotal for future ascension.
L: That's a specious argument. Exploitation under the guise of opportunity is still exploitation.
P: I empathize, but sometimes enduring short-term inequity can catalyze long-term prosperity. Don't let transient grievances eclipse the horizon.

The tone of L is _____ and Which idiom/phrase is most suitable for P?

(a) indifferent; reap what you sow

(b) ecstatic; bite the bullet

(c) apologetic; the last straw

(d) disgruntled; a means to an end

(e) sanguine; look a gift horse in the mouth

Question 8:

S: The board rescinded our funding without consultation! How can we sustain operations sans capital? This is sheer folly.
T: A vexing predicament, indeed. Yet, austerity might galvanize ingenuity. Remember how we orchestrated the crowdfunding campaign last quarter?
S: That was serendipity, not strategy. We can't bank on miracles repeatedly.
T: Perhaps, but adversity often unshackles latent potential. Let's marshal our resources and chart a new course.

The tone of S is _____ and Which idiom/phrase is most suitable for T?

(a) placid; let sleeping dogs lie

(b) euphoric; the ball is in your court

(c) despondent; when life gives you lemons, make lemonade

(d) sardonic; strike while the iron is hot

(e) belligerent; a dime a dozen

Directions (9-11): Two paragraphs are given based on a certain topic. We need to read the paragraphs first and identify the common theme between them.

Question 9:

Paragraph 1:

Technological proliferation has irrevocably transformed interpersonal communication, enabling instantaneous global connectivity. While digital platforms foster collaboration and cultural exchange, overreliance on virtual interactions risks eroding nuanced face-to-face discourse.

Paragraph 2:

Remote work paradigms, accelerated by advancements in teleconferencing tools, underscore the necessity of adaptability in modern professional ecosystems. However, the absence of physical camaraderie may engender isolation, necessitating deliberate efforts to sustain interpersonal rapport.

(a) The deleterious consequences of technological stagnation in a competitive economy.

(b) Digital innovation supersedes traditional methodologies, rendering them obsolete.

(c) The dichotomy between technological efficiency and the preservation of human relational depth.

(d) Fiscal austerity measures are paramount to mitigate corporate insolvency.

(e) None of the above

Question 10:

Paragraph 1:

Epistemological curiosity, the relentless pursuit of knowledge, catalyzes intellectual evolution and societal progress. Lifelong learning transcends formal education, fostering cognitive agility and mitigating obsolescence in rapidly evolving industries.

Paragraph 2:

Innovative pedagogical frameworks, such as experiential learning, prioritize critical analysis over rote memorization. These paradigms cultivate adaptability, equipping individuals to navigate multifaceted challenges in dynamic environments.

(a) The hegemony of traditional education systems stifles creative potential.

(b) Intellectual complacency perpetuates human curiosity.

(c) Technocratic dominance undermines humanitarian values in academia.

(d) Synergizing curiosity and adaptive learning methodologies to fortify cognitive resilience.

(e) None of the above