

VARC

Read the passage below and answer the questions that follow:

The optic nerve lies at the back of the human eye, connected to the retina, which is made up of receptors sensitive to incoming light. The nerve's job is to transmit visual input gathered by those receptors to the brain. But the optic nerve's location atop a tiny portion of the retina also means there is a blind spot in our vision, a region in the visual field that is literally unseen.

In science, that blind spot is experience. Experience is intimate — a continuous, ongoing background for all that happens. It is the fundamental starting point below all thoughts, concepts, ideas and feelings. The philosopher William James used the term "direct experience." Others have used words like "presence" or "being." Philosopher Edmund Husserl spoke of the "Lebenswelt" or life-world to highlight the irreducible totality of our "already being in a living world" before we ask any questions about it.

From this perspective, experience is a holism; it can't be pulled apart into smaller units. It is also a precondition for science: To even begin to develop a theory of consciousness requires being already embedded in the richness of experience. But dealing with this has been difficult for the philosophies that guide science as it's currently configured.

In many ways, experience landed in science's blind spot by design. As the methodologies of modern science were being established from the 16th through the 19th centuries, a central goal was to set aside personal, or subjective, elements. What the early architects of the scientific method, such as Francis Bacon, sought to do was break down the elements of experience into aspects that remain unchanged from person to person, or what the philosopher Michel Bitbol calls the "structural invariants of experience." Identifying these elements, which became the basis for making measurements, was the first step in our scientific interrogations of nature.

In this way, over time, scientists began to imagine a perspective-less perspective, a supposed God's-eye view of the universe — free of any human bias. The philosopher Thomas Nagel calls this the "view from nowhere." And this philosophical position eventually became synonymous with mainstream science itself. The development of the thermometer, and from it the science of thermodynamics, offers a notable example of our scientific culture's blind spot. In it, we can see how those unchanging elements of experience are extracted and then, in time, misconstrued as a false perspective-less perspective.

The embodied feeling of being hot or cold is a basic example of direct experience. But developing a measurable scale of this experience for future scientific inquiry took centuries of work. Much of this story played out in what we now call laboratories, where those elements of experience could be isolated and probed. First, hot and cold needed to become correlated with something like the level of alcohol or mercury in a graduated tube. This was the invention of thermometry. Once a way to measure degrees was established, those degrees could then be used to investigate other focal points of experience, like the boiling point of water. A mathematically formulated theory of thermodynamics was then slowly developed, describing the relationship between temperature and heat flow.

1. The author discusses the development of the thermometer and thermodynamics primarily to:

- A. show how the 19th-century inventors of thermodynamics directly and consciously applied Francis Bacon's 16th-century ideas.
- B. demonstrate that direct experience and the view from nowhere are ultimately compatible and can be synthesized into a single theory.
- C. argue that hot and cold are the most important structural invariants of experience that science has ever identified.
- D. provide a concrete example of the historical process by which direct experience is extracted, abstracted, and ultimately obscured by its own scientific formalization.

2. According to the passage, the early architects of the scientific method sought to:

- A. eliminate all human experience from science, believing it to be fundamentally illusory and unreliable.
- B. create a God's-eye view of the universe that was free of all human bias.
- C. isolate and identify the consistent, measurable, and person-to-person unchanged elements within the totality of experience.
- D. prove that the embodied feeling of hot and cold was not a reliable basis for a theory.

3. Which of the following best describes the logical progression detailed in the final paragraph?

- A. A subjective theory is replaced by an objective measurement, which is then proven to be a universal mathematical law.
- B. A universal, direct experience is correlated with a physical-mechanical system, which then becomes the foundation for an abstract, mathematical theory.
- C. A false philosophical position leads to the invention of a new tool and a new, flawed science.

D. A structural invariant is identified, disproven as subjective, and then replaced by a more accurate direct experience.

4. *In the context of the passage, the view from nowhere refers to:*

1. *A scientific ideal that seeks to eliminate personal bias and perspective.*
2. *A philosophical stance that imagines a God-like, perspective-less observation point.*
3. *A principle introduced by Francis Bacon to explain the structure of experience.*

A. 1 and 2 only

B. 2 only

C. 3 only

D. 1 and 3 only

5. *The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.*

Every day that we fail to detect alien signals is further support for such criticisms and gives more reason to doubt that off-world signals are on their way to Earth. And yet, for SETI, decades of failure have not budged its ongoing commitment to the search for anthropomorphic extraterrestrials. There seems to be an element of metaphysical superstition to this perseverance. Basalla has noted the continuity of ancient religious cosmologies of superior beings from the heavens, such as angels or saints, with the thinking of SETI evangelists. Consider Drake, who wrote publicly about his belief that aliens were immortals destined to share the secret of eternal life with us, or Sagan, who unflaggingly promoted his faith in hyper-advanced but benevolent civilisations bound to save humankind from follies such as nuclear war.

A. Despite repeated failures to detect alien life, SETI continues its search, driven by beliefs that echo religious faith in benevolent higher beings.

B. The failure of SETI to detect alien signals shows that extraterrestrial life does not exist and that its proponents are misguided.

