

## CAT 2022 VARC Slot-2 Question Paper with Solutions

**Time Allowed :3 Hours**

**Maximum Marks :390**

**Total questions :130**

### General Instructions

**Read the following instructions very carefully and strictly follow them:**

1. **Duration of Section:** 40 Minutes
2. **Total Number of Questions:** 22 Questions (as per latest pattern, may vary slightly)
3. **Section Covered:** Quantitative Aptitude (QA)
4. **Type of Questions:**
  - Multiple Choice Questions (MCQs)
  - Type In The Answer (TITA) Questions – No options given, answer to be typed in
5. **Marking Scheme:**
  - +3 marks for each correct answer
  - -1 mark for each incorrect MCQ
  - No negative marking for TITA questions
6. **Syllabus Coverage:** Arithmetic, Algebra, Geometry, Number System, Modern Math, and Mensuration
7. **Skills Tested:** Numerical ability, analytical thinking, and problem-solving

**The passage below is accompanied by a set of questions. Choose the best answer to each question.**

Humans today make music. Think beyond all the qualifications that might trail after this bald statement: that only certain humans make music, that extensive training is involved, that many societies distinguish musical specialists from nonmusicians, that in today's societies most listen to music rather than making it, and so forth. These qualifications, whatever their local merit, are moot in the face of the overarching truth that making music, considered from a cognitive and psychological vantage, is the province of all those who perceive and experience what is made. We are, almost all of us, musicians — everyone who can entrain (not necessarily dance) to a beat, who can recognize a repeated tune (not necessarily sing it), who can distinguish one instrument or one singing voice from another. I will often use an antique word, recently revived, to name this broader musical experience. Humans are musicking creatures. . . .

The set of capacities that enables musicking is a principal marker of modern humanity. There is nothing polemical in this assertion except a certain insistence, which will figure often in what follows, that musicking be included in our thinking about fundamental human commonalities. Capacities involved in musicking are many and take shape in complicated ways, arising from innate dispositions. . . . Most of these capacities overlap with nonmusical ones, though a few may be distinct and dedicated to musical perception and production. In the area of overlap, linguistic capacities seem to be particularly important, and humans are (in principle) language-makers in addition to music-makers — speaking creatures as well as musicking ones. Humans are symbol-makers too, a feature tightly bound up with language, not so tightly with music. The species Cassirer dubbed *Homo symbolicus* cannot help but tangle musicking in webs of symbolic thought and expression, habitually making it a component of behavioral complexes that form such expression.

But in fundamental features musicking is neither language-like nor symbol-like, and from these differences come many clues to its ancient emergence. If musicking is a primary, shared trait of modern humans, then to describe its emergence must be to detail the coalescing of that modernity. This took place, archaeologists are clear, over a very long *durée*: at least 50,000 years or so, more likely something closer to 200,000, depending in part

on what that coalescence is taken to comprise. If we look back 20,000 years, a small portion of this long period, we reach the lives of humans whose musical capacities were probably little different from our own. As we look farther back we reach horizons where this similarity can no longer hold — perhaps 40,000 years ago, perhaps 70,000, perhaps 100,000. But we never cross a line before which all the cognitive capacities recruited in modern musicking abruptly disappear. Unless we embrace the incredible notion that music sprang forth in full-blown glory, its emergence will have to be tracked in gradualist terms across a long period. This is one general feature of a history of music’s emergence. . . . The history was at once sociocultural and biological. . . . The capacities recruited in musicking are many, so describing its emergence involves following several or many separate strands.

**1. Which one of the following sets of terms best serves as keywords to the passage?**

- (A) Humans; Musicking; Linguistic capacities; Symbol-making; Modern humanity.
- (B) Humans; Psychological vantage; Musicking; Cassirer; Emergence of music.
- (C) Musicking; Cognitive psychology; Antique; Symbol-makers; Modernity.
- (D) Humans; Capacities; Language; Symbols; Modernity.

**Correct Answer:** (A) Humans; Musicking; Linguistic capacities; Symbol-making; Modern humanity.

**Solution:**

The passage discusses humans’ inherent ability to make music, referred to as *musicking*. The author emphasizes the importance of linguistic capacities, symbol-making, and their connection to modern humanity.

- **Humans** and **Musicking** are central themes of the passage, highlighting that everyone has the capacity for music-making.
- **Linguistic capacities** are mentioned as being intertwined with musicking, forming a significant part of human abilities.
- The concept of **symbol-making** is also introduced, linking it to both language and musicking, representing an essential aspect of modern humanity.

Thus, the set of terms **Humans; Musicking; Linguistic capacities; Symbol-making; Modern humanity** most accurately captures the essence of the passage. Hence, the correct

answer is (A).

### Quick Tip

When identifying key terms in a passage, focus on the main ideas and themes discussed, and select the option that best summarizes them. In this case, the passage focuses on human capacities related to musicking, language, and symbolism.

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## 2. Based on the passage, which one of the following statements is a valid argument about the emergence of music/musicking?

- (A) 20,000 years ago, human musical capacities were not very different from what they are today.
- (B) Although musicking is not language-like, it shares the quality of being a form of expression.
- (C) All musical work is located in the overlap between linguistic capacity and music production.
- (D) Anyone who can perceive and experience music must be considered capable of musicking.

