# NELTAS | M-CAT
PATH TO EDUCATIONAL EXCELLENCE | International Maths Competition

**Grade 5**

# Grand Finale 2024-25

## M-CAT Question Paper

## NMA025

**Return the answer sheet along with question paper to the invigilator at the end of the exam.**

**TOTAL MARKS**
**100**

**QUESTIONS**
**50**

**DURATION**
**60 mins**

## Instructions for Student:

➲ Read the question carefully before answering.

➲ Each question has 4 options (A, B, C & D).

➲ Choose one correct option as your answer, from the 4 options.

➲ Every question carries 2 marks.

➲ There will be an additional 0.5 Negative Marking for every wrong answer.

➲ On the answer sheet blacken the correct option against the corresponding question number,
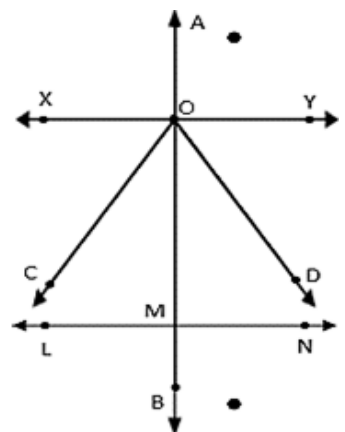
The Correct Method

| Q. | Answer |
|---|---|
| 1 | (A) (B) ● (D) |

✓

The Wrong Methods

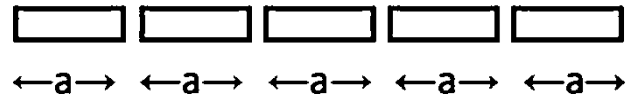| Q. | Answer |
|---|---|
| 1 | (A) ● ● (D) |
| 1 | (A) (B) (◉) (D) |
| 1 | (A) (B) (✓) (D) |
| 1 | (A) (B) (✗) (D) |

✗

➲ **Use pencil to mark your answer.**

➲ If you wish to change your answer, erase the previous mark completely.

1. The Roman numeral XVIII represents the number _____ in the Hindu–Arabic number system.
   a. 10
   b. 17
   c. 18
   d. 8

2. The cost of a wooden chair is ₹ 1300. What is the cost of 20 similar chairs?
   a. ₹ 24000
   b. ₹ 25000
   c. ₹ 26000
   d. ₹ 27000

3. Which of these could be represented by the expression 'A – 5'?
   a. Ishan is 5 times as old as Sanjit. If Sanjit's age is A years, how old is Ishan?
   b. Tarun is 5 years younger than Anny. If Anny's age is A years, how old is Tarun?
   c. Naman is one-fifth as old as Aman. If Naman's age is A years, how old Is Aman?
   d. Geet is 5 years older than Suhana. If Suhana's age is A years, how old is Geet?

4. The area of a rectangle is 120 sq. m and its breadth is 30 m. Find its length.
   a. 4 m
   b. 40 m
   c. 14 m
   d. 20 m

5. Arrange the following decimals in ascending order of value:
   0.4213, 0.4312, 0.4321, & 0.4132
   a. 0.4213 < 0.4312 < 0.4321 < 0.4132
   b. 0.4132 < 0.4213 < 0.4312 < 0.4321
   c. 0.4132 < 0.4312 < 0.4213 < 0.4321
   d. 0.4312 < 0.4213 < 0.4321 < 0.4132

6. Which unit would you use to measure the length of a pen?
   a. L
   b. mL
   c. cm
   d. m

7. The sum of a set of 7 numbers is 16604. If another number 124 is also included in this set, what is the average of the new set off numbers?
   a. 2091
   b. 2074
   c. 2081
   d. 2088

8. In the given figure, what can be said about the lines XY and LN?
   a. They are intersecting lines.
   b. They are parallel to each other.
   c. They cut each other at a point.
   d. None of these

9. **What is the total length represented by the given figure, in terms of a?**
   a. 5 + a
   b. a − 5
   c. 5a
   d. 5/a



