

VARC

Read the passage below and answer the questions that follow:

Sheilah Miller is a 39-year-old Black woman who was admitted to the hospital to give birth to her child. But there were complications. Hours later, she had lost a lot of blood and suffered a debilitating stroke. Her physician, Dr Smith, a white man, repeatedly ignored her complaints of pain and discomfort due to his prejudice against her identity. The baby lived, but Ms Miller was paralysed from the neck down. As a patient, she had knowledge to share about her pain, her discomfort, her suffering. But, for more than 10 hours, Dr Smith refused to consider her knowledge due to his bigotry. Ms Miller suffered enormously as a result of Dr Smith's medical malpractice. She was harmed financially with medical expenses from her hospitalisation, and lost wages due to time away from work. Her physical harm, paralysis, is obvious, and her emotional harm may manifest itself as anxiety or depression. But there is another kind of harm she suffered: epistemic. Epistemic harm, while real, is not widely known.

The term 'epistemic' is derived from the Ancient Greek word episteme, meaning knowledge. Knowledge, and especially seeking and giving knowledge, is essential to being human. As profoundly social creatures, humans are givers of knowledge, but according to the philosopher Miranda Fricker in her groundbreaking book *Epistemic Injustice*, epistemic harm prevents, denies and rejects that. If our ability to give knowledge is rejected, then so is our humanness and our dignity. To be harmed epistemically is to be humiliated and degraded as a human being; it is to be treated not as a someone but as a something. People don't need to listen to things or regard them with respect or credibility. Suppose, for example, that we deny someone the right to be heard or the right to explain their position on an important issue based on a prejudice that we have regarding the social group that the person belongs to. By denying them that right, we would have, in effect, denied them an essential part of their own humanity. After all, other things being equal, human beings possess rationality and autonomy, and these characteristics are constitutive of what it means to be a human being.

Thus, an injustice of this kind cuts deeply since it affects the very core of what it means to be a human being. A victim of epistemic harm is not regarded as a rational human being but as an infant or an animal, or a piece of furniture. A great injustice of the United States' legal system is that it will allow Ms Miller to be compensated for her financial, physical and emotional harm, but not her epistemic harm. Ms Miller suffered serious epistemic harm and yet cannot be compensated for it, even though the other harms flowed from her original epistemic harm. Her attempt to give her knowledge was rejected and ignored for 10 hours.

Imagine how frustrated and scared she must have felt – hours of pleading and yet being ignored by Dr Smith as one unworthy of care or credibility.

Which of the following scenarios would best illustrate epistemic harm in a non-medical context?

- A. A child loses an inheritance due to a clerical error in a will.
- B. An employee's safety warning is dismissed because of their gender, leading to an accident.
- C. A student receives a lower grade due to careless grading by a teacher.
- D. A consumer pays more for a product because of misleading advertising.

Which of the following, if true, would most strengthen the claim that epistemic harm should be recognised legally?

- A. Studies show that epistemic harm often precedes and worsens other harms, such as physical and emotional injury.
- B. Patients frequently exaggerate pain, which makes it difficult for physicians to act on their testimony.
- C. Courts already provide ample compensation for financial and emotional suffering, making epistemic categories unnecessary.
- D. Philosophers disagree on whether epistemic harm is distinct from emotional harm.

All of the following can be inferred from the passage EXCEPT:

- A. The legal system currently compensates only for measurable or visible harms.
- B. Epistemic harm is considered less serious because it does not produce tangible damage.
- C. The recognition of epistemic harm would expand our moral understanding of justice.
- D. Ms Miller's epistemic harm was caused by her own lack of medical knowledge.

Which of the following policy changes, if adopted in hospitals, would most directly address the kind of epistemic harm described in the passage?

- A. Introducing automated monitoring systems to minimize errors caused by human bias or fatigue.
- B. Establishing a grievance committee to review patient complaints related to medical negligence.
- C. Implementing regular workshops that train doctors to evaluate patient testimony objectively, regardless of identity or background.
- D. Creating a policy that ensures patients receive detailed written explanations for all medical decisions made about their care.

