

VARC

Read the passage below and answer the questions that follow:

The term “superfood,” originally coined in the 60s to describe foods capable of fighting malnutrition, has seen a significant change in meaning since the 2000s, becoming a target for marketing strategies. Nowadays, no specific scientific standards define what constitutes a superfood, but the term generally refers to a group of nutrient-dense foods and bioactive compounds with positive effects on human health. In various religious traditions, there are narratives of foods with “miraculous effects”. A well-known example is manna, described in the Old Testament as food provided by God to men during the exodus from Egypt. Manna is actually the sugary sap of plants of the genus *Fraxinus*, in particular *Fraxinus ornus*. Foods such as honey, almonds and olives are mentioned in the Bible and appreciated for their nutritional properties, while the Quran contains accounts of miracles linked to food performed by prophets, and Hindu scriptures recount divine food in times of need.

Aside from the metaphysical aspects of recalling symbolic episodes or imitating the Divine, there are certainly traditions of foods that lie outside of sacred texts. For instance, traditional balsamic vinegar of Modena has been administered by the spoonful to children, as well as cooked must, fruit compotes, and preserves are other examples of foods enjoyed on special festive occasions. The variety of foods considered superfoods varies globally. In some cultures, local berries and fruits are preferred, while in others, fatty fish or whole grains are valued. This diversity shows that the definition of superfood fits the dietary needs of each culture.

In the most current sense, from a compositional perspective, a superfood is characterized by its “high nutritional density,” in terms of vitamins and other essential nutrients, minerals, soluble fibers, amino acid analogues like L-theanine, as well as bioactive compounds with antioxidant activity. Superfoods consumption is often associated with a reduction in the risk of chronic diseases, non-communicable diseases, and support for the immune and cognitive systems. In addition, many superfoods are minimally processed, thus maintaining nutritional quality and facilitating their integration into the daily diet.

Garlic and ginger are widely regarded as superfoods due to their health properties. Garlic, rich in allicin, has antithrombotic, antimicrobial and anti-inflammatory effects, contributing to reduced LDL cholesterol and blood pressure. Ginger, containing gingerol, relieves pain and inflammation, improving motor skills. Red yeast rice (or red fermented rice), rich in monacolin K, is another superfood known for its effect in controlling LDL cholesterol.

In recent times, the pandemic has increased interest in foods capable of boosting immunity and protecting against pathogens. This list includes foods such as ginseng, eleuthero (also known as Siberian ginseng or devil's bush), echinacea, goji berries, aloe vera, turmeric, ginkgo, or individual molecules such as quercetin (a flavonoid found in many plants) and chloroquine (a synthetic derivative of quinine, a natural alkaloid originally extracted from the bark of the Andean plant Cinchona, known and used as a medication with antipyretic, antimalarial and analgesic properties). These foods are considered as potential panaceas in extreme situations. In this context, superfoods can represent not only a nutritional option but also a way to address public health challenges.

1. Which of the following most accurately expresses the main idea of the passage?

- A. To argue that the recent marketing of "superfoods" has corrupted their original meaning and misled consumers about their health benefits.
- B. To trace the evolution of the concept of "superfood" from its historical and religious roots to its modern scientific and public health contexts.
- C. To provide a comprehensive list of scientifically verified superfoods and detail the specific bioactive compounds that make them effective.
- D. To contrast the ancient, faith-based understanding of miraculous foods with the modern, evidence-based definition of nutrient-dense foods.

2. It can be logically inferred from the passage that the author would agree with which of the following statements?

- A. A food's classification as a "superfood" is an objective, universal label based on a fixed set of nutritional criteria.
- B. The primary difference between ancient "miraculous" foods and modern superfoods is the presence of marketing.
- C. A synthetic compound can be conceptually grouped with superfoods if it is perceived to be a panacea during a health crisis.
- D. The health benefits attributed to superfoods like garlic and ginger are largely psychosomatic, stemming from cultural beliefs.

3. The inclusion of chloroquine in the list of substances that gained interest during the pandemic is significant because it:

- A. highlights that the quest for a "panacea" can blur the lines between natural foods and pharmaceutical compounds.
- B. provides a counterexample to the idea that superfoods must be rich in vitamins and minerals.
- C. serves as the only example in the passage of a substance with proven antimalarial properties.
- D. proves that synthetic substances are more effective than natural superfoods in boosting immunity.

4. Which of the following, if true, would most weaken the claim that superfoods can represent not only a nutritional option but also a way to address public health challenges?