**Correct Answer:** (A) 20,000 years ago, human musical capacities were not very different from what they are today.

### **Solution:**

The passage explains the gradual development of musicking and the emergence of its related capacities over a long period. Specifically, it mentions that 20,000 years ago, human musical capacities were probably not very different from modern humans. This suggests a gradual, rather than abrupt, evolution of musicking abilities over time. Thus, (A) is supported by the passage.

- **Option (B)** mentions the expression quality of musicking, but does not align as directly with the emergence timeline discussed in the passage.

- **Option (C)** focuses on the overlap between linguistic capacities and music production, but the passage does not assert that all musical work is exclusively located in this overlap.

- **Option (D)** suggests that anyone who perceives music can be considered capable of musicking, but the passage defines musicking in more specific terms related to human capacities for musical production.

Therefore, the correct answer is (A).

#### Quick Tip

The emergence of musicking is gradual, and the passage indicates that human musical capacities 20,000 years ago were similar to those of modern humans. Understanding the timeline of musical development is key to answering these types of questions.

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**3. “Think beyond all the qualifications that might trail after this bald statement...”. In the context of the passage, what is the author trying to communicate in this quoted extract?**

(A) A bald statement is one that requires no qualifications to infer its meaning.

(B) Thinking beyond qualifications allows us to give free reign to musical expressions.

(C) Although there may be many caveats and other considerations, the statement is essentially true.

(D) A bald statement is one that is trailed by a series of qualifying clarifications and caveats.

**Correct Answer:** (C) Although there may be many caveats and other considerations, the statement is essentially true.

#### **Solution:**

The phrase “Think beyond all the qualifications that might trail after this bald statement” suggests that while there may be many qualifiers, exceptions, or conditions that follow, the core statement is fundamentally true. This aligns with option (C), which acknowledges that, despite any potential caveats, the statement remains essentially true.

- **Option (A)** incorrectly defines a bald statement as one that requires no qualifications to infer its meaning, which is not the context in which the phrase is used in the passage.
  - **Option (B)** focuses on musical expression, but the quoted extract is about the nature of the statement itself, not the freedom of musical expression.
  - **Option (D)** incorrectly suggests that a bald statement is trailed by qualifications, whereas the passage is encouraging thinking beyond those qualifications.
- Therefore, the correct answer is (C).

#### Quick Tip

When the author asks to "think beyond all the qualifications," it means to look past the caveats and focus on the essential truth of the statement. Understanding this concept helps in interpreting the core message accurately.

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#### 4. Which one of the following statements, if true, would weaken the author's claim that humans are musicking creatures?

- (A) Musical capacities are primarily socio-cultural, which explains the wide diversity of musical forms.
- (B) Nonmusical capacities are of far greater consequence to human survival than the capacity for music.
- (C) From a cognitive and psychological vantage, musicking arises from unconscious dispositions, not conscious ones.
- (D) As musicking is neither language-like nor symbol-like, it is a much older form of expression.

**Correct Answer:** (B) Nonmusical capacities are of far greater consequence to human survival than the capacity for music.

#### **Solution:**

The author emphasizes that musicking is an essential human trait, central to the cognitive and psychological makeup of humans. If statement (B) were true, it would suggest that the

capacity for music is less important for human survival compared to nonmusical capacities, which could weaken the argument that musicking is a fundamental aspect of being human.

- **Option (A)** does not weaken the author's claim; rather, it offers an explanation for the diversity of musical forms, which is consistent with the idea that humans are musicking creatures.

- **Option (C)** argues that musicking arises from unconscious dispositions, which does not necessarily weaken the idea of humans as musicking creatures, but rather provides a different perspective on how musicking operates.

- **Option (D)** describes the age of musicking but does not directly undermine the claim that humans are musicking creatures. It rather adds context to the historical development of musicking.

Therefore, the correct answer is (B).

#### Quick Tip

To weaken a claim, focus on countering its core argument. In this case, arguing that nonmusical capacities are more vital for survival challenges the significance of musicking as an inherent human trait.

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**The passage below is accompanied by a set of questions. Choose the best answer to each question.**

We begin with the emergence of the philosophy of the social sciences as an arena of thought and as a set of social institutions. The two characterizations overlap but are not congruent. Academic disciplines are social institutions. My view is that institutions are all those social entities that organize action: they link acting individuals into social structures. There are various kinds of institutions. Hegelians and Marxists emphasize universal institutions such as the family, rituals, governance, economy, and the military. These are mostly institutions that just grew. Perhaps in some imaginary beginning of time they spontaneously appeared. In their present incarnations, however, they are very much the product of conscious attempts to

mold and plan them. We have family law, established and disestablished churches, constitutions and laws, including those governing the economy and the military. Institutions deriving from statute, like joint-stock companies, are formal by contrast with informal ones such as friendships.

There are some institutions that come in both informal and formal variants, as well as in mixed ones. Consider the fact that the stock exchange and the black market are both market institutions, one formal one not. Consider further that there are many features of the work of the stock exchange that rely on informal, nonmodifiable agreements, not least the language used for communication. To be precise, mixtures are the norm. From constitutions at the top to by-laws near the bottom, we are always adding to, or tinkering with, earlier institutions, the grown and the designed are intertwined. It is usual in social thought to treat culture and tradition as different from, although alongside, institutions. The view taken here is different. Culture and tradition are sub-sets of institutions analytically isolated for explanatory or expository purposes. Some social scientists have taken all institutions, even purely local ones, to be entities that satisfy basic human needs – under local conditions. . . . Others differed and declared any structure of reciprocal roles and norms an institution. Most of these differences are differences of emphasis rather than disagreements.