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

One standard intuition of logic, dating back at least to Aristotle, is that a logical consequence ought to hold by virtue of the content of the propositions involved, not simply by virtue of being “true” or “false”. Recently, the Swedish logician Dag Prawitz observed that, perhaps surprisingly, the traditional treatment of logic entirely fails to capture this intuition. The modern discipline of logic, the sturdy backbone of science, engineering, and technology, has a fundamental problem. For the last two millennia, the philosophical and mathematical foundation of logic has been the view that meaning derives from what words refer to. It assumes the existence of abstract categories of objects floating around the universe, such as the concept of “fox” or “female” and defines the notion “truth” in terms of facts about these categories.

A. The historical foundations of logic, built on Aristotelian principles, continue to effectively define truth and meaning through abstract categories of objects.

B. Logic, though central to modern science and technology, is fundamentally flawed because it defines truth based on abstract categories rather than the intrinsic meaning of propositions.

C. Modern logic succeeds in grounding the meaning of propositions in their content, as Aristotle originally intended, avoiding dependence on abstract notions of truth.

D. Dag Prawitz revived Aristotle’s belief that logic must rely on universal categories, showing that modern logic captures this view well through its definition of truth.

6. The four sentences (labelled 1, 2, 3 and 4) given below, when properly sequenced, would yield a coherent paragraph. Decide on the proper sequencing of the order of the sentences and key in the sequence of the four numbers as your answer.

1. His unique blend of humour and creativity has attracted a substantial following on various social media platforms.

2. Moffitt began his career by experimenting with different types of content and quickly found success in the niche of interactive video games.

3. Logan Moffitt, a 23-year-old content creator from Canada, has gained widespread recognition for his innovative approach to digital storytelling.

4. As a result, he has become one of the most influential figures in the online content creation community.

7. 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: We have not only contaminated our rivers but have also impacted oceans, causing long-term damage to marine species.

Paragraph: The term ‘economics’ originates from the Greek ‘oikonomia’, meaning ‘household management’ or ‘art of living’. ____ (1) _____. Yet, over time, this art has shifted to signify a relentless pursuit of wealth, often at the cost of sustainable living. ____ (2) _____. We have drifted from nature’s

rhythm; the principle of 'live and let live' has been overshadowed by the pursuit of monetary gains and a misguided sense of progress. ____ (3) ____.

In the name of progress, we indiscriminately clear forests, erode mountains, alter landscapes, and pollute rivers, leading to seasonal disruptions, erratic rainfall, floods, droughts, and temperature extremes. ____ (4) ____.

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

8. The four sentences (labelled 1, 2, 3 and 4) given below, when properly sequenced, would yield a coherent paragraph. Decide on the proper sequencing of the order of the sentences and key in the sequence of the four numbers as your answer.

1. During the first half of 2022, a mere 2% of international trade contracts were denominated or settled in renminbi, pale in comparison to the US dollar's dominance of around 75% of global trade contracts and settlements.
2. The Chinese renminbi faces several hurdles in becoming a global reserve currency.
3. Also, China's communist government would need to loosen its tight control to allow the open and flexible financial markets necessary to support a currency's reserve status.
4. While 70 central banks hold the renminbi in their reserves, it is only the fifth-most held currency globally.

9. 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: One does find much work on classical Indian thought produced and documented by Western Orientalists who referred to these thoughts as systems of Indian philosophy, also known as darshanas.

Paragraph: ____ (1) ____.

When it comes to talking about Indian philosophy, the commonsense view of a layman is distorted. ____ (2) ____.

This general distorted understanding is that Indian philosophy is a unified body of knowledge, and all the discourses on it are an expatiation of a monolithic narrative of an esoteric truth that stands in direct conflict with other philosophies. ____ (3) ____.

