

CAT 2015 VARC Slot 2 Question Paper with Solutions

Time Allowed :3 Hours

Maximum Marks :300

Total questions :100

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

Reading Comprehension

Passage 1: The Rise of Artificial Intelligence

Artificial Intelligence (AI) has transformed industries by automating tasks and enhancing decision-making. From healthcare diagnostics to autonomous vehicles, AI's applications are vast. However, its rise raises ethical concerns, such as job displacement and privacy invasion. Studies suggest AI could automate 30% of current jobs by 2030, creating economic challenges. Additionally, AI systems often rely on vast datasets, raising concerns about data security. Proponents argue that AI boosts efficiency and innovation, but critics warn of unchecked development leading to societal risks. Balancing progress with regulation is crucial.

1. What is the primary concern raised by critics of AI development in the passage?

- (a) Lack of innovation
- (b) Societal risks from unchecked development
- (c) High implementation costs
- (d) Limited applications

Correct Answer: (b) Societal risks from unchecked development

Solution:

We need to identify the primary concern of AI critics.

- **Step 1:** Locate critics' view: The passage states, "critics warn of unchecked development leading to societal risks."

- **Step 2:** Evaluate options:

- (a) Lack of innovation: Incorrect, as proponents highlight innovation.
- (b) Societal risks from unchecked development: Matches the passage directly.
- (c) High implementation costs: Not mentioned
- (d) Limited applications: Incorrect, as AI has "vast" applications.

- **Step 3:** Confirm: Option b aligns with the passage's emphasis on critics' concerns.

Thus, the answer is **b**.

Quick Tip

Focus on the passage's explicit statements about specific groups (e.g., critics) to identify their views.

2. According to the passage, what percentage of jobs could AI automate by 2030?

- (a) 20%
- (b) 25%
- (c) 30%
- (d) 35%

Correct Answer: (c) 30%

Solution:

We need the percentage of jobs AI could automate by 2030.

- **Step 1:** Find the statistic: The passage states, "AI could automate 30% of current jobs by 2030."

- **Step 2:** Match options:

- (a) 20%: Incorrect.
- (b) 25%: Incorrect.
- (c) 30%: Correct.
- (d) 35%: Incorrect.

- **Step 3:** Confirm: The passage explicitly mentions 30%.

Thus, the answer is **c**.

Quick Tip

For factual questions, directly quote the passage's specific data or statistics.

3. What is the tone of the passage regarding AI's impact?

- (a) Entirely optimistic
- (b) Completely pessimistic
- (c) Balanced

(d) Indifferent

Correct Answer: (c) Balanced

Solution:

We need to determine the passage's tone.

- **Step 1:** Analyze content: The passage discusses AI's benefits ("boosts efficiency and innovation") and concerns ("job displacement," "privacy invasion," "societal risks").
- **Step 2:** Evaluate tone: It presents both positive and negative aspects, suggesting a neutral stance.
- **Step 3:** Check options:
 - (a) Entirely optimistic: Incorrect, as it mentions concerns.
 - (b) Completely pessimistic: Incorrect, as it highlights benefits.
 - (c) Balanced: Correct, as it weighs both sides.
 - (d) Indifferent: Incorrect, as it shows engagement with pros and cons.

Thus, the answer is **c**.

Quick Tip

Determine tone by assessing whether the passage presents both positive and negative viewpoints.

4. What does the passage suggest is crucial for AI's development?

- (a) Rapid expansion
- (b) Balancing progress with regulation
- (c) Eliminating ethical concerns
- (d) Increasing data usage

Correct Answer: (b) Balancing progress with regulation

Solution:

We need to identify what the passage deems crucial for AI.

- **Step 1:** Find the relevant statement: The passage concludes, "Balancing progress with regulation is crucial."

- **Step 2:** Match options:
- (a) Rapid expansion: Not mentioned
- (b) Balancing progress with regulation: Directly matches.
- (c) Eliminating ethical concerns: Not stated
- (d) Increasing data usage: Incorrect, as data raises concerns.
- **Step 3:** Confirm: Option b is explicitly stated

Thus, the answer is **b**.

Quick Tip

Look for concluding or emphasized statements to identify key suggestions in the passage.

Passage 2: Urbanization and Sustainability

Urbanization has accelerated globally, with over 50% of the world's population now living in cities. This shift drives economic growth but strains resources like water and energy. Cities contribute 70% of global carbon emissions, necessitating sustainable urban planning. Green buildings and public transport reduce environmental impact, but challenges like slum growth and waste management persist. Effective policies can mitigate these issues, ensuring cities remain livable while supporting economic progress.