Let us straddle all these versions and present institutions very generally . . . as structures that serve to coordinate the actions of individuals. . . . Institutions themselves then have no aims or purpose other than those given to them by actors or used by actors to explain them. . . .

Language is the formative institution for social life and for science. Both formal and informal language is involved, naturally grown or designed. (Language is all of these to varying degrees.) Languages are paradigms of institutions or, from another perspective, nested sets of institutions. Syntax, semantics, lexicon, and alphabet/character-set are all institutions within the larger institutional framework of a written language. Natural languages are typical examples of what Ferguson called ‘the result of human action, but not the execution of any human design’; reformed natural languages and artificial languages introduce design into their modifications or refinements of natural language. Above all, languages are paradigms of institutional tools that function to coordinate.

**5. All of the following inferences from the passage are false, EXCEPT:**

(A) as concepts, “culture” and “tradition” have no analytical, explanatory or expository power, especially when they are treated in isolation.

(B) “natural language” refers to that stage of language development where nonconscious human intent is evident in the formation of language.

(C) institutions like the family, rituals, governance, economy, and the military are natural and cannot be consciously modified.

(D) the institution of friendship cannot be found in the institution of joint-stock companies because the first is an informal institution, while the second is a formal one.

**Correct Answer:** (B) “natural language” refers to that stage of language development where nonconscious human intent is evident in the formation of language.

**Solution:**

The passage explores the concepts of culture, language, and institutions, offering insights into their respective roles and characteristics. Here’s the analysis of each option:

- **Option (A)** is false because the passage does not make such a sweeping generalization about the concepts of “culture” and “tradition.”

- **Option (B)** is correct, as it describes the development of “natural language” in a way that fits within the broader context of language development as explored in the passage.

- **Option (C)** is false because the passage indicates that institutions can indeed be modified and are not inherently natural or unchangeable.

- **Option (D)** is false because it oversimplifies the nature of both friendship and joint-stock companies, suggesting an absolute dichotomy between informal and formal institutions.

Thus, the correct answer is (B).

**Quick Tip**

When evaluating options for true/false inferences, pay attention to the precise language used in the passage and compare it with the claims made in the options.

**6. In the first paragraph of the passage, what are the two “characterisations” that are seen as overlapping but not congruent?**

- (A) “the philosophy of the social sciences” and “a set of social institutions”.
- (B) “an arena of thought” and “academic disciplines”.
- (C) “academic disciplines” and “institutions”.
- (D) “individuals” and “social structures”.

**Correct Answer:** (A) “the philosophy of the social sciences” and “a set of social institutions”.

**Solution:**

In the first paragraph, the passage mentions that there is overlap but not complete congruence between two key ideas: - The philosophy of the social sciences, which refers to the theoretical framework that governs the understanding of social phenomena, and - A set of social institutions, which are the structures and systems that shape societal behavior. These two characterizations are linked, yet not identical, as one represents the intellectual framework and the other the concrete manifestations of social order. Therefore, the correct answer is (A).

**Quick Tip**

When identifying overlaps between concepts, look for subtle distinctions in the way terms are framed — one may refer to theory, and the other to practical application.

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**7. “Consider the fact that the stock exchange and the black market are both market institutions, one formal one not.” Which one of the following statements best explains this quote, in the context of the passage?**

- (A) Market instruments can be formally traded in the stock exchange and informally traded in the black market.
- (B) The stock exchange and the black market are both organized to function by rules.

(C) The stock exchange and the black market are examples of how, even within the same domain, different kinds of institutions can co-exist.

(D) The stock exchange and the black market are both dependent on the market to survive.

**Correct Answer:** (C) The stock exchange and the black market are examples of how, even within the same domain, different kinds of institutions can co-exist.

**Solution:**

The quote highlights the co-existence of two institutions within the same domain — the market — but with different formalities. The stock exchange is a formal institution, governed by legal rules and regulations, while the black market operates informally, often outside legal bounds but still functioning as a market. This illustrates the diversity of institutions within the same domain. Therefore, the correct answer is (C).

**Quick Tip**

Different kinds of institutions can coexist within the same domain, even though they may differ in terms of legality or formality.

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**8. Which of the following statements best represents the essence of the passage?**

(A) The stock exchange and the black market are both market institutions.

(B) It is usual in social thought to treat culture and tradition as different from institutions.

(C) Language is the fundamental formal institution for social life and for science.

(D) Institutions are structures that serve to coordinate the actions of individuals.

**Correct Answer:** (C) Language is the fundamental formal institution for social life and for science.

**Solution:**

The passage discusses the importance of institutions, particularly the role of language as a formal institution in social life and science. It explains how institutions serve to coordinate

human actions and behaviors in structured ways. Hence, option (C) best captures the essence of the passage, focusing on the role of language as a central formal institution.

#### Quick Tip

Institutions like language play a critical role in organizing social life and scientific processes, forming the foundation for much of human interaction and knowledge.

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**The passage below is accompanied by a set of questions. Choose the best answer to each question.**

When we teach engineering problems now, we ask students to come to a single “best” solution defined by technical ideals like low cost, speed to build, and ability to scale. This way of teaching primes students to believe that their decision-making is purely objective, as it is grounded in math and science. This is known as technical-social dualism, the idea that the technical and social dimensions of engineering problems are readily separable and remain distinct throughout the problem-definition and solution process. Nontechnical parameters such as access to a technology, cultural relevancy or potential harms are deemed political and invalid in this way of learning.

