#### **VARC**

Read the passage below and answer the questions that follow:

Several years ago, a colleague teaching at Miami University, a large state school in Ohio, kindly invited me to give a talk there. After picking me up at the airport, he suggested that we have lunch at a Sichuan restaurant near campus. I was skeptical. Sichuan, in small-town Ohio? "Trust me," he said. "It's fantastic." And it was. The reason a first-class Sichuan cook had set up shop in this unlikely location soon became clear. At the time, the university was enrolling large numbers of Chinese students — more than 1,400 in 2014, for example. In fact, my colleague went on to tell me, significant social tensions had arisen, since the Chinese students were much wealthier than the American ones, to say nothing of the townspeople. As he said this, he pointed to a Chinese student driving past in a Maserati.

The Trump administration's attempt to keep Harvard from enrolling new attention to the students has drawn internationalization of American higher education over the past two generations. In the 2023-24 school year, no fewer than 1.1 million international students were enrolled in colleges and universities in the United States, or almost four times the number in the 1979-80 school year. Like many large social changes, this one happened without much conscious planning or debate. Foreign students kept applying in ever greater numbers, and universities happily admitted them, since non-Americans receive merit- and need-based financial assistance at much lower rates than Americans do. It has taken Donald Trump's crude and vengeful swipe at Harvard to draw much attention to the subject.

Now it seems that a serious debate may finally start. Has the internationalization of the American student body been a good development? Should it continue? To be sure, no one should take the Trump administration's position on the issue seriously. In announcing the suspension of Harvard's participation in the Student Exchange and Visitor Program, Kristi Noem, the homeland security secretary, said, "It is a privilege, not a right, for universities to enroll foreign students and benefit from their higher tuition payments to help pad their multibillion-dollar endowments."

This is the Trumpian viewpoint in a nutshell: The enrollment of foreign students is basically an elite scam. And the Trumpian solution, at least in Harvard's case, is to shut things down as brutally as possible, regardless of the consequences for the students who cannot complete their degrees, the labs that need these students to conduct research and the university that is losing the tuition income.

But the fact that the Trump administration is handling the issue crudely doesn't mean it's not a real issue. Strikingly, the progressive historian Daniel Steinmetz-Jenkins and the conservative law professor Adrian Vermeule both suggested on X after Mr. Trump's move against Harvard that perhaps international enrollments should not continue at the same level. By some measures, the opening of American higher education to international students is an obvious, unqualified good. By others, it is much more problematic.

- 1. It can be most reasonably inferred from the passage that the author believes the universities' primary motivation for admitting large numbers of international students has been:
- A. a commitment to fostering cross-cultural diversity on campus.
- B. a response to social pressure to appear more globally integrated.
- C. an opportunity to enhance their institutional finances.
- D. a desire to offset declining enrollment from American students.
- 2. The author mentions the Chinese student driving a Maserati primarily to:
- A. provide a concrete illustration of the wealth disparity that underlies social tensions.
- B. argue that international students are the primary reason for the success of local businesses like the Sichuan restaurant.
- C. emphasize the economic contributions that international students make to small American towns.
- D. offer a counter-argument to the idea that international students need financial assistance.
- 3. The author's claim that a "serious debate may finally start" is most weakened if which of the following were true?
- A. The universities targeted by the administration successfully sue and have all restrictions permanently lifted.
- B. Subsequent research shows that the economic benefits of international students for local towns far exceed any social friction.
- C. The Trump administration's actions were found to be motivated by a personal vendetta against Harvard's president.
- D. Steinmetz-Jenkins and Vermeule, while agreeing that the issue is important, propose mutually exclusive solutions driven by opposing ideologies.
- 4. The author presents all of the following as facts EXCEPT:
- A. More than one million international students were enrolled in US universities in the 2023-24 school year.
- B. The number of international students in 2023-24 was almost four times the number in 1979-80.