- A. A study reveals that the bioactive compounds in superfoods like turmeric and ginger are not easily absorbed by the body unless consumed in very large quantities.
- B. It is discovered that the original 1960s definition of "superfood" was created by a single marketing executive, not a nutritionist.
- C. Research indicates that the nutritional content of superfoods can vary dramatically depending on the soil quality and climate in which they are grown.
- D. A government report shows that people who regularly consume superfoods are no more likely to visit a doctor than those who do not.

5. 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. And with mostly tepid attempts to slash greenhouse gas emissions, researchers are scrambling for realistic ways to pull carbon out of the atmosphere.
- 2. Now a growing number of scientists and entrepreneurs are trying a vastly simpler approach: collecting truckloads of logs, branches, wood chips and sawdust, and burying them.
- 3. If carbon dioxide is buried under just a few yards of dirt—where bacteria no longer have the oxygen they need to break down woody tissues—however, none or very little of it is released.
- 4. Humanity has only so much time to limit global warming and minimize the severity of future climate disasters.
- 5. Flashy, high-tech proposals that promise to vacuum pollutants out of the sky, or to scrub them from smokestacks before they hit the atmosphere, have attracted attention and investment—but are falling far short of expectations.

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

As investments in renewable energy and electric vehicles lead to a decline in demand for fossil fuels, the oil and gas industry is turning to plastics to maintain revenue. This trend has alarming implications for the climate crisis. Last October, a report from our organization, Beyond Plastics, found that greenhouse gas emissions from plastics production in the United States are on track to outpace domestic coal emissions by 2030. The Formosa project alone would have emitted more than 13.6 million tons of greenhouse gases a year—equivalent to what 3.5 coal-fired power plants would emit in the same year. But stopping, or at least slowing, Formosa's project is just part of reducing the overall pollution burden for

St. James Parish, which is located along an 85-mile stretch of the Mississippi River between Baton Rouge and New Orleans known as "Cancer Alley."

A. Plastic production emissions in the U.S. are negligible compared to coal, and projects like Formosa's have minimal environmental impact.

B. The oil and gas sector's decline due to renewable energy adoption has led to reduced plastic production, which aids in lowering greenhouse gas emissions nationwide.

C. The Formosa project is the sole contributor to greenhouse gas emissions in St. James Parish, with no wider implications for climate or local pollution.

D. As fossil fuel demand wanes, the oil and gas industry's shift to plastic production poses serious climate risks, highlighted by the pollution potential of the Formosa project in Louisiana's heavily polluted "Cancer Alley."

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: There is robust evidence that emotion regulation rapidly improves during early childhood.

Paragraph: ____ (1) ____ . Less is known, however, about the development of emotion regulation in adolescence and beyond. ____ (2) ____ . To explore this, I joined world-renowned developmental cognitive neuroscientist Professor Sarah-Jayne Blakemore and her research group. ____ (3) ____ . Together, we have been looking at age-related differences in the cognitive building blocks that underlie successful emotion regulation. ____ (4) ____ . That is, we study how adolescents and adults differ in their ability to exert cognitive control in emotional compared to neutral contexts.

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. The CCA made collapsible shipping boxes, and it transformed packaging into a science and an art.

2. Cardboard's ubiquity rests on simple claims: I can hold that, and I can go there.

3. It advanced market research, shaped mid-century taste, and altered the chromatic universe through color standards.

4. The Container Corporation of America was founded in 1926, and upon those claims, it built an empire with surprising reach.

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. There is in development a technology much like Pandora's jar.
2. The original Greek story describes it as a terracotta jar.
3. The Gods have bestowed upon her a bounty of blessings to the point where her very name means "the one who bears all gifts".
4. Pandora herself is, according to the Greek myth, the first woman on Earth.
5. Pandora's box, a term we now use to describe an object that brings great and unexpected consequences, was not a box at all.

10. 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 central bank has already made an unprecedented half-point rate cut in September, lowering the federal funds rate to a range of 4.75% to 5%.
2. There is some debate, however, about how quickly the Fed should continue lowering rates.
3. This aggressive move was unusual for an economy in expansion, signaling the Fed's commitment to managing inflation while balancing economic growth.
4. While a quarter-point rate cut in both the November and December meetings seems likely, Atlanta Fed President Raphael Bostic has expressed openness to pausing rate cuts altogether at the next meeting.

MBA KARO

DILR

Eight teams - DC, GT, KKR, LSG, PBKS, RCB, RR and SRH participated in a cricket tournament. The teams were divided into two groups - Group A and Group B. In league matches, each team in a group played two matches against every other team in the group. The top two teams from each group reached the semifinals. In case of a tie in points, the team having the better run-rate was ranked higher. In the semi-finals, the team ranked first in a group played against the team ranked second in the other group. The final was played between the winners of the two semi-finals.

- None of the matches ended in a tie.
- No team won all the league matches while exactly two teams lost all the league matches.
- DC, GT, KKR and PBKS qualified for semifinals.
- In Group A, teams that qualified for the semi finals won equal number of matches, which was higher than the number of matches won by other teams in the group.
- In Group B, all the teams won different number of matches. In this group, the team ranked first at the end of league matches did not lose to the team ranked second.
- Out of GT, LSG and DC, two teams were in one group while the third team was in the other group.
- SRH lost to LSG in both league matches. LSG lost to DC in both league matches.
- RCB lost to RR in both league matches. RR won at least one match against two other teams.
- Toppers in both groups lost in the semifinals.

11. *How many matches did LSG win?*

- A. None
- B. 1
- C. 2
- D. 3

12. *How many matches did PBKS win?*

- A. Either 4 or 5
- B. Exactly 4
- C. Exactly 5
- D. Either 3 or 4

13. *Which of the following pairs of teams were definitely in Group A?*

- A. KKR and DC
- B. DC and SRH
- C. PBKS and DC
- D. KKR and LSG

14. If it is known that the final was played between DC and GT, what was the result of the two League matches played between GT and RR?

- A. GT won both matches
- B. RR won both matches
- C. Both GT and RR won one match each
- D. GT and RR did not play against each other in the league stage

15. Which of the following statements is definitely correct?

- A. Out of the two matches PBKS played against GT in the league stage, PBKS won both matches.
- B. The team ranked second in Group B, won five matches in the league stage.
- C. Out of the two matches KKR played against PBKS in the league stage, one was won by KKR, while the other was won by PBKS.
- D. RR won three matches in the league stage.

In a dance competition, there were four participants, P1, P2, P3 and P4, and three judges, J1, J2 and J3. Each performer performed two dances – D1 and D2.

Table 1 gives the average points given to the four participants by the three judges:

	P1	P2	P3	P4
J1	6	6.5	9	9.5
J2	5.5	6	6.5	9
J3	7	5	4.5	6.5

Table 2 shows the lowest and the highest points received by the participants from the judges on their two dances:

	P1	P2	P3	P4
D1	(3,7)	(4,9)	(2,9)	(6,10)
D2	(4,9)	(1,8)	(7,9)	(7,10)

Table 3 shows the minimum, the maximum and the average points given by the judges to the two dances of the four participants