But those technical ideals are at their core social and political choices determined by a dominant culture focused on economic growth for the most privileged segments of society. By choosing to downplay public welfare as a critical parameter for engineering design, we risk creating a culture of disengagement from societal concerns amongst engineers that is antithetical to the ethical code of engineering. In my field of medical devices, ignoring social dimensions has real consequences. . . . Most FDA-approved drugs are incorrectly dosed for people assigned female at birth, leading to unexpected adverse reactions. This is because they have been inadequately represented in clinical trials.

Beyond physical failings, subjective beliefs treated as facts by those in decision-making roles can encode social inequities. For example, spirometers, routinely used devices that measure lung capacity, still have correction factors that automatically assume smaller lung capacity in

Black and Asian individuals. These racially based adjustments are derived from research done by eugenicists who thought these racial differences were biologically determined and who considered nonwhite people as inferior. These machines ignore the influence of social and environmental factors on lung capacity. Many technologies for systemically marginalized people have not been built because they were not deemed important, such as better early diagnostics and treatment for diseases like endometriosis, a disease that afflicts 10 percent of people with uteruses. And we hardly question whether devices are built sustainably, which has led to a crisis of medical waste and health care accounting for 10 percent of U.S. greenhouse gas emissions.

Social justice must be made core to the way engineers are trained. Some universities are working on this. . . . Engineers taught this way will be prepared to think critically about what problems we choose to solve, how we do so responsibly, and how we build teams that challenge our ways of thinking. Individual engineering professors are also working to embed societal needs in their pedagogy. Darshan Karwat at the University of Arizona developed activist engineering to challenge engineers to acknowledge their full moral and social responsibility through practical self-reflection. Khalid Kadir at the University of California, Berkeley, created the popular course Engineering, Environment, and Society that teaches engineers how to engage in place-based knowledge, an understanding of the people, context, and history, to design better technical approaches in collaboration with communities. When we design and build with equity and justice in mind, we craft better solutions that respond to the complexities of entrenched systemic problems.

**9. We can infer that the author would approve of a more evolved engineering pedagogy that includes all of the following EXCEPT:**

- (A) making considerations of environmental sustainability intrinsic to the development of technological solutions.
- (B) moving towards technical-social dualism where social community needs incorporated in problem-definition and solutions.
- (C) design that is based on the needs of communities using local knowledge and responding to local priorities.
- (D) a more responsible approach to technical design and problem-solving than focus on

speed in developing and bringing to scale.

**Correct Answer:** (B) moving towards technical-social dualism where social community needs incorporated in problem-definition and solutions.

**Solution:**

The author advocates for engineering pedagogy that is responsible, sustainable, and responsive to community needs. This includes emphasizing environmental sustainability (A), design based on local knowledge and priorities (C), and a more responsible approach to design (D). However, the author does not explicitly support a technical-social dualism approach (B), which divides technical and social concerns in the problem definition and solutions. The author would likely favor a more integrated approach, rather than a dualistic one. Therefore, option (B) is the correct answer.

**Quick Tip**

In evolving engineering pedagogy, it is important to focus on sustainability, community needs, and responsible design while avoiding artificial separations between technical and social aspects.

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**10. All of the following are examples of the negative outcomes of focusing on technical ideals in the medical sphere EXCEPT the:**

(A) neglect of research and development of medical technologies for the diagnosis and treatment of diseases that typically afflict marginalized communities.

(B) exclusion of non-privileged groups in clinical trials which leads to incorrect drug dosages.

(C) incorrect assignment of people as female at birth which has resulted in faulty drug interventions.

(D) continuing calibration of medical devices based on past racial biases that have remained unadjusted for changes.

**Correct Answer:** (C) incorrect assignment of people as female at birth which has resulted in faulty drug interventions.

**Solution:**

The passage discusses the negative outcomes of focusing on technical ideals in the medical field, such as the neglect of marginalized communities in medical research (A), exclusion of non-privileged groups in clinical trials leading to incorrect drug dosages (B), and racial biases in the calibration of medical devices (D). However, the issue of assigning people as female at birth (C) does not directly relate to the technical ideals in medicine, but rather to social and cultural biases in gender assignment. Therefore, option (C) is the correct answer, as it is the exception.

**Quick Tip**

In the medical field, focusing too much on technical ideals without considering diverse groups can lead to biased outcomes, but gender assignment is more related to social and cultural factors than to technical ones.

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**11. The author gives all of the following reasons for why marginalized people are systematically discriminated against in technology-related interventions EXCEPT:**

- (A) “And we hardly question whether devices are built sustainably, which has led to a crisis of medical waste and health care accounting for 10 percent of U.S. greenhouse gas emissions.”
- (B) “These racially based adjustments are derived from research done by eugenicists who thought these racial differences were biologically determined and who considered nonwhite people as inferior.”
- (C) “Beyond physical failings, subjective beliefs treated as facts by those in decision-making roles can encode social inequities.”
- (D) “But those technical ideals are at their core social and political choices determined by a dominant culture focused on economic growth for the most privileged segments of society.”

**Correct Answer:** (A) “And we hardly question whether devices are built sustainably, which has led to a crisis of medical waste and health care accounting for 10 percent of U.S. greenhouse gas emissions.”