5. What is a major environmental impact of urbanization mentioned in the passage?

- (a) Reduced energy consumption
- (b) 70% of global carbon emissions
- (c) Decreased slum growth
- (d) Improved waste management

Correct Answer: (b) 70% of global carbon emissions

Solution:

We need to identify a major environmental impact of urbanization.

- **Step 1:** Locate impact: The passage states, "Cities contribute 70% of global carbon emissions."

- **Step 2:** Evaluate options:
 - (a) Reduced energy consumption: Incorrect, as resources are strained(d)
 - (b) 70% of global carbon emissions: Correct, directly state(d)
 - (c) Decreased slum growth: Incorrect, slum growth is a challenge.
 - (d) Improved waste management: Incorrect, waste management is a challenge.
 - **Step 3:** Confirm: Option b matches the passage's data(a)
- Thus, the answer is **b**.

Quick Tip

Focus on specific data or statistics in the passage for impact-related questions.

6. What does the passage suggest to make cities more livable?

- (a) Increasing urbanization rates
- (b) Implementing effective policies
- (c) Expanding slum areas
- (d) Reducing public transport

Correct Answer: (b) Implementing effective policies

Solution:

We need to find what makes cities livable.

- **Step 1:** Locate suggestion: The passage states, “Effective policies can mitigate these issues, ensuring cities remain livable.”
 - **Step 2:** Match options:
 - (a) Increasing urbanization: Incorrect, as it strains resources.
 - (b) Implementing effective policies: Correct, directly state(d)
 - (c) Expanding slum areas: Incorrect, slums are a challenge.
 - (d) Reducing public transport: Incorrect, public transport reduces impact.
 - **Step 3:** Confirm: Option b aligns with the passage.
- Thus, the answer is **b**.

Quick Tip

Identify solutions or recommendations in the passage's concluding statements.

7. Which of the following is NOT a challenge of urbanization mentioned in the passage?

- (a) Slum growth
- (b) Waste management
- (c) Economic growth
- (d) Resource strain

Correct Answer: (c) Economic growth

Solution:

We need to identify what is not a challenge.

- **Step 1:** List challenges: The passage mentions “strains resources like water and energy,” “slum growth,” and “waste management.”

- **Step 2:** Evaluate options:

- (a) Slum growth: A challenge, incorrect.
- (b) Waste management: A challenge, incorrect.
- (c) Economic growth: A benefit, not a challenge.
- (d) Resource strain: A challenge, incorrect.

- **Step 3:** Confirm: Economic growth is a positive outcome.

Thus, the answer is **c**.

Quick Tip

Distinguish between positive outcomes and challenges in the passage.

8. What percentage of the world's population lives in cities, according to the passage?

- (a) 40%
- (b) 50%
- (c) 60%
- (d) Over 50%

Correct Answer: (d) Over 50%

Solution:

We need the percentage of the population in cities.

- **Step 1:** Find data: The passage states, “over 50% of the world’s population now living in cities.”

- **Step 2:** Match options:

- (a) 40%: Incorrect.

- (b) 50%: Incorrect, as it’s “over 50%.”

- (c) 60%: Not specific(d)

- (d) Over 50%: Correct, matches exactly.

- **Step 3:** Confirm: Option d is precise.

Thus, the answer is **d**.

Quick Tip

Match numerical data exactly to the passage’s wording for precision.

Passage 3: The Gig Economy

The gig economy, characterized by short-term, flexible jobs, has grown with platforms like Uber and Freelancer. It offers workers freedom but lacks job security and benefits. Studies show gig workers earn 20% less on average than traditional employees. Companies benefit from reduced costs, but critics argue this model exploits workers. Policymakers face the challenge of regulating this sector to protect workers while preserving its flexibility. **9.** What

is a key advantage of the gig economy for workers, according to the passage?

(a) Job security

(b) Higher earnings

(c) Freedom

(d) Employee benefits

Correct Answer: (c) Freedom

Solution:

We need to identify a key advantage for workers.

- **Step 1:** Find advantage: The passage states, “It offers workers freedom.”
- **Step 2:** Evaluate options:
 - (a) Job security: Incorrect, as it lacks security.
 - (b) Higher earnings: Incorrect, as gig workers earn less.
 - (c) Freedom: Correct, directly state(d)
 - (d) Employee benefits: Incorrect, as benefits are lacking.
- **Step 3:** Confirm: Option c matches the passage.

Thus, the answer is **c**.

Quick Tip

Look for explicit advantages mentioned for specific groups in the passage.

10. How much less do gig workers earn compared to traditional employees?

- (a) 10%
- (b) 15%
- (c) 20%
- (d) 25%

Correct Answer: (c) 20%

Solution:

We need the earnings difference for gig workers.