10. **Which number should come in the blank?**
    **49 ÷ 7 + 10 − 7 = 36 ÷ ___ × 5**
    a. 18
    b. 16
    c. 14
    d. 12

11. **If selling price of an item is ₹ 6300 and its cost price is ₹ 5400, then find its profit/loss percentage?**
    a. Profit of 9%
    b. Profit of 16.67%
    c. Loss of 6.67%
    d. Loss of 3.4%

12. **If 14 men construct a wall in 5 days, in how many days will 1 man be able to construct the wall?**
    a. 70 days
    b. 24 days
    c. 64 days
    d. 74 days

13. **Which of the following terms is a like term for 47vc?**
    a. 4v
    b. 7c
    c. −92vc
    d. 8v + 2c

14. **Find the greatest number which divides 143 and 33 exactly.**
    a. 10
    b. 11
    c. 12
    d. 13

15. **A cake weighing 3.5 kg was divided equally amongst 50 guests at a birthday party. What will be the share of each person?**
    a. 0.7 kg
    b. 0.07 kg
    c. 7 kg
    d. 0.007 kg

16. **Hari runs at a speed of 20 km/hr. How far will he run in 2.5 hours?**
    a. 50 km
    b. 60 km
    c. 12 km
    d. 10 km

**17. Which of the following is INCORRECT?**
   a. A line segment is a part of a straight line with fixed length and two end points.
   b. An angle is formed when two rays or straight lines meet.
   c. The diameter of a circle is always twice the length of the radius.
   d. A shape is said to be symmetrical if it cannot be divided into two or more identical pieces.

**18. Solve the expression using the BODMAS rule:** $\left(\frac{1}{3} + \frac{5}{3}\right) - 5 + 3$
   a. 0
   b. 1
   c. −1
   d. 2

**19. What is the difference between the greatest and the smallest 7-digit number?**
   a. Eight million nine hundred and ninety-nine thousand nine hundred and ninety-nine.
   b. Eighty-nine crore ninety-nine lakh nine hundred and ninety-nine.
   c. Eight hundred and ninety-nine thousand nine hundred and ninety-nine.
   d. Nine million nine hundred ninety-nine.

**20. What is the amount received if ₹ 12000 is invested at 6% p.a. simple interest for 4 years?**
   a. ₹ 12400
   b. ₹ 14880
   c. ₹ 20400
   d. None of these

**21. A school has 806 desks to be placed in 26 classrooms. If the same number of desks are placed in each classroom, then how many desks will be there in each room?**
   a. 31
   b. 34
   c. 42
   d. 44

**22. A computer is bought for ₹ 40000 and resold at 10% loss. What is its selling price?**
   a. ₹ 34200
   b. ₹ 36000
   c. ₹ 42400
   d. None of these

**23. What is the value of** $\frac{8}{5} \times 75 + 20 - \left(\frac{18}{3}\right)$ **?**
   a. 125
   b. 134
   c. 146
   d. 153

**24. Seema has to buy rose saplings to plant in her garden. What is the least number of rose saplings required so that there are either 24 or 30 rose saplings in each row?**
   a. 24
   b. 30
   c. 100
   d. 120

**25. Choose the correct bill for the bill dated 12th September 2023 and numbered 567781 for the following items bought by Jack from J. K. Mart:**

i.   Two bottles of cold drink for ₹ 45 each.     ii.   4 packs of paneer for ₹ 20 per pack.

iii.  One loaf of bread for ₹ 75 per loaf.      iv.  Three packs of chips for ₹ 40 per pack.

a.

**A. K. MART**

Bill No.: 567781     Date: 12/09/2023

| Sr. No. | Items | Qty | Rate | Amount (in ₹) |
|---|---|---|---|---|
| 1 | Cold Drink | 2 | ₹ 45 | ₹ 90 |
| 2 | Paneer | 1 | ₹ 20 | ₹ 20 |
| 3 | Bread | 1 | ₹ 75 | ₹ 75 |
| 4 | Chips | 3 | ₹ 40 | ₹ 120 |
| | | | Total | ₹ 285 |

b.