- C. The Trump administration's handling of the Harvard issue was crude and vengeful.
- D. A judge blocked the suspension of Harvard's participation in a student exchange program.
- 5. The passage given below is followed by four alternate summaries. Choose the option that best captures the essence of the passage.
- This summer, something unusual happened at an informal annual gathering of Communist Party leaders. A former close aide to Jiang Zemin, China's president from 1993 to 2003, reportedly admonished Xi in unprecedentedly strong tones. "If the political, economic and social turmoil continues and no effective measures are taken, the general public will turn away from the party, and our governance itself may be in danger," the elder aide said. "All the problems left behind by the past three leaders (Deng Xiaoping, Jiang Zemin and Hu Jintao) have fallen on me," a reportedly furious Xi subsequently yelled to his close aides. "I have worked hard for 10 years since I took office to deal with the problems. But they have not gone away. Are you saying that this is my fault?"
- A. Tensions surfaced at a Communist Party summit as a senior figure blamed Xi Jinping for China's ongoing crises, prompting Xi to assert that the nation's deep-rooted problems stem from previous administrations rather than solely his own leadership.
- B. The Communist Party's informal meeting revealed both fierce criticism of Xi's leadership and Xi's own frustration, as he claimed that persistent national issues are a result of unresolved and accumulating problems from his predecessors.
- C. An ex-aide to Jiang Zemin criticized Xi for China's troubles, but Xi responded defensively, arguing that the legacy issues from past leaders have hampered his decadelong efforts at reform.
- D. The former leaders of China, Deng, Jiang, and Hu, are solely responsible for the present disorder in the country, having left an insurmountable legacy for Xi, who has struggled to make any improvement in the last ten years.
- 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: Some of this is just the annoyance anyone would feel at having a labour-saving tool taken away.

Paragraph: Students tell me they don't like the new forms of assessment,
either(1) But some students may struggle with the practicalities
of this new system(2) This is a generation that never learned
cursive; its members grew up typing(3) For many of them,
timed essays are not a return to anything but a new and unfamiliar mode.
(4) Some are already so reliant on A.I. that working without it is
disorienting, even upsetting.

- A. Option 1
- B. Option 2
- C. Option 3
- D. Option 4
- 7. 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. Eighty years on from the end of the war, many of its battlegrounds and graves have become solemn sites of national remembrance.
- 2. Today, they constitute some of the most challenging heritage sites in the world: politically sensitive, environmentally unstable and long neglected due to the complexities of managing sovereign craft, unexploded ordnance, leaking oil and human remains in foreign waters.
- 3. It has been all too easy for both flag and coastal states to ignore these wrecks.
- 4. This is not the case for the sunken warships of Southeast Asia.
- 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. The cost of firewood was stable until the 1540s, yet it quadrupled by the 1580s and reached ten times its old level by the 1620s.
- 2. Charcoal, though rather less seriously affected, followed the same pattern in a sixfold increase by the 1660s.
- 3. This growing shortage of wood manifested itself in a price inflation of astonishing magnitude.
- 4. The whole period was, of course, one of general and rapid inflation, modest by modern standards but severe by comparison with anything before it.
- 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. Grass' examination of horse teeth helps us better understand animals that have been regularly found in the pit, including two similar genera of native American horses.
- 2. They concluded that their diets were much like those of the wildebeests and zebras of the modern African Serengeti.
- 3. Grass found that the enamel patterns on what is called the occlusal, or biting, surface of the tooth are different for each species.
- 4. Only careful lab work will identify the horse's correct genus, species and age.

- 5. Researchers Lillian Spencer and Eric Scott also studied the ways horse teeth and those of bighorn sheep were worn down differently from different foods.
- 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. She may be at the forefront of a revolution in how we think about light and a huge class of diseases.
- 2. And I guess I hadn't really thought about it.
- 3. "I was in a meeting, and someone said to me, 'Wow, you seem like you're pretty high energy!" Young says.
- 4. And then two days later, my daughter said to me, 'Mom, what are you on?'
- 5. For years, Young had been forced to rest in bed many times a day, but that stopped with what she calls her UV-fueled rebirth.



#### **DILR**

In the Hockey World Cup, 5 teams of group 1 (A, B, C, D, E) have played exactly one match against every team of group 2 (F, G, H, I, J). The points table is given below:

	Vs F	Vs G	Vs H	Vs I	Vs J	Points
Α				Т		4
В		L		L		5
С						9
D					W	10
Е			W		W	8
Points	7	6	8	5	7	

- The table to be read as B lost to G, E won against J.
- Team D did not win against team H.
- 3 points were awarded for a win, 1 point to each team for a tie and no points for a loss.
- 11. How many of the given matches of the given tournament were tied?
- 12. What was the result of the match between D and G?
- A. Team D won
- B. Team G won
- C. A tie
- D. Insufficient information
- 13. Team B had a tie against which two teams?
- A. F and H
- B. F and J
- C. H and J
- D. Insufficient information
- 14. Against which team did A win the match?
- A. F
- B. G
- C. H
- D. J
- 15. Against which of these teams did H have a tie?
- A. E
- B. C
- C. A
- D.B

In a toy shop, there are 5 toys: Doll, Teddy Bear, Remote Car, Board Game and an Airplane. The cost price and selling price are among ₹ 950, ₹ 1000, ₹ 1050, ₹1150 and ₹ 1200. The selling prices are different for all toys, and cost prices are different for all toys. The cost price of Remote Car is equal to the selling price of Airplane and on the sale of both the shop incurred a loss. On selling Teddy Bear the shop earned a profit. The profit earned by selling any article is more than ₹ 50 and the profit is not same for any product. Similarly, the loss incurred for any two products are not same. The toy shop earned a profit on only 2 products. It is also known that the Cost Price of the Board Game is lowest while the selling price of Teddy Bear is ₹1150. The Profit/Loss made on selling Doll and Teddy Bear are equal in absolute terms.

