

VARC

Read the passage below and answer the questions that follow:

As an author of short stories, plays, and novels, Charles Dickens became known the world over for endearing characterisation, vivid narration of ordinary lives, and depiction of the social and moral values of his time. For years, Dickens thrilled readers with his simple stories about simple people forced into real situations. Although Dickens wanted to make a lot of money from his writings, his works invariably aimed to influence the consciousness of his readers, even though it seemed like he knew what his readers wanted.

To some critics, Dickens was an entertainer and his novels lacked intellectual challenge, but The London Times described the British author as the greatest instructor of the nineteenth century in his obituary. The unparalleled sentimentality, rage, plight and bitterness in his novels established Dickens as a spokesman for the downtrodden.

Dickens was born on February 7, 1812, into a poor family in Portsmouth on the southern coast of England. He was the second of eight children. In 1822, the Dickens family moved to Camden Town, a poor neighbourhood in London. The extravagance of his father often brought financial embarrassment to the family and eventually imprisonment for him in 1824. This brought an abrupt end to Dickens' childhood. He had to discontinue his schooling and support his family by doing manual work at a factory. Young Dickens was rudely introduced to long hours of harsh working conditions and poor pay. He felt orphaned and betrayed by his parents, who he believed should have taken care of him in his childhood. These feelings later became a recurring theme of many of his novels. Characters like Oliver Twist and David Copperfield developed from the harsh experiences of Dickens' early life.

Dickens' literary journey started in 1833 when he submitted sketches to various magazines and newspapers under the nickname "Boz." In 1836, he published The Posthumous Papers of the Pickwick Club, which became widely popular with magazine readers. Soon, his first novel, Oliver Twist, depicting the life of an orphan and inspired by Dickens' own experience as an impoverished child, hit the stands. The overwhelming success of Oliver Twist turned Dickens into a celebrity, and over the next few years, he struggled to match the literary and commercial standard set by the book.

In 1842, Dickens and his wife, Kate, went on a tour of the United States, where people went crazy listening to him. Upon his return, Dickens wrote American Notes for General Circulation, a sarcastic travelogue criticising American culture and materialism. Over the next couple of years, Dickens published two Christmas stories, including the classic A Christmas Carol.

From 1849 to 1850, Dickens worked passionately on his favourite novel, *David Copperfield*, a sort of autobiography and probably the first work of its kind.

The death of his daughter and father, and separation from his wife in the 1850s, cast a dark shadow on Dickens' writing during this period. He returned to his original style with *A Tale of Two Cities* in 1859, a historical novel, followed by *Great Expectations* in 1861, widely considered his greatest literary feat. On June 9, 1870, Dickens suffered a stroke and died at his country home in Kent, England.

1. The author most likely agrees with all of the following statements EXCEPT:

- A. Dickens was not impressed by the materialism of American society.
- B. *David Copperfield*, a biographical account of Dickens' life, is often cited as his best literary achievement.
- C. Dickens' novels portrayed the attitude of society towards the downtrodden.
- D. To some of his critics, Dickens was an entertainer, and his writing was not intellectually challenging.

2. Which of the following statements is best taken to be true in the context of the passage?

- A. Dickens played the role of an instructor through his writings.
- B. Dickens was the best British author of the nineteenth century.
- C. No other Dickens' novel could ever match the standard set by *Oliver Twist*.
- D. Dickens' writing became sarcastic after the death of his daughter and father.

3. Which of the following statements, if true, would most weaken the author's argument?

- A. Dickens' parents were responsible for his harsh childhood.
- B. Dickens sympathised with his characters who often survived a life of struggle.
- C. Dickens' writing emphasised how simple people got forced into real situations.
- D. Dickens wrote his classics during the period of shock that he experienced after the deaths of his daughter and father.

4. All of the following are linked to Dickens' commercial success EXCEPT:

- A. Popularity of *The Posthumous Papers of the Pickwick Club*
- B. Widespread appeal of *Oliver Twist*
- C. His critical travelogue *American Notes*
- D. Publication of *Great Expectations*

5. 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. There is no doubt that climate change will continue, and the effects of extreme weather events will be felt around the world.
2. This is a major challenge for agriculture and economy.
3. Therefore, future research should focus not only on elucidation of the response of the plant-soil-microbiome continuum to extreme moisture but also on finding solutions to help agriculture.
4. Understanding the processes and interactions that occur in the soil environment as a result of hydrological stress should lead to finding answers on how to help the microbiome, the soil, and therefore the plant survive these stressful conditions.