C. SETI scientists like Drake and Sagan blend scientific inquiry with mystical hopes of salvation from advanced extraterrestrial civilizations.

D. The ongoing search for extraterrestrial life reflects humanity's unrelenting curiosity and optimism about life beyond Earth.

6. *There is a sentence that is missing in the paragraph below. Look at the paragraph and decide where (option 1, 2, 3, or 4) the following sentence would best fit.*

Sentence: This structure started forming at the Big Bang, after which slight density variations amplified to a massive scale.

Paragraph: The solar system's planets have roughly circular orbits, and zooming out a hundred-millionfold, the Milky Way is a flattened disk.

____(1)____. But zooming out by a further factor of 1,000 from the Milky Way, to encompass our nearest non-satellite galaxy, Andromeda, and

dozens of others, the shapes look different. ____ (2) _____. The arrangement may look haphazard, but it's ordered in its own way, in a network of filaments with vast walls and voids between them, called the cosmic web. ____ (3) _____. It's still evolving today, with a fractal geometry characterised more by branching flows than orbits. ____ (4) _____.

- A. Option 1
- B. Option 2
- C. Option 3
- D. Option 4

7. *Five jumbled-up sentences (labelled 1, 2, 3, 4 and 5), related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd sentence and key in the number of that sentence as your answer.*

- 1. Consider the relentless choice in online shopping, for example.
- 2. If you don't have a 'trusted brand' in mind to whittle down the literally thousands of options, where should you start?
- 3. If we're maximizers, we settle for nothing less than the best possible option.
- 4. Is this particular stitching important, or do you prefer that kind of belt loop?
- 5. Say you're browsing for a new pair of jeans.

8. *The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.*

Several studies suggest that life events that are exciting – such as graduations, weddings and major accomplishments – can be destabilising for people at risk of manic episodes. This is tricky, as life is often at its best when these types of events happen. By all means, we want people to experience and enjoy these events. But it can be helpful to keep an eye on mood, and make sure that you have social support at hand, as well as any prescribed medication, if symptoms emerge. Achieving goals that are fulfilling and meaningful is important – but, as you do so, test the brakes and ensure you're able to pause for a good night of sleep. If you find that you are not able to pause or sleep, calling a doctor proactively is wise.

- A. People should balance their pursuit of meaningful goals with emotional restraint to maintain a sense of stability in everyday life.
- B. Life's happiest moments can often lead to emotional instability, so people should avoid such situations if they have a history of manic episodes.
- C. The key to managing mania lies in medication and regular medical supervision rather than engagement in emotionally charged experiences.
- D. Enjoying major life events is important, but people vulnerable to mania should monitor their mood and maintain preventive measures to avoid destabilization.

9. Five jumbled-up sentences (labelled 1, 2, 3, 4 and 5), related to a topic, are given below. Four of them can be put together to form a coherent paragraph. Identify the odd sentence and key in the number of that sentence as your answer.

1. It's so prevalent that society has coined a term for mindlessly scrolling past post after post of depressing content: doomscrolling.
2. Though social media has long been the bearer of bad news, many people have taken to creating under the hashtag 'Hopecore'.
3. Teenagers between thirteen and eighteen spend an average of eight and a half hours online daily, with the potential to be exposed to the worst kinds of content.
4. Teenagers now inhabit echo chambers of doubt and uncertainty, doomscrolling away, and this is a large part of what's causing us to be increasingly nihilistic.
5. In the midst of a technological revolution, our minds are flooded by an abundance of negative stimuli.

10. There is a sentence that is missing in the paragraph below. Look at the paragraph and decide where (option 1, 2, 3, or 4) the following sentence would best fit.

Sentence: I've also selected practical products, such as a pram rocker and a comfortable and easy-to-clean playmat – all things that can save the sanity of the new parent.

Paragraph: As a new parent, there is so much noise around the products you have to have that sometimes it can be hard to know what you need.

____(1)____. Compiling this list, I've included books and toys my baby loved during testing, and those that we've had a lot of use out of over the past 11 months. ____ (2) ____ . I've focused on toys that will help encourage a baby's development at different stages, as well as being fun for parents and little ones to interact with together. ____ (3) ____ . I also spoke to parenting experts to gain insight into the benefits of different types of toys. ____ (4) ____ . Based on this, I've offered suggestions for gifts that fit their recommendations.

- A. Option 1
- B. Option 2
- C. Option 3
- D. Option 4

DILR

The students of an institute enrolled in three different courses: Machine learning, Blockchain and Digital marketing. A student is enrolled in none, one or multiple certifications. The information below is known.

- The number of students enrolled in only machine learning is $\frac{3}{4}$ th of the number of students enrolled in only digital marketing.
- The number of students enrolled in only blockchain is 40% more than the number of students enrolled in blockchain and machine learning, but not in digital marketing.
- The number of students enrolled in all three courses is twice the number of students enrolled in blockchain and digital marketing, but not in machine learning.
- The number of students who enrolled in both digital marketing and machine learning is 20% more than the number of students enrolled in only machine learning.
- The number of students enrolled in only machine learning is three times the number of students enrolled in blockchain and machine learning, but not in digital marketing.
- The number of students who enrolled in both digital marketing and blockchain is the average of the number of students enrolled only in digital marketing and only in blockchain.
- 21 students did not enroll in any of the certifications.
- $\frac{1}{4}$ th of the total students enrolled in only digital marketing.