- **Step 1:** Find data: The passage states, “gig workers earn 20% less on average than traditional employees.”
- **Step 2:** Match options:
 - (a) 10%: Incorrect.
 - (b) 15%: Incorrect.
 - (c) 20%: Correct.
 - (d) 25%: Incorrect.
- **Step 3:** Confirm: Option c is exact.

Thus, the answer is **c**.

Quick Tip

Directly quote numerical data from the passage for factual questions.

11. What challenge do policymakers face in the gig economy?

- (a) Reducing company costs
- (b) Regulating to protect workers while preserving flexibility
- (c) Increasing gig worker earnings
- (d) Eliminating short-term jobs

Correct Answer: (b) Regulating to protect workers while preserving flexibility

Solution:

We need the policymakers' challenge.

- **Step 1:** Find challenge: The passage states, "Policymakers face the challenge of regulating this sector to protect workers while preserving its flexibility."

- **Step 2:** Match options:

- (a) Reducing company costs: Incorrect, a company benefit.
- (b) Regulating to protect workers while preserving flexibility: Correct, directly state(d)
- (c) Increasing earnings: Not mentione(d)
- (d) Eliminating short-term jobs: Incorrect, against the model.

- **Step 3:** Confirm: Option b matches exactly.

Thus, the answer is **b**.

Quick Tip

Identify challenges in the passage's concluding or problem-focused statements.

12. What is a criticism of the gig economy mentioned in the passage?

- (a) It reduces worker freedom
- (b) It exploits workers
- (c) It increases job security
- (d) It raises company costs

Correct Answer: (b) It exploits workers

Solution:

We need a criticism of the gig economy.

- **Step 1:** Find criticism: The passage states, “critics argue this model exploits workers.”
- **Step 2:** Evaluate options:
 - (a) Reduces worker freedom: Incorrect, freedom is an advantage.
 - (b) It exploits workers: Correct, directly stated
 - (c) Increases job security: Incorrect, security is lacking.
 - (d) Raises company costs: Incorrect, companies reduce costs.
- **Step 3:** Confirm: Option b aligns with critics’ view.

Thus, the answer is **b**.

Quick Tip

Focus on critics’ statements to identify criticisms in the passage.

Verbal Ability

13. Choose the word most similar in meaning to “mitigate” as used in Passage 2.

- (a) Aggravate
- (b) Alleviate
- (c) Intensify
- (d) Complicate

Correct Answer: (b) Alleviate

Solution:

We need a synonym for “mitigate” in “Effective policies can mitigate these issues.”

- **Step 1:** Define context: “Mitigate” means to reduce or lessen the severity of issues.
- **Step 2:** Evaluate options:
 - (a) Aggravate: Means to worsen, opposite.

- (b) Alleviate: Means to reduce or relieve, synonymous.
- (c) Intensify: Means to increase, opposite.
- (d) Complicate: Means to make complex, unrelate(d)
- **Step 3:** Confirm: Alleviate fits the context of reducing issues.

Thus, the answer is **b**.

Quick Tip

Use the word's context in the passage to select the precise synonym.

14. What is the antonym of “vast” as used in Passage 1?

- (a) Large
- (b) Small
- (c) Extensive
- (d) Broad

Correct Answer: (b) Small

Solution:

We need the antonym of “vast” in “AI’s applications are vast.”

- **Step 1:** Define context: “Vast” means very large or numerous.
- **Step 2:** Evaluate options:
 - (a) Large: Synonym, not antonym.
 - (b) Small: Opposite, meaning limited or few.
 - (c) Extensive: Synonym, not antonym.
 - (d) Broad: Synonym, not antonym.
- **Step 3:** Confirm: Small is the clear opposite.

Thus, the answer is **b**.

Quick Tip

Ensure the antonym fits the word's specific usage in the passage.

15. Fill in the blank with the most appropriate word:

“The rise of AI has concerns about data privacy.”

- (a) Alleviated
- (b) Mitigated
- (c) Exacerbated
- (d) Resolved

Correct Answer: (c) Exacerbated

Solution:

We need a word that fits the context of increasing concerns.

- **Step 1:** Analyze context: Passage 1 mentions “ethical concerns, such as job displacement and privacy invasion,” implying AI worsens privacy issues.
- **Step 2:** Evaluate options:
 - (a) Alleviated: Means reduced, incorrect.
 - (b) Mitigated: Means lessened, incorrect.
 - (c) Exacerbated: Means worsened, fits context.
 - (d) Resolved: Means solved, incorrect.
- **Step 3:** Confirm: Exacerbated aligns with privacy concerns increasing.

Thus, the answer is **c**.

Quick Tip

Choose words that match the passage’s tone and context for fill-in-the-blank questions.