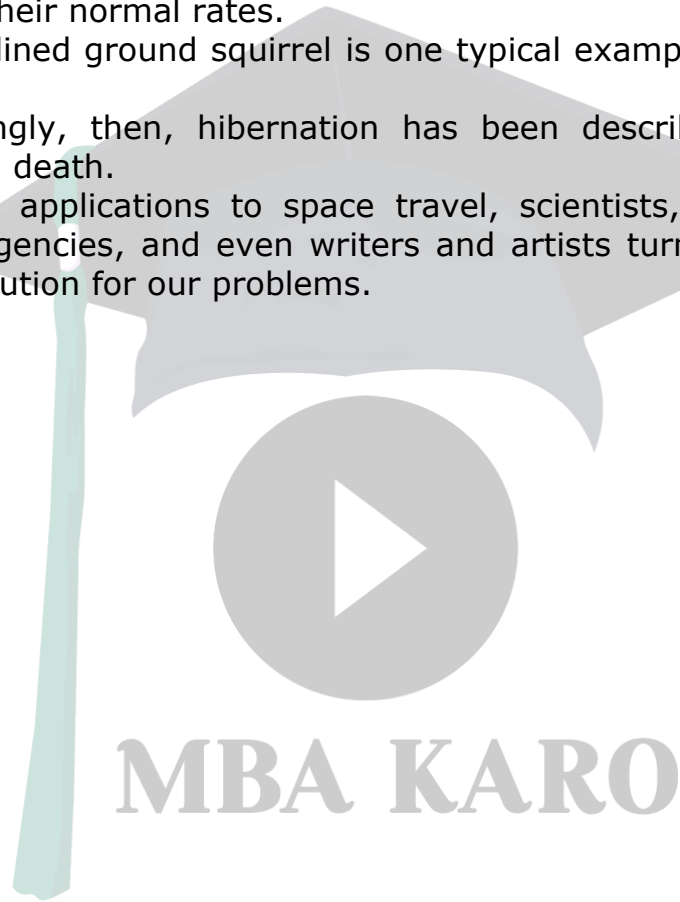
Further, it is also held, as a general opinion sometimes derived from the Orientalists, that Indian philosophy is a repository of spiritual insights that no other worldview possesses. ____ (4) ____.

Some of them also projected a view that the pinnacle of philosophical excellence was reached in Vedanta, a contestable view.

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

10. 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. When they perceive early signs of winter approaching, these squirrels gain weight and build long burrows in the ground where they courageously descend sometime in October, not to see light again until the following March, at least.
2. Remarkably, the body temperature of these animals during hibernation can fall to sub-zero values, and heartbeats and respiration decrease to a tiny fraction of their normal rates.
3. The thirteen-lined ground squirrel is one typical example of a seasonal hibernator.
4. Not surprisingly, then, hibernation has been described as a state between life and death.
5. From clinical applications to space travel, scientists, entrepreneurs, governmental agencies, and even writers and artists turn to hibernation as a possible solution for our problems.



DILR

Yash had a trip to Goa, Manali, Agra, Shimla, Delhi, Pune and Jaipur one after another, not necessarily in the given order. He started his trip from one of the given cities. To reach from one city to another city, the modes of transport used were bus, train, aeroplane, truck, ship and car.

- i) Yash visited Shimla before visiting Delhi and after visiting Pune.
- ii) He travelled to Goa by truck.
- iii) He travelled from Agra to the next city by bus.
- iv) He travelled from Delhi to Jaipur by car.
- v) He travelled from Manali to the next city by aeroplane.
- vi) Manali and Agra are not the first cities, and Jaipur is not the last city visited by Yash.
- vii) He did not travel to Manali by train.
- viii) He travelled by train before travelling by aeroplane and after travelling by ship.
- ix) He visited at most one city after visiting Jaipur.

11. Which are the first and last cities visited by Yash?

- A. Pune, Manali
- B. Pune, Goa
- C. Shimla, Manali
- D. Shimla, Goa

12. What is the mode of travel from Shimla to the next city?

- A. Train
- B. Bus
- C. Ship
- D. Car

13. How many cities did he visit between Agra and Delhi?

14. Which of the following statements is correct?

- A. The next city after Pune was Agra
- B. He travelled to Delhi by train
- C. Shimla was the third city he visited
- D. He travelled to Manali by bus

8 students appeared in an examination and scored marks as given below:

Amar	Udit	Diya	Isha	Tanvi	Om	Ravi	Seema
59	78	55	34	73	38	87	47

After the exam, some of them approached the teacher and asked for a re-evaluation. The teacher re-evaluated their papers, and the scores of all students who approached the teacher for re-evaluation increased after the re-evaluation. The following facts are known:

- The scores of no two students were the same.
- The rank of any student after the re-evaluation was not the same as before.
- The total increase in the marks of the students was not more than 50.

15. At least how many students must have approached the teacher for re-evaluation?

16. If exactly two students approached the teacher for re-evaluation, what is the minimum increase in scores of the students who approached for re-evaluation?

- A. 41
- B. 44
- C. 46
- D. 47

17. If exactly three students approached the teacher for re-evaluation, what is the maximum increase in the score of any student who approached for re-evaluation?

- A. 40
- B. 41
- C. 42
- D. 44

18. What is the minimum possible increase in the scores of the students who approached the teacher for re-evaluation?

- A. 35
- B. 34
- C. 33
- D. 32

19. If the total increase in the scores of the students who approached the teacher for re-evaluation is the minimum possible, what is the highest percentage increase in the score of any student?

- A. 19.23%
- B. 27.66%
- C. 38.23%
- D. 49.15%

20. At most, how many students could have approached the teacher for re-evaluation?

QA

21. Four friends, Parvez, Qadir, Rashid, and Sarfaraz, have certain amounts of money. The amount with Parvez is equal to the total amount held by the other three. The amount with Qadir is one-third of the total amount held by the others. The amount with Rashid is one-fifth of the total amount held by the others. The amount with Sarfaraz is one-eleventh of the total amount held by the others. If the sum of the smallest and the largest amounts among them is ₹ 1750, find the amount held by Rashid.

- A. 250
- B. 350
- C. 500
- D. 750

22. Find the sum of all the real solutions of the equation:

$$3^x - (\sqrt{3})^{x+4} + 20 = 0$$

- A. 4
- B. 9
- C. $\log_3 20$
- D. $2 \log_3 20$

23. What is the highest power of 3 that divides the number $3 \times 33 \times 333 \times \dots \times 333333333$?

24. A shopkeeper usually makes a profit of 20% on his sales. However, due to an error in the weighing machine, he sold 900 grams instead of 1 kilogram. To compensate for this mistake, he offered a 20% discount to the customer. What is the shopkeeper's actual profit percentage on this transaction?

- A. 3.33%
- B. 6.67%
- C. 10%
- D. 5%

25. A circle is inscribed in a right-angled triangle with a hypotenuse of 25 cm and one leg of 24 cm. A second, smaller circle is drawn in the corner formed by the hypotenuse and the shorter leg, such that it is tangent to these two sides and also externally tangent to the first circle. What is the radius of this smaller circle?

- A. 0.75 cm
- B. 1 cm
- C. 1.25 cm
- D. 1.5 cm

26. Rahul and Karan are running on a 1200-meter circular track, starting from the same point. Karan gets a head start of 25 seconds

and begins running at a speed of 6 m/s. Rahul starts 25 seconds later and runs in the same direction at a speed of 10 m/s. How many distinct points on the track will they meet at during their run?

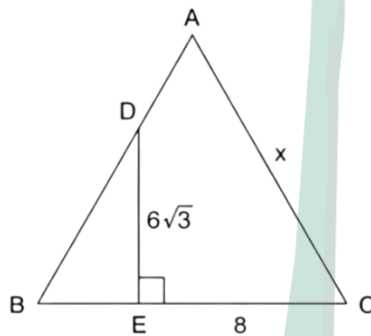
27. An engineer is designing a closed cylindrical fuel tank that must have a total surface area of exactly 150π square meters. To maximize the tank's volume, what must be the ratio of its height to its radius?

- A. 1:2
- B. 3:2
- C. 2:1
- D. 3:1

28. The sum of an infinite decreasing geometric progression with a negative common ratio is 22.5, and the sum of the first two terms is 20. Find the fifth term of the progression.

- A. $10/27$
- B. $10/9$
- C. $5/27$
- D. $5/9$

29. ABC is an equilateral triangle of side length x . D and E are points on AB and BC, respectively, such that $DE \perp BC$. If $DE = 6\sqrt{3}$ and $EC = 8$, find the side of triangle ABC.



- A. 10
- B. 11
- C. 12
- D. 14

30. A vessel contains 300 litres of a mixture of milk and water, with water comprising 43.75% of the mixture. X litres of this mixture are removed and replaced with 3 litres of water, resulting in a new mixture where the ratio of milk to water becomes 5:4. Find the value of X .