**Solution:**

The passage discusses how marginalized people face discrimination in technological interventions due to social biases and unjust practices. Specifically, the author mentions that racial adjustments in medical devices are based on outdated and racist beliefs (B), and how subjective beliefs in decision-making roles encode social inequities (C). Additionally, the passage points out that technical ideals prioritize the needs of privileged segments of society (D).

However, the statement in (A) refers to the environmental impact of medical devices, not specifically to how marginalized people are discriminated against in technology-related interventions. Therefore, the correct answer is (A).

**Quick Tip**

While the passage critiques environmental concerns (like medical waste), it focuses more on how marginalized communities are systematically excluded or misrepresented in technological solutions.

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**12. In this passage, the author is making the claim that:**

(A) the objective of best solutions in engineering has shifted the focus of pedagogy from humanism and social obligations to technological perfection.

(B) technical-social dualism has emerged as a technique for engineering students to incorporate social considerations into their technical problem-solving processes.

(C) engineering students today are taught to focus on objective technical outcomes, independent of the social dimensions of their work.

(D) engineering students today are trained to be non-subjective in their reasoning as this best enables them to develop much-needed universal solutions.

**Correct Answer:** (C) engineering students today are taught to focus on objective technical outcomes, independent of the social dimensions of their work.

**Solution:**

The passage critiques the current state of engineering education, where students are taught to focus on objective technical outcomes defined by ideals such as low cost, speed, and scalability. This technical-social dualism promotes the idea that engineering solutions can be separated from the social and ethical dimensions. The author argues that this narrow focus neglects social considerations, which are integral to engineering practice, especially in addressing issues like public welfare and societal impact. Therefore, the correct answer is (C).

**Quick Tip**

Engineering education has traditionally emphasized technical outcomes, but a growing shift advocates incorporating social dimensions to foster more responsible and inclusive engineering solutions.

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**The passage below is accompanied by a set of questions. Choose the best answer to each question.**

[Octopuses are] misfits in their own extended families . . . They belong to the Mollusca class Cephalopoda. But they don't look like their cousins at all. Other molluscs include sea snails, sea slugs, bivalves – most are shelled invertebrates with a dorsal foot. Cephalopods are all arms, and can be as tiny as 1 centimetre and as large as 30 feet. Some of them have brains the size of a walnut, which is large for an invertebrate. . . . It makes sense for these molluscs to have added protection in the form of a higher cognition; they don't have a shell covering them, and pretty much everything feeds on cephalopods, including humans. But how did cephalopods manage to secure their own invisibility cloak?

Cephalopods fire from multiple cylinders to achieve this in varying degrees from species to species. There are four main catalysts – chromatophores, iridophores, papillae, and

leucophores. . . . Well, what about other colours? Cue the iridophores. Think of a second level of skin that has thin stacks of cells. These can reflect light back at different wavelengths. . . . It's using the same properties that we've seen in hologram stickers, or rainbows on puddles of oil. You move your head and you see a different colour. The sticker isn't doing anything but reflecting light – it's your movement that's changing the appearance of the colour. This property of holograms, oil, and other such surfaces is called "iridescence". . . .

Papillae are sections of the skin that can be deformed to make a texture bumpy. Even humans possess them (goosebumps) but cannot use them in the manner that cephalopods can. For instance, the use of these cells is how an octopus can wrap itself over a rock and appear jagged or how a squid or cuttlefish can imitate the look of a coral reef by growing miniature towers on its skin. It actually matches the texture of the substrate it chooses. Finally, the leucophores: According to a paper, published in *Nature*, cuttlefish and octopuses possess an additional type of reflector cell called a leucophore. They are cells that scatter full spectrum light so that they appear white in a similar way that a polar bear's fur appears white. Leucophores will also reflect any filtered light shown on them . . . If the water appears blue at a certain depth, the octopuses and cuttlefish can appear blue; if the water appears green, they appear green, and so on and so forth.

**13. All of the following are reasons for octopuses being "misfits" EXCEPT that they:**

- (A) exhibit higher intelligence than other molluscs.
- (B) do not possess an outer protective shell.
- (C) are consumed by humans and other animals.
- (D) have several arms.

**Correct Answer:** (D) have several arms.

**Solution:**

The passage refers to octopuses as "misfits" in their extended family, meaning that they have unique characteristics that set them apart from other molluscs. The reasons listed in the passage include their higher intelligence (A), lack of an outer shell (B), and being preyed upon by humans and other animals (C). However, having several arms (D) is not considered

a reason for them being misfits since this is a characteristic shared by all cephalopods, including squid and cuttlefish. Therefore, the correct answer is (D).

#### Quick Tip

The term "misfit" in this context refers to the octopus's unique traits that set it apart from other molluscs, such as its intelligence and lack of a shell. Its multiple arms, however, are typical of cephalopods.

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#### 14. Which one of the following statements is not true about the camouflaging ability of Cephalopods?

- (A) Cephalopods can change their texture.
- (B) Cephalopods can change their color.
- (C) Cephalopods can take on the color of their predator.
- (D) Cephalopods can blend into the color of their surroundings.

**Correct Answer:** (C) Cephalopods can take on the color of their predator.

#### Solution:

The passage describes several ways that cephalopods, such as octopuses and cuttlefish, can camouflage. These include changing their texture (A), changing their color (B), and blending into their surroundings (D) by reflecting light and using properties like iridescence.

However, the passage does not mention that cephalopods take on the color of their predator (C). Instead, they change color and texture to match their environment or to make themselves less visible to predators. Therefore, the correct answer is (C).

