# NIMCET 2025 Question Paper

| Time Allowed :2 Hours | Maximum Marks :200 | Total Questions :200 |
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## General Instructions

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

This question paper is divided into three sections:

1. The total duration of the examination is 2 hours. The question paper contains three sections

2. The total number of questions is 200, carrying a maximum of 200 marks.

3. The marking scheme is as follows:

   (i) For each correct response, 1 mark will be awarded.

   (ii) For each incorrect response, 0.25 mark will be deducted.

4. No marks will be awarded for unanswered questions.

5. Follow the instructions provided during the exam for submitting your answers.

**1. A man walks 10 meters towards the North, then turns right and walks 5 meters, then turns right again and walks 10 meters. In which direction is he now facing?**

(A) North

(B) South

(C) East

(D) West

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**2. Which of the following is *not* a characteristic of Object-Oriented Programming?**

(A) Encapsulation

(B) Inheritance

(C) Compilation

(D) Polymorphism

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**3. Five friends A, B, C, D, and E are sitting in a row facing north, but not necessarily in the same order:**

- B is to the immediate left of C

- E is not at any of the ends

- D is to the right of E but not next to C

- A is at one of the ends

**Who is sitting in the middle?**

(A) B

(B) C

(C) E

(D) D

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**4. Which traversal of a binary tree gives the nodes in *non-decreasing* order if the tree is a Binary Search Tree?**

(A) Pre-order

(B) In-order

(C) Post-order

(D) Level-order

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**5. In a paging system, the page table is stored in memory. If memory access time is 100 ns, what is the effective access time if one page table lookup is needed per access?**

(1) 100 ns

(2) 150 ns

(3) 200 ns

(4) 50 ns

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**6. From the word *ARRANGEMENT*, how many distinct 9-letter words can be formed?**

(1) 151200

(2) 302400

(3) 604800

(4) 1209600

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**7. Which of the following is true for a natural join between two relations $R(A, B)$ and $S(B, C)$?**

(1) Result is always a Cartesian product

(2) Common attribute B appears twice

(3) Result will have schema $(A, B, C)$

(4) Natural join cannot be performed unless attribute names differ

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**8. Which protocol is responsible for ensuring packet delivery in the correct sequence in the transport layer?**

(1) UDP

(2) IP

(3) TCP

(4) HTTP

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**9. The equation of the circle passing through the point** $(1, 2)$ **and touching both axes is:**

(1) $(x - 1)^2 + (y - 2)^2 = 1$

(2) $(x - 2)^2 + (y - 1)^2 = 1$

(3) $(x - 1)^2 + (y - 1)^2 = 1$

(4) $(x - 2)^2 + (y - 2)^2 = 4$

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**10. Six students scored different marks in an exam. A scored more than B but less than C. D scored more than E but less than B. F scored more than A but less than C. Who scored the third highest?**

(1) A

(2) B

(3) F

(4) D

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**11. How many binary trees can be formed with 4 distinct nodes?**

(1) 14

(2) 24

(3) 42

(4) 120

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**12. A system uses a two-level paging scheme. If the logical address space is 32 bits, the page size is 4 KB, and the outer page table has 1024 entries, how many bits are used for the outer page number?**

(1) 10

(2) 12

(3) 20

(4) 22

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