**J. K. MART**

Bill No.: 567781     Date: 13/09/2023

| Sr. No. | Items | Qty | Rate | Amount (in ₹) |
|---|---|---|---|---|
| 1 | Cold Drink | 3 | ₹ 45 | ₹ 90 |
| 2 | Paneer | 4 | ₹ 20 | ₹ 80 |
| 3 | Bread | 1 | ₹ 75 | ₹ 75 |
| 4 | Chips | 3 | ₹ 40 | ₹ 120 |
| | | | Total | ₹ 365 |

c.

**J. K. MART**

Bill No.: 567781     Date: 12/09/2023

| Sr. No. | Items | Qty | Rate | Amount (in ₹) |
|---|---|---|---|---|
| 1 | Cold Drink | 2 | ₹ 45 | ₹ 90 |
| 2 | Paneer | 4 | ₹ 20 | ₹ 80 |
| 3 | Bread | 1 | ₹ 75 | ₹ 75 |
| 4 | Chips | 3 | ₹ 40 | ₹ 120 |
| | | | Total | ₹ 365 |

d.

**J. K. MART**

Bill No.: 567767     Date: 12/09/2023

| Sr. No. | Items | Qty | Rate | Amount (in ₹) |
|---|---|---|---|---|
| 1 | Cold Drink | 2 | ₹ 45 | ₹ 90 |
| 2 | Paneer | 4 | ₹ 20 | ₹ 80 |
| 3 | Bread | 1 | ₹ 75 | ₹ 75 |
| 4 | Chips | 3 | ₹ 40 | ₹ 120 |
| | | | Total | ₹ 365 |

**26. Which of the following is a list of quivalent fractions?**

a. $\frac{2}{3}, \frac{4}{6}, \frac{6}{9}, \frac{8}{12}$           b. $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}$

c. $1\frac{1}{2}, 1\frac{1}{3}, 1\frac{1}{4}, 1\frac{1}{5}$        d. $\frac{8}{7}, \frac{8}{6}, \frac{8}{5}, \frac{8}{4}$

**27. Amit rode his bike for 3.10 km on Friday and 4.2 km on Saturday. How many more kilometers did Amit cover on Saturday as compared to Friday?**

a.  1.50

b.  1.15

c.  1.10

d.  7.35

**28. How many horizontal lines of symmetry does the figure given alongside have?**

a.  0

b.  1

c.  2

d.  None of these



**29. What is the amount of surface enclosed by a closed plane figure called?**

a.  Area

b.  Perimeter

c.  Volume

d.  Circumference

30. Which is the smallest four-digit number formed using all the digits 6, 3, 1 and 0 only once?
    a. 1306
    b. 1036
    c. 0136
    d. 6310

31. Find the value of $(35\% \text{ of } 400) + (\frac{3}{4} \text{ of } 320)$ = _____
    a. 340
    b. 357
    c. 368
    d. 380

32. Compare the following two numbers:
    43,29,52,280 _____ 432,925,280
    a. >
    b. <
    c. =
    d. None of these

33. 6477480 is divisible by _____.
    a. 2
    b. 3
    c. 6
    d. All of these

34. The price at which an article is bought is called its _____.
    a. Cost price
    b. Selling price
    c. Profit
    d. Loss

35. Weight of 1 orange is 200 g. What is the weight of 1 dozen oranges?
    a. 2000 g
    b. 2200 g
    c. 2400 g
    d. 2800 g

36. Solve: 276 + 900 ÷ 3 − 300 x 2
    a. −24
    b. −25
    c. 35
    d. 24

37. Multiply the shaded portion of the given figures:
    a. 35
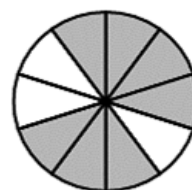    b. 0.035
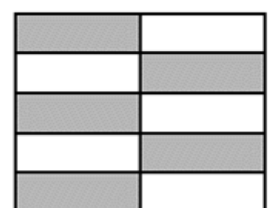    c. 0.35
    d. 3.5