#### Quick Tip

Cephalopods are masters of camouflage, using texture, color, and light reflection to blend into their environment, but they do not mimic the color of predators.

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**15. Based on the passage, we can infer that all of the following statements, if true, would weaken the camouflaging adeptness of Cephalopods EXCEPT:**

- (A) the number of chromatophores in Cephalopods is half the number of iridophores and leucophores.
- (B) the temperature of water at the depths at which Cephalopods reside renders the transmission of neural signals difficult.
- (C) the hydrostatic pressure at the depths at which Cephalopods reside renders radial muscle movements difficult.
- (D) light reflects the colors red, green, and yellow at the depths at which Cephalopods reside.

**Correct Answer:** (D) light reflects the colors red, green, and yellow at the depths at which Cephalopods reside.

**Solution:**

The passage explains that cephalopods use their chromatophores, iridophores, papillae, and leucophores for camouflaging. The passage suggests that cephalopods are adapted to environments where light is filtered, and their ability to change color is based on the available light at their depths. Option (D) does not weaken their camouflaging ability because the presence of red, green, and yellow light could still be utilized by cephalopods for camouflaging purposes.

On the other hand, options (A), (B), and (C) would hinder their ability to camouflage by limiting their physiological capacity to perform the required adaptations effectively. For example, the reduced number of chromatophores (A) or difficulty in neural signal transmission (B) or muscle movements (C) would make it harder for cephalopods to change color and texture efficiently. Therefore, the correct answer is (D).

### Quick Tip

Cephalopods rely on their ability to adjust their color and texture for camouflage. The availability of light at different depths is crucial, but challenges in neural and muscle function would weaken their adeptness more than the color spectrum at those depths.

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**16. Based on the passage, it can be inferred that camouflaging techniques of octopuses are most dissimilar to those in:**

- (A) cuttlefish
- (B) squids
- (C) polar bears
- (D) sea snails

**Correct Answer:** (C) polar bears.

**Solution:**

The passage explains that octopuses, squids, and cuttlefish are cephalopods that share similar mechanisms for camouflage, using chromatophores, iridophores, papillae, and leucophores to adapt to their surroundings. However, the passage makes a direct comparison between cephalopods and polar bears by mentioning that leucophores, which are used by cephalopods, scatter light in a way that resembles how a polar bear's fur appears white. Despite this similarity, the passage clearly suggests that polar bears do not use the same complex mechanisms as cephalopods for camouflage. Therefore, the camouflaging techniques of octopuses are most dissimilar to those of polar bears.

In contrast, cuttlefish and squids, being cephalopods, share similar camouflaging abilities and mechanisms with octopuses, making them less dissimilar. Hence, the correct answer is (C).

### Quick Tip

While polar bears use passive reflection through their fur to appear white, octopuses actively adjust their texture and color using complex mechanisms, making their camouflage techniques fundamentally different.

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**17. The four sentences (labeled A, B, C, and D) 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:**

(A) Women may prioritize cooking because they feel they alone are responsible for mediating a toxic and unhealthy food system.

(B) Food is commonly framed through the lens of individual choice: you can choose to eat healthily.

(C) This is particularly so in a neoliberal context where the state has transferred the responsibility for food onto individual consumers.

(D) The individualized framing of choice appeals to a popular desire to experience agency, but draws away from the structural obstacles that stratify individual food choices.

**Correct Answer:** (B), (C), (A), (D)

**Solution:**

The correct sequence of sentences is B, C, A, D. Here's the explanation for the flow:

(B) starts by introducing the framing of food as an individual choice.

(C) builds on this by explaining the neoliberal context where the state pushes responsibility for food onto individual consumers.

(A) follows logically, suggesting that this responsibility is why women may feel they must prioritize cooking.

(D) concludes by noting how this individual choice framework can obscure the structural barriers that limit food options for individuals.

Thus, the proper sequence is B, C, A, D.

### Quick Tip

Understanding the sequence in paragraphs often involves looking at the logical flow of ideas, starting from the general concept (food as individual choice) and narrowing down to specific impacts (how women feel responsible and how structural barriers are ignored).

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

**Today, many of the debates about behavioral control in the age of big data echo Cold War-era anxieties about brainwashing, insidious manipulation and repression in the ‘technological society’. In his book *Psychopolitics*, Han warns of the sophisticated use of targeted online content, enabling ‘influence to take place one pre-reflexive level’. On our current trajectory, “freedom will prove to have been merely an interlude.” The fear is that the digital age has not liberated but exposed us, by offering up our private lives to machine-learning algorithms that can process masses of personal and behavioral data. In a world of influencers and digital entrepreneurs, it’s not easy to imagine the resurgence of culture engendered through disconnect and disaffiliation, but concerns over the threat of online targeting, polarization and big data have inspired recent polemics about the need to rediscover solitude and disconnect.**

- (A) The role of technology in influencing public behavior is reminiscent of the manner in which behavior was manipulated during the Cold War.
- (B) With big data making personal information freely available, the debate on the nature of freedom and the need for privacy has resurfaced.
- (C) The notion of freedom and privacy is at stake in a world where artificial intelligence is capable of influencing behavior through data gathered online.
- (D) Rather than freeing us, digital technology is enslaving us by collecting personal information and influencing our online behavior.

**Correct Answer:** (C) The notion of freedom and privacy is at stake in a world where

artificial intelligence is capable of influencing behavior through data gathered online.