- 16. What is the selling price of the Remote Car?
- A. ₹ 950
- B. ₹ 1000
- C. ₹ 1050
- D. ₹ 1150
- 17. What is the difference between the cost price and the selling price of the Board Game?
- 18. Which article has a selling price of ₹1050?
- A. Teddy Bear
- B. Doll
- C. Airplane
- D. Board Game
- 19. Which statement is true?
- A. Selling Price of Board Game is ₹1050
- B. Profit made by selling a doll is ₹100
- C. The cost price of the Airplane is equal to the selling price of the Board Game
- D. The profit made by selling the Board Game is equal to the loss made by selling the Airplane.
- 20. The sale of which item resulted in the maximum loss?
- A. Teddy Bear
- B. Doll
- C. Remote Car
- D. Airplane

# **QA**

- 21. The distance between stations X and Y is 1400 km. Trains L1 and L2 leave station X simultaneously for station Y. L2 takes 12 hours longer than L1 to arrive at Y. Also, L2 reaches station Z, the midpoint of X and Y, 8 hours before L1 reaches Y. What is the speed of train L2 (in km/hr)?
- 22. A square pyramid of height 15 cm and base side 5 cm is cut by a plane parallel to the base at a height of 6 cm from the base. Find the volume of the resulting frustum.

A. 84 cm<sup>3</sup>

B. 90 cm<sup>3</sup>

C. 98 cm<sup>3</sup>

D. 105 cm<sup>3</sup>

23. If 
$$f(x) = \frac{1}{\sqrt{x+1} + \sqrt{x}}$$
 and  $f(1) + f(2) + f(3) + ... f(n) = 8$ , find n.

24. At the beginning of 2014, a person invested a certain sum of money in a bank at a fixed annual rate of compound interest. By the beginning of 2017, the accumulated interest amounted to ₹1,00,000, and by the beginning of 2020, the accumulated interest had increased to ₹2,50,000. If the interest is compounded annually, what will be the total amount in the account at the beginning of 2023?

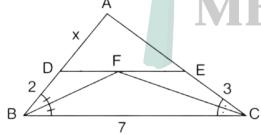
A. 6,50,000

B. 6,75,000

C. 6,25,000

D. 6,45,000

25. In the given figure,  $DE \mid\mid BC$ . BF is the bisector of ABC, and CF is the bisector of ACB. If DB = 2 cm, and EC = 3 cm, find the length of AD.



A. 3.5

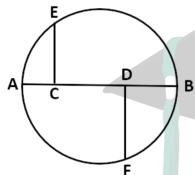
B. 4

C. 4.5

D. 5

26. Mixture M has liquid A and B in the ratio of 11:14, respectively, while mixture N has liquid A, B and C in the ratio of 7:18:25, respectively. When mixtures M and N are mixed, the percentage of liquid A in the mixture is 34%. What is the percentage of liquid B in this mixture? A. 49.33%

- B. 51.67%
- C. 48.67%
- D. 50.83%
- 27. How many three-digit numbers are not divisible by 5, have a digit sum of less than 20, and have the first digit equal to the third digit?
- A. 52
- B. 66
- C. 60
- D. 68
- 28. In the given figure, AB is the diameter of the circle.  $EC \perp AB$  and  $FD \perp AB$ . If AC = 2, BD = 3, and EC = 4, find the length of DF.



- A.  $\sqrt{20}$
- B.  $\sqrt{21}$
- C.  $\sqrt{24}$
- D.  $\sqrt{27}$
- 29. The solution of the inequality  $4^{-x+0.5} 7*2^{-x} < 4$  is:
- A. (-2, 7/2)
- B. (2, ∞)
- C. (-2, 2)
- D. (-2, ∞)



30. A group of workers, all having the same efficiency, began constructing a building. They completed 20% of the work by working 7 hours and 30 minutes per day for 16 days. After this, 6 workers left the group, and the remaining workers completed the rest of the work in 81 days, working 6 hours and 40 minutes per day. Find the initial number of workers in the group.