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. Pools are built over and poorly maintained; waterways are polluted and neglected; and ocean beaches are rendered inaccessible to those who most need their curative qualities.
2. Appearing in many culturally distinct shapes and sizes, communal city baths have long fostered a deep, healing sense of togetherness, abundance, relaxation and grounding.
3. However, in 21st-century cities, as more luxury baths and spas are built, public blue spaces are in decline.
4. Many of these public spaces were successful because they were inexpensive (or free) and widely accessible.

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: Genetic studies suggest that dogs were domesticated at least twice, once in Asia and once in Europe.

Paragraph: The partnership between humans and dogs is one of the oldest known relationships. ____ (1) ____ . Archaeological evidence shows canines buried alongside humans tens of thousands of years ago. ____ (2) ____ . Scholars debate whether domestication was a single event or occurred in different regions. ____ (3) ____ . This enduring bond transformed both species over millennia. ____ (4) ____ .

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

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

Since the 1960s and '70s, Sweden has had a deep interest in Polynesian flavours, like bananas and pineapple, which were introduced in Swedish cookbooks to inspire home cooks. "Deep-fried bananas served with steak or veal is an early dish from the 1960s served at some restaurants," Tellström says. "Bananas could be served along with ham, as a fancy dish for a Saturday night with the family watching TV. In the '70s, a simple, everyday dish at home could be sausage filled with tomatoes, pineapple, mustard and ham. In the '80s, deep-fried bananas were a common dessert at Chinese restaurants, and then served with ice cream and ginger syrup. You could use the new microwave to make an 'Oriental chicken,' a dish with chicken, curry, bananas and peanuts."

A. Swedish cuisine has long embraced tropical fruits like bananas and pineapple, incorporating them into both traditional and experimental dishes across decades.

B. Since the mid-20th century, Sweden's fascination with exotic flavours has led to creative recipes blending local and tropical ingredients in everyday and restaurant meals.

C. In the latter half of the 20th century, Swedish home cooks began rejecting local flavours and turning completely toward Polynesian and Oriental dishes.

D. Swedish food culture from the 1960s onward became dominated by microwave-based recipes featuring tropical ingredients such as bananas and pineapple.

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. Its self-interested role in spreading global disinformation is an ongoing crisis.

2. Recall, too, the company's secret mood-manipulation experiment in 2012, which deliberately tinkered with what users saw in their News Feed to measure how Facebook could influence people's emotional states without their knowledge.

3. Zuckerberg, who in Facebook's early days had adopted the mantra "Company over country", wanted every American with an internet connection to have a Facebook account.

4. Or its participation in inciting genocide in Myanmar in 2017.

5. Facebook (now Meta) has become an avatar of all that is wrong with Silicon Valley.

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. But taken to its logical extreme, this classical account of rationality would imply that nobody should ever vote.
2. Failure to participate in a collective endeavour is fundamentally irrational whenever it risks contributing to outcomes contrary to our own basic interests.
3. Few question the rationality of minimising our individual carbon footprints, for example, or individually deciding to boycott companies that rely on child labour.
4. Voting is not fundamentally different from many other actions.
5. We rely on cooperation to solve a range of pressing challenges, from global warming and extreme poverty to preventable disease.



DILR

An online Data Science course consisted of 20 modules, numbered 1 to 20, which had to be completed in sequence. A total of 120 students enrolled in the course. However, many students dropped out along the way. The table below shows the cumulative number of male, female, and total students who had dropped out by the completion of each module. The last column indicates that all 120 students eventually dropped out, including those who completed all 20 modules.

Module	3	4	5	6	8	12	15	16	18	20
Male	12			21		41	48		57	
Female		10			20	34		45		59
Total			30				88			120

It is also known that

- Each student completed the first module.
- At least 2 male and 2 female students dropped out after every module.
- No student who dropped out rejoined the course.

11. What is the maximum number of students who completed the 17th module but dropped before the 18th module?

12. What is the minimum number of modules that could have been completed by half of the students?

- A. 8
- B. 9
- C. 10
- D. 11

13. If 45 male students completed at least 5 modules, how many female students completed the 5th module and dropped before the 6th module?

14. Which of the following statements could be true?

- A. 6 students dropped after the 13th module
- B. More than 100 students completed at least 3 modules
- C. At least 100 students had dropped out after the 16th module
- D. Only 5 students completed the final module

A cube is cut into 125 identical cubes. The cubes present at the corners were taken out and discarded. Also, a cube from the centre of each of the faces was removed. Then, the remaining cube was soaked in blue paint.