**Solution:**

Option (C) best captures the essence of the passage. The passage discusses concerns about digital technology, particularly how personal data is used by algorithms to influence behavior. This aligns with the essence of the passage, which emphasizes the conflict between freedom, privacy, and the influence of AI through online data collection.

- Option (A) focuses on the Cold War comparison, which is a minor theme in the passage but not the main focus. - Option (B) brings up the debate about privacy, but it does not fully capture the concern about AI and its influence.

- Option (D) speaks to the enslavement of individuals, but it does not highlight the role of AI in influencing behavior through data, which is central to the passage.

Thus, the correct answer is (C).

**Quick Tip**

When summarizing a passage, focus on the central theme. In this case, the primary concern was how AI influences behavior through online data collection, making option (C) the best choice.

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

**There's a common idea that museum artworks are somehow timeless objects available to admire for generations to come. But many are objects of decay. Even the most venerable Old Master paintings don't escape: pigments discolor, varnishes crack, canvases warp. This challenging fact of art-world life is down to something that sounds more like a thread from a morality tale: inherent vice. Damien Hirst's iconic shark floating in a tank – entitled *The Physical Impossibility Of Death in the Mind of Someone Living* – is a work that put a spotlight on inherent vice. When he made it in 1991, Hirst got himself in a pickle by not using the right kind of pickle to preserve the giant fish.**

**The result was that the shark began to decompose quite quickly – its preserving liquid clouding, the skin wrinkling, and an unpleasant smell wafting from the tank.**

(A) Museums have to guard timeless art treasures from intrinsic defects such as the deterioration of paint, polish and canvas.

(B) Artworks may not last forever; they may deteriorate with time, and the challenge is to slow down their degeneration.

(C) The role of museums has evolved to ensure that the artworks are preserved forever in addition to guarding and displaying them.

(D) Museums are left with the moral responsibility of restoring and preserving the artworks since artists cannot preserve their works beyond their life.

**Correct Answer:** (B) Artworks may not last forever; they may deteriorate with time, and the challenge is to slow down their degeneration.

**Solution:**

Option (B) best captures the essence of the passage. The passage discusses the inevitable deterioration of artworks over time, even for the most renowned pieces, and the challenges faced in preserving them. It highlights the decay of Damien Hirst's shark artwork as a prime example of how artworks can deteriorate.

- Option (A) focuses on guarding art treasures from defects but does not fully address the broader theme of inevitable decay.

- Option (C) talks about the evolving role of museums but doesn't capture the central theme of artwork decay.

- Option (D) mentions the moral responsibility of museums but misses the core issue of degradation and preservation challenges.

Thus, the correct answer is (B).

### Quick Tip

When summarizing a passage, identify the main issue discussed. In this case, the main concern is the natural decay of artworks and the challenge of slowing down their deterioration.

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**20. The four sentences (labeled A, B, C, and D) 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:**

- (A) The trajectory of cheerfulness through the self is linked to the history of the word ‘cheer’ which comes from an Old French meaning ‘face’.
- (B) Translations of the Bible into vernacular languages, expanded the noun ‘cheer’ into the more abstract ‘cheerfulness’, something that circulates as an emotional and social quality defining the self and a moral community.
- (C) When you take on a cheerful expression, no matter what the state of your soul, your cheerfulness moves into the self: the interior of the self is changed by the power of cheer.
- (D) People in the medieval ‘Canterbury Tales’ have a ‘piteous’ or a ‘sober’ cheer; ‘cheer’ is an expression and a body part, lying at the intersection of emotions and physiognomy.

**Correct Answer:** (C, A, D, B)

### **Solution:**

The passage traces the evolution of the word “cheer” and its connection to both physical expressions and emotional states:

- (C) explains how adopting a cheerful expression affects the interior self, altering one’s emotional state.
- (A) introduces the historical origin of the word “cheer,” linking it to the Old French meaning “face.”
- (D) elaborates on how “cheer” was used in medieval times to describe both an expression and a body part, merging emotions and physiology.

- (B) explains how translations of the Bible expanded the term "cheer" into "cheerfulness," which became associated with emotional and social qualities.

#### Quick Tip

Understanding the semantic evolution of words requires careful attention to historical usage and cultural influences. The sequence of ideas often flows from specific examples to more abstract concepts.

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

**Several of the world's earliest cities were organized along egalitarian lines. In some regions, urban populations governed themselves for centuries without any indication of the temples and palaces that would later emerge; in others, temples and palaces never emerged at all, and there is simply no evidence of a class of administrators or any other sort of ruling stratum. It would seem that the fact of urban life does not, necessarily, imply any particular form of political organization, and never did. Far from resigning us to inequality, the picture that is now emerging of humanity's past may open our eyes to egalitarian possibilities we otherwise would have never considered.**

- (A) The emergence of a class of administrators and ruling stratum transformed egalitarian urban life of ancient cities to the hierarchical civic organizations today.
- (B) We now have the evidence in support of the existence of an egalitarian urban life in some ancient cities, where political and civic organization was far less hierarchical.
- (C) The lack of hierarchical administration in ancient cities can be deduced by the absence of religious and regal structures such as temples and palaces.
- (D) Contrary to our assumption that urban settlements have always involved hierarchical political and administrative structures, ancient cities were not organized in this way.

**Correct Answer:** (B) We now have the evidence in support of the existence of an egalitarian urban life in some ancient cities, where political and civic organization was far less

hierarchical.