	J1	J2	J3
D1	(3,9), 6.5	(4,10), 6.25	(2,9), 5.75
D2	(8,10), 9	(4,9), 7.25	(1,8), 5.75

16. How many points were given by J3 to P1 for D2?

17. How many points were given by J1 to P2 for D1?

18. How many points were given by J2 to P3 for D1?

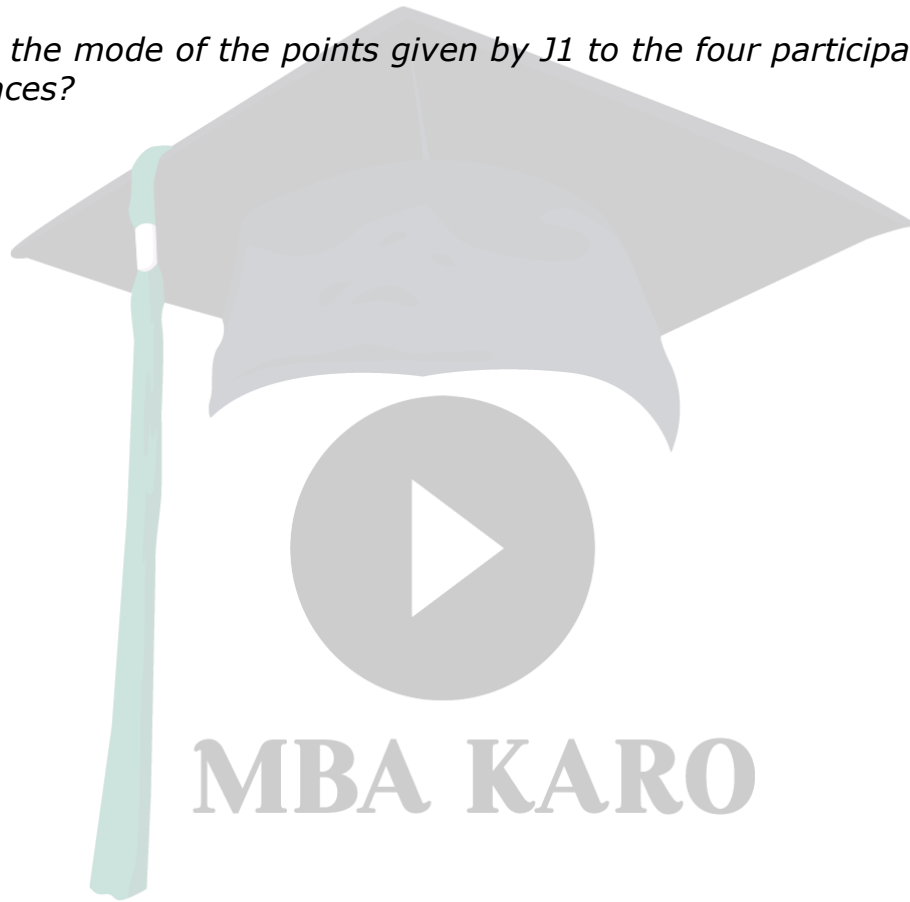
- A. 3
- B. 4
- C. 5
- D. 6

19. How many points were given by J3 to P4 for D2?

- A. 5
- B. 6
- C. 7
- D. 8

20. What is the mode of the points given by J1 to the four participants for the two dances?

- A. 6
- B. 7
- C. 8
- D. 9



QA

21. In writing an equation of the form $ax^2 + bx + c = 0$, the coefficient of x is written incorrectly, and the roots are found to be equal. Again, in writing the same equation, the constant term is written incorrectly, and it is found that one root is equal to that of the previous wrong equation, while the other is double that of it. If α and β are the roots of the correct equation, then $(\alpha - \beta)^2$ is equal to

- A. 5
- B. $5\alpha\beta$
- C. $-4\alpha\beta$
- D. -4

22. Anutosh has a 50-litre soda and lime solution in a ratio of 3:x, respectively, where x is a positive integer. It is mixed with 100 litres of a solution having $y\%$ soda concentration to get a solution having 40% soda concentration. If $3 < x < 10$, and the amount of lime present in both initial quantities is a whole number, find the value of y .

23. If $x = 2 + 2^{1/3} + 2^{2/3}$, then the value of $x^3 - 6x^2 + 6x$ is

- A. 2
- B. 4
- C. -6
- D. -8

24. What is the HCF of all integers of the form $n^4 - 1$, where n is a prime number greater than 5?

- A. 480
- B. 360
- C. 120
- D. 240

25. A restaurant offers three desserts, and exactly twice as many starters as main courses. A dinner consists of a starter, a main course, and a dessert. What is the least number of main courses that the restaurant should offer so that a customer could have a different dinner each night for a year?

26. For all integers n greater than 1, $a_n = \frac{1}{\log_n 2002}$. Let $b = a_2 + a_3 + a_4 + a_5$ and $c = a_{10} + a_{11} + a_{12} + a_{13} + a_{14}$, find $c-b$.

- A. -1
- B. 2
- C. 1
- D. -1/2

27. A and B ran a race of 600 m twice at their respective constant speeds. In the first race, A gave B a head start of 60 m and beat him by 10 seconds. In the second race, A gave B a head start of 150 m and was beaten by 5 seconds. What is A's speed?

- A. 6 m/s
- B. 7.5 m/s
- C. 8 m/s
- D. 10 m/s

28. Two lines with slopes $\frac{1}{2}$ and 2 intersect at (2,2). What is the area of the triangle enclosed by these two lines and the line $x+y = 10$?

- A. 6
- B. 8
- C. 4
- D. 5

29. A solid hemisphere has a radius of 21 cm. It is melted to form a cylinder such that the ratio of its curved surface area to total surface area is 2:5. What is the radius (in cm) of its base?

30. The compound interest earned at the end of three years on a sum is Rs. 21840, and that at the end of two years is Rs. 13200. Compute the principal amount.

- A. Rs 25000
- B. Rs 30000
- C. Rs 40000
- D. Rs 20000

MBA KARO