15. How many cubes have no face painted?

- A. 21
- B. 25
- C. 27
- D. 18

16. How many cubes have 1 face painted?

- A. 18
- B. 24
- C. 30
- D. 36

17. How many cubes have 2 faces painted?

- A. 24
- B. 30
- C. 32
- D. 36

Seema has three daughters – Chhaya, Kaya and Maya. They kept spices in 12 boxes in the kitchen. Seema needed 5 items to prepare a dish. She asked each one of them where the items were kept. The following were the responses:

Question	Response by		
	Chhaya	Kaya	Maya
In which box is Haldi kept?	Box 11	Box 11	Box 10
In which box is Jeera kept?	Box 7	Box 3	Box 7
In which box is Dhania kept?	Box 11	Box 8	Box 12
In which box is Rai kept?	Box 9	Box 4	Box 9
In which box is Lal Mirch kept?	Box 3	Box 7	Box 3

It is known that each girl will answer at least one of the five questions truthfully.

18. If it is known that Chhaya has lied only once, then in how many of the boxes could Dhania have been kept?

- A. 7
- B. 8
- C. 9
- D. 10

19. It is known that for each of the questions, at least one of the girls has told the truth and Seema checks Box 3, 4, 7, 8, 10, and 11. What is the minimum number of spices she will be able to find?

20. Which of the following could be true about the spices and the boxes they are held in?

- A. Jeera – 3, Lal Mirch – 7, Rai – 4, Dhania – 8, Haldi – 11
- B. Jeera – 7, Lal Mirch – 3, Rai – 9, Dhania – 12, Haldi – 10
- C. Jeera – 9, Lal Mirch – 4, Rai – 8, Dhania – 12, Haldi – 11
- D. Jeera – 7, Lal Mirch – 3, Rai – 10, Dhania – 11, Haldi – 9

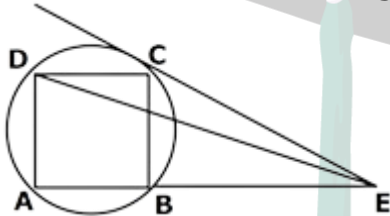
QA

21. A milkman marks up the cost of milk by 100%. He offers $x\%$ discount on the milk because of which he incurs a loss of $y\%$. But now he wants to earn $y\%$ profit. For this, he added 25% freely available water by volume to the milk and then again 20% freely available water by volume to the new milk solution. And then sell this on the same marked-up and discount as earlier. Find the value of x .

- A. 40
- B. 50
- C. 60
- D. Cannot be determined

22. If $\log_8 a + \log_4 b^2 = 5$ and $\log_8 b + \log_4 a^2 = 7$, what is the value of ab ?

23. A square ABCD is inscribed in a circle of unit radius. AB is extended to E, such that EC is a tangent to the circle. What is the length of ED?



- A. $\sqrt{12}$
- B. $\sqrt{10}$
- C. 3
- D. $\sqrt{8}$

24. A man borrowed ₹ 8000 from a bank at a certain rate of simple interest. After four years, he repaid ₹ 3700. At the end of the sixth year, he paid ₹ 6026.40 and cleared the loan. What was the rate of interest charged by the bank?

- A. 7%
- B. 6%
- C. 5%
- D. 4%

25. Find the remainder when $4 + 44 + 444 + 4444 + \dots + 444\dots$ (50 digits) is divided by 9.

- A. 3
- B. 4
- C. 6
- D. 0

26. Seven people get into the elevator in the basement of a 12-story building, but none of them wants to get off on the first floor. In how many different ways can these seven people get off on different floors?

- A. 1451520
- B. 1663200
- C. 1764000
- D. 3175200

27. The rate of evaporation of water from an alcohol solution in sunlight is 2.5 L/hour. At 8:00 AM, the volume of alcohol in the mixture was 90 litres more than the volume of water. By 2:00 PM on the same day, the ratio of water to alcohol becomes 1:8. What percentage of the total volume of the mixture will be alcohol at 6:00 PM on the same day?

- A. 90%
- B. 94%
- C. 96%
- D. 98%

28. If $|x| < 100$ and $|y| < 100$, then the number of integer solutions of (x,y) satisfying the equation $12x + 7y + 9 = 0$ is

29. A survey of a village shows that 56% of the total population is male, and amongst the males, 75% are educated. Furthermore, it is known that the number of uneducated females is 8910, which constitutes 19.8% of the entire village population. What percentage of the village's total population consists of educated persons?

- A. 66.2%
- B. 68.4%
- C. 69.6%
- D. 70.8%

30. ABC is a triangle, right-angled at B. The lengths of AB and BC are 16 and 12 cm, respectively. E is a point on AB. A line from E, parallel to BC, intersects AC at F. Another line from F, parallel to AB, intersects BC at G. Find the minimum distance EG.

- A. 10.8 cm
- B. 10.5 cm
- C. 9.6 cm
- D. 9 cm