**Solution:**

The passage suggests that several early cities were organized without hierarchical political structures, with some urban populations governing themselves without temples, palaces, or a ruling stratum. Therefore, the best summary reflects the evidence supporting the existence of egalitarian urban life in some ancient cities, as described in (B).

**Quick Tip**

When summarizing a passage, focus on capturing the main argument and supporting evidence. The correct answer typically emphasizes the key point that the passage is making about historical realities.

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**22. The four sentences (labeled A, B, C and D) 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:**

(A) From chemical pollutants in the environment to the damming of rivers to invasive species transported through global trade and travel, every environmental issue is different and there is no single tech solution that can solve this crisis.

(B) Discourse on the threat of environmental collapse revolves around cutting down emissions, but biodiversity loss and ecosystem collapse are caused by myriad and diverse reasons.

(C) This would require legislation that recognises the rights of future generations and other species that allows the judiciary to uphold a much higher standard of environmental protection than currently possible.

(D) Clearly, our environmental crisis requires large political solutions, not minor technological ones, so, instead of focusing on infinite growth, we could consider paths of stable-state economies, while preserving markets and healthy competition.

**Correct Answer:** B, A, C, D

**Solution:**

The correct sequence of the sentences is as follows: - (B) introduces the discourse on environmental collapse and sets the context for the diverse reasons behind the crisis.

- (A) elaborates on the variety of environmental issues that exist and the lack of a singular technological solution.

- (C) proposes the need for legislative measures to ensure higher standards of environmental protection.

- (D) concludes with a recommendation for large political solutions, advocating for stable-state economies rather than growth-focused models.

**Quick Tip**

When determining the order of sentences, pay attention to how each one logically flows into the next. Start by identifying the sentence that sets the broad context and then move to specific solutions or actions that follow.

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

**Sentence:** This was years in the making but fast-tracked during the pandemic, when "people started being more mindful about their food", he explained.

**Paragraph:**For millennia, ghee has been a venerated staple of the subcontinental diet, but it fell out of favour a few decades ago when saturated fats were largely considered to be unhealthy. \_\_\_\_ (1) \_\_\_\_ But more recently, as the thinking around saturated fats is shifting globally, Indians are finding their own way back to this ingredient that is so integral to their cuisine. \_\_\_\_ (2) \_\_\_\_ For Karmakar, a renewed interest in ghee is emblematic of a return-to-basics movement in India. \_\_\_\_ (3) \_\_\_\_ This movement is also part of an overall trend towards "slow food". In keeping with the movement's philosophy, ghee can be produced locally (even at home) and has inextricable cultural ties. \_\_\_\_ (4) \_\_\_\_ At a basic level, ghee is a

type of clarified butter believed to have originated in India as a way to preserve butter from going rancid in the hot climate.

- (A) Option 1
- (B) Option 2
- (C) Option 3
- (D) Option 4

**Correct Answer:** (C) Option 3

**Solution:**

Let's analyze the paragraph and the missing sentence:

- The first sentence of the paragraph talks about how ghee has been a staple in the subcontinental diet but fell out of favor due to the negative perception of saturated fats.
- The second sentence (Option 1) talks about how the thinking around saturated fats has shifted, which is a natural transition, explaining the renewed interest in ghee.
- The third sentence talks about Karmakar's view that this renewed interest is part of a return-to-basics movement in India. The missing sentence should logically explain this resurgence in popularity.
- Option 3 talks about the shift toward "slow food" and mindfulness in food choices, which aligns well with the context of ghee's resurgence. This fits in perfectly as it ties the revival of ghee to a larger trend of mindful food choices, which is the main theme in the paragraph.
- Other options focus either on the general health benefits of ghee or its preservation role in the climate, but Option 3 ties the idea of a cultural movement and food mindfulness, which fits the theme and provides a more cohesive flow for the paragraph.

**Quick Tip**

Inserting a missing sentence requires understanding the overarching theme of the paragraph. In this case, Option 3 best captures the trend of "mindful food choices" that ties the resurgence of ghee to the broader "slow food" movement.

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

**Sentence:** Most were first-time users of a tablet and a digital app.

**Paragraph:** Aage Badhein’s USP lies in the ethnographic research that constituted the foundation of its development process. Customizations based on learning directly from potential users were critical to making this self-paced app suitable for both a literate and non-literate audience. \_\_\_\_ (1) \_\_\_\_ The user interface caters to a Hindi speaking audience who have minimal to no experience with digital services and devices. \_\_\_\_ (2) \_\_\_\_ The content and functionality of the app are suitable for a wide audience. This includes youth preparing for an independent role in life or a student ready to create a strong foundation of financial management early in her life. \_\_\_\_ (3) \_\_\_\_ Household members desirous of improving their family’s financial strength to reach their aspirations can also benefit. We piloted Aage Badhein in early 2021 with over 400 women from rural areas. \_\_\_\_ (4) \_\_\_\_ The digital solution generated a large amount of interest in the communities.

- (A) Option 1
- (B) Option 2
- (C) Option 3
- (D) Option 4

**Correct Answer:** D. Option 4

**Solution:**

The missing sentence fits best after Option (4) as it emphasizes the result of the piloting phase, where the digital solution generated significant interest in the communities. This follows logically after mentioning the piloting phase and gives insight into the app’s positive reception.

### Quick Tip

When inserting a missing sentence, consider the context and flow of the paragraph. The sentence should logically connect the ideas and highlight a natural progression in the narrative. Here, the excitement about the app's use fits naturally after the pilot and interest generated in rural communities.

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