Figure 1          Figure 2

**38. Find the volume of a cube of edge 20 cm.**
   a. 7500 cu. cm
   b. 8000 cu. cm
   c. 8500 cu. cm
   d. 9000 cu. cm

**39. Simplify: $120t - 30 - 34t + 54 - 2(43t + 12)$**
   a. 0
   b. 12t
   c. 12
   d. None of these

**40. If the numerator is more than the denominator, then the fraction is called as _____.**
   a. Like Fraction
   b. Improper Fraction
   c. Proper Fraction
   d. Unit Fraction

**41. Fill in the blank: An equilateral triangle _____.**
   a. has three equal sides
   b. has three equal angles
   c. is an acute angled triangle
   d. All of these

**42. What is the perimeter of a square tile whose area is half of 128 cm²?**
   a. 64 cm
   b. 32 cm
   c. 16 cm
   d. 8 cm

**43. The product of two numbers is 336. If HCF of the numbers is 2, then find the LCM of the numbers.**
   a. 246
   b. 144
   c. 168
   d. 173

**44. Raju's Diwali camp starts on 20th November, 2023. If the camp is 20 days long, then the camp will end on _____.**
   a. 30th November, 2023
   b. 29th November, 2023
   c. 10th December, 2023
   d. 9th December, 2023

**45. Khushi bought a set of 50 paper cups. If she used $\frac{1}{4}$ of the cups, then what percentage of the cups are left unused?**
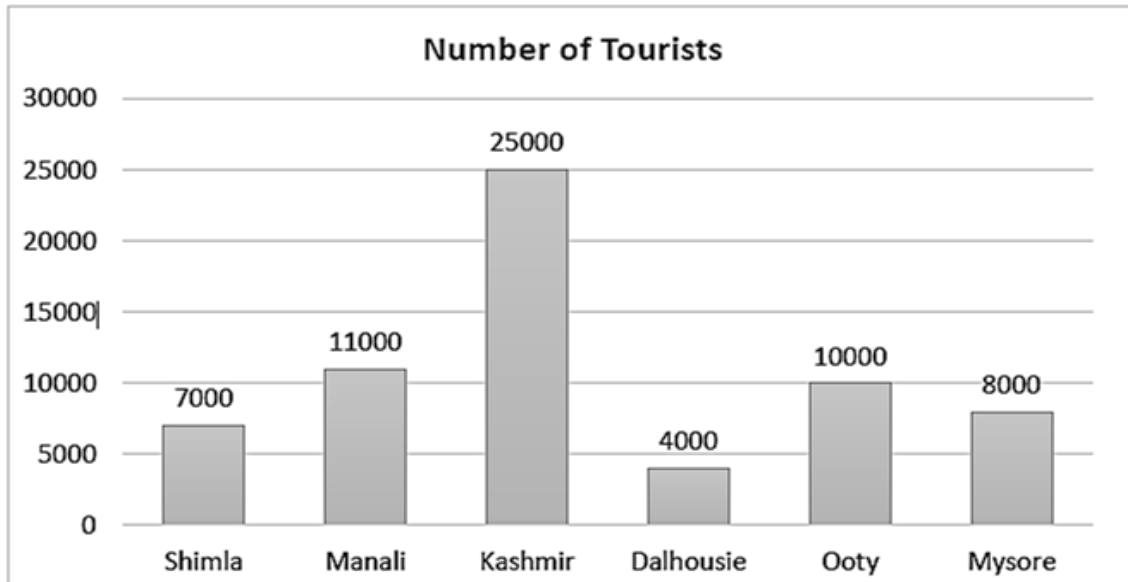   a. 25%
   b. 30%
   c. 50%
   d. 75%

**46. 5 shaving blades cost ₹ 600.  Find the cost of 12 blades.**
   a.  ₹ 1440
   b.  ₹ 1400
   c.  ₹ 7200
   d.  ₹ 1500

**Answer questions 47–50 based on the bar graph given below:**

**The bar graph represents the number of tourists visiting various hill stations during a summer holiday.**



**47. The highