

WB Board Class 12, 2026 Applied Artificial Intelligence Question Paper

Time Allowed :3 Hours	Maximum Marks :100	Total questions :38
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General Instructions

Read the following instructions very carefully and strictly follow them:

1. The paper is divided into Section A and Section B.
2. Section A includes objective-type, short answer, and long answer questions.
3. All questions in Section A are compulsory.
4. Section B contains elective questions based on the chosen topic.
5. Answers must be written legibly within the word limit.
6. Use of unfair means or electronic devices is prohibited.
7. Follow the correct format and instructions for each section.

1. Which of the following is true about Python classes?

- (A) A class is a blueprint for creating objects.
- (B) A class cannot contain methods.
- (C) Objects of the same class have different attributes.
- (D) A class is used to execute functions.

2. Arrange the following steps to create and use a function in Python:

- a) Define the function
- b) Call the function
- c) Write the function body

d) Use the def keyword

Choose the correct sequence:

(A) a, b, c, d

(B) d, a, c, b

(C) d, c, a, b

(D) a, d, c, b

3. What is the main characteristic of a stack?

(a) First-In-First-Out

(b) Last-In-First-Out

(c) Random Access

(d) Priority-based Access

4. In a binary tree, each node can have at most:

(a) 1 child

(b) 2 children

(c) 3 children

(d) 4 children

5. Which of the following operations is used to add an element to a queue?

(a) Push

(b) Pop

(c) Enqueue

(d) Dequeue

6. Which of the following is a necessary condition for binary search to work correctly?

(a) The array must be unsorted.

- (b) The array must be sorted in descending order.
 - (c) The array must be sorted in ascending order.
 - (d) The array must contain unique elements only.
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7. Which of the following pairs is correctly related?

- (a) `arr.append(5)` ⇒ Adds 5 to the beginning of the array
 - (b) `stack.pop()` ⇒ Removes the bottom element from the stack
 - (c) `queue.dequeue()` ⇒ Removes the last element from the queue
 - (d) `arr[2]` ⇒ Accesses the third element in the array
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8. The brain of the computer, which performs calculations and tasks, is known as the

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- (A) Memory
 - (B) Hard Drive
 - (C) CPU
 - (D) Monitor
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9. The operating system that is commonly used in mobile devices is -----.

- (A) Linux
 - (B) Windows
 - (C) Android
 - (D) MacOS
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10. Arrange the following in the correct order of a typical network communication process:

1. Data is sent from the sender to the receiver.
2. Data is converted into packets.

3. Packets are routed through network devices.
4. The receiver reassembles the data from packets.

- (A) 1, 2, 3, 4
 - (B) 2, 3, 4, 1
 - (C) 1, 3, 2, 4
 - (D) 2, 1, 3, 4
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11. In networking, a _____ is a protocol used to assign IP addresses dynamically to devices on a network.

- (A) DNS
 - (B) DHCP
 - (C) FTP
 - (D) HTTP
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12. Assertion: In Boolean algebra, the AND operator returns true only if both operands are true. Reasoning: The OR operator returns true if at least one operand is true.

- (A) Both assertion and reasoning are true, and reasoning is the correct explanation of assertion.
 - (B) Both assertion and reasoning are true, but reasoning is not the correct explanation of assertion.
 - (C) Assertion is true, but reasoning is false.
 - (D) Assertion is false, but reasoning is true.
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13. What is the hexadecimal equivalent of the decimal number 255?

- (A) 0xFF
- (B) 0xFE
- (C) 0xF0

(D) 0x100

14. In the binary number system, what is the result of the operation 1010 XOR 1100 XOR 1010?

(A) 0110

(B) 1110

(C) 1000

(D) 0010

15. Which of the following ASCII codes represents the character 'A'?

(A) 65

(B) 66

(C) 67

(D) 68

16. What is the result of the binary addition of 1011 and 1101?

(A) 11000

(B) 10100

(C) 10110

(D) 11100

17. Which of the following is a high-level programming language?

(A) Machine Language

(B) Assembly Language

(C) C++

(D) Binary Code

18. A compiler is used to:

- (A) Execute code line by line
 - (B) Translate high-level language into machine code
 - (C) Translate machine code into high-level language
 - (D) None of the above
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19. Which of the following is a key feature of Object-Oriented Programming?

- (A) Sequence
 - (B) Functions
 - (C) Classes and Objects
 - (D) Loops
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20. Which of the following statements is true?

- (A) Assembly language is easier to understand than machine language.
 - (B) High-level languages are less abstract than assembly language.
 - (C) Machine language is composed of symbols and mnemonics.
 - (D) Assembly language is a type of high-level language.
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