16. Identify the grammatically incorrect sentence:

- (a) AI has transformed industries by automating tasks.
- (b) Many companies is adopting AI for efficiency.
- (c) Workers are concerned about job displacement.
- (d) Policymakers are addressing ethical issues in AI.

Correct Answer: (b) Many companies is adopting AI for efficiency.

Solution:

We need to find the grammatically incorrect sentence.

- **Step 1:** Analyze sentences:

- (a) Correct: “has transformed” agrees with singular “AI.”
- (b) Incorrect: “Many companies” (plural) with “is” (singular); should be “are.”
- (c) Correct: “Workers are” agrees, proper structure.
- (d) Correct: “Policymakers are” agrees, proper structure.

- **Step 2:** Confirm: Sentence b has a subject-verb agreement error.

Thus, the answer is **b**.

Quick Tip

Check subject-verb agreement to identify grammatical errors in sentences.

17. Arrange the following sentences to form a coherent paragraph:

1. Urbanization drives economic growth by concentrating resources.
2. However, it also leads to environmental challenges like pollution.
3. Sustainable urban planning can address these issues.
4. Cities must adopt green technologies to remain livable.

- (a) 1, 2, 3, 4
- (b) 2, 1, 3, 4
- (c) 1, 3, 2, 4
- (d) 4, 1, 2, 3

Correct Answer: (a) 1, 2, 3, 4

Solution:

We need a coherent paragraph.

- **Step 1:** Identify introduction: Sentence 1 introduces urbanization’s economic benefit.
- **Step 2:** Find contrast: Sentence 2 uses “however” to highlight environmental challenges.
- **Step 3:** Identify solution: Sentence 3 suggests sustainable planning as a solution.
- **Step 4:** Conclude: Sentence 4 specifies green technologies for livability.
- **Step 5:** Test order: 1-2-3-4 flows logically: benefit, challenge, solution, action. Other orders disrupt coherence (e.g., b starts with challenge).

Thus, the answer is **a**.

Quick Tip

Arrange sentences by identifying introduction, contrast, solution, and conclusion.

18. Which sentence is the odd one out?

- (a) AI enhances decision-making in industries.
- (b) It automates repetitive tasks efficiently.
- (c) It raises concerns about data privacy.
- (d) It improves productivity in healthcare.

Correct Answer: (c) It raises concerns about data privacy.

Solution:

We need the sentence that differs in theme.

- **Step 1:** Identify theme: Sentences a, b, and d focus on positive impacts of AI (decision-making, automation, productivity).
- **Step 2:** Compare: Sentence c discusses a negative concern (data privacy).
- **Step 3:** Confirm: Sentence c is the odd one out due to its negative focus.

Thus, the answer is **c**.

Quick Tip

The odd one out differs in tone or theme from the others.

19. Complete the sentence with the most appropriate word:

“The gig economy offers flexibility but often lacks job”

- (a) Security
- (b) Growth
- (c) Opportunities
- (d) Freedom

Correct Answer: (a) Security

Solution:

We need a word that fits the context of a drawback in the gig economy.

- **Step 1:** Analyze context: Passage 3 states, “lacks job security and benefits.”
- **Step 2:** Evaluate options:
 - (a) Security: Matches the passage’s mention of lacking job security.
 - (b) Growth: Not mentioned as a specific lack.
 - (c) Opportunities: Incorrect, as the gig economy provides opportunities.
 - (d) Freedom: Incorrect, as freedom is an advantage.
- **Step 3:** Confirm: Security is directly supported by the passage.

Thus, the answer is **a**.

Quick Tip

Choose words that align with the passage’s specific drawbacks or benefits.

20. Choose the most logical inference from Passage 1:

- (a) AI will eliminate all jobs by 2030
- (b) Regulation can address AI’s ethical concerns
- (c) AI has no practical applications
- (d) Data security is not a concern for AI

Correct Answer: (b) Regulation can address AI’s ethical concerns

Solution:

We need a logical inference from Passage 1.

- **Step 1:** Review passage: It mentions ethical concerns (job displacement, privacy) and concludes, “Balancing progress with regulation is crucial.”
- **Step 2:** Evaluate options:
 - (a) AI will eliminate all jobs: Incorrect, only 30% automation mentioned
 - (b) Regulation can address ethical concerns: Supported by the need for regulation.
 - (c) No practical applications: Incorrect, applications are vast.
 - (d) Data security not a concern: Incorrect, it’s a concern.
- **Step 3:** Confirm: Option b is a logical inference from the regulation emphasis.

Thus, the answer is **b**.

Quick Tip

Inferences must be directly supported by the passage's content, not exaggerate(d)