11. What is the total number of students in the institute?

12. How many students are enrolled only in blockchain?

- A. 7
- B. 14
- C. 21
- D. 28

13. How many students are enrolled in digital marketing?

- A. 40
- B. 67
- C. 76
- D. 85

14. How many students are enrolled in both machine learning and blockchain certifications?

- A. 18
- B. 20
- C. 28
- D. 35

15. How many students are enrolled in at least two certifications?

16. How many students are enrolled in at most two certifications?

- A. 142
- B. 150
- C. 137
- D. 121

Eight students of a class lived in eight different houses on a street numbered from 1-8 from right to left. The roll number of each of these students is different and is the square of the house number in which some other student lives. The roll number of Bina is a multiple of 3, and she lives in an even-numbered house immediately left of the person whose roll number is 16. The person whose roll number is the square of the house number in which Renu lives, lives in the leftmost house. Neeraj lives immediately left of Ishani, and both have a roll number which is a multiple of 4 but not 9. The roll number of Ishani is higher than the roll number of Neeraj. The roll number of Jinu is the square of the house number in which Ishani lives. Three people live between Renu and the person whose roll number is 16. Uday lives to the right of Geeta but to the left of Anuj. The difference between the roll number of the person living in the leftmost house and the person living in the 4th house is 24.

17. For how many of the given students can their roll numbers be identified?

18. What is Anuj's roll number?

- A. 9
- B. 25
- C. 16
- D. Cannot be determined

19. Which of the following statements is false?

- A. There are two pairs of students who live adjacent and have their roll numbers as squares of consecutive numbers
- B. The sum of the roll numbers of the students living in the central two houses is 50.
- C. Geeta's roll number is odd.
- D. Jinu lives in an odd-numbered house, and her roll number is also odd.

20. If there are two houses between the students that have the lowest two roll numbers, what is Udit's roll number?

- A. 1
- B. 25
- C. 49
- D. Cannot be determined

QA

21. The prices of three articles A, B, and C are Rs. a , Rs. b , and Rs. c , respectively. The cost of 10 articles of type A and 7 articles of type B is Rs. 750. The cost of 3 articles of type A and 4 articles of type C is Rs. 360. Similarly, the total cost of 5 articles of type B and 4 articles of type C is Rs. 490. Find the cost of 10 articles of type B

- A. Rs. 250
- B. Rs. 300
- C. Rs. 450
- D. Rs. 500

22. A number N , when divided by 7, 11, and 13, leaves remainders of 5, 9, and 11, respectively. What is the sum of the digits of the largest 4-digit number that satisfies these conditions?

- A. 16
- B. 11
- C. 21
- D. 19

23. On an upward-moving escalator, Paul, Qadir, and Ritesh take 20 steps, 24 steps, and 10 steps, respectively, to reach the top. On the same upward-moving escalator, Paul takes 60 steps to come down from the top. Find the ratio of the time taken by Qadir and Ritesh to reach the top.

- A. 2:5
- B. 3:10
- C. 5:12
- D. 4:11

24. The lengths of the two diagonals in a parallelogram are 24 cm and 16 cm. Find the length of the longer side of the parallelogram if the shorter side is 12 cm.

- A. $\sqrt{272}$ cm
- B. $\sqrt{232}$ cm
- C. $\sqrt{344}$ cm
- D. $\sqrt{176}$ cm

25. In a class of ' n ' students, the ratio of boys to girls is $a:4$. After 18 more girls join the class, the ratio of girls to boys becomes 19:25. Find the minimum number of students in the class.

26. If $[]$ denotes the greatest integer function, then find the value of $[\log_2 1] + [\log_2 2] + [\log_2 3] + [\log_2 4] + \dots + [\log_2 255]$

- A. 1530
- B. 1538
- C. 1544
- D. 1546

27. P , Q , and R are the only three book publishers in a market. The market share of P at the start of the last year was 20% more than that of Q . In one year, the market share of P and Q has increased by 33.33% and 20%, respectively, as a result of which, the market share of R is equal to that of Q . Find the market share of R in percentage at the start of the last year.

28. Find the coordinates of the incentre of the triangle with vertices $A(10, 5)$, $B(-10, -10)$ and $C(-46, 5)$.

- A. $(-9, -2)$
- B. $(-8, -3)$
- C. $(-11, -2)$
- D. $(-7, -1)$

29. How many subsets of $\{2, 3, 4, 5, 6, 7, 8, 9\}$ contain at least one prime number?

- A. 128
- B. 192
- C. 224
- D. 240

30. Suppose that all the terms of an arithmetic progression are natural numbers. If the ratio of the sum of the first seven terms to the sum of the first eleven terms is 6:11 and the seventh term lies between 130 and 140, then the common difference of this A.P. is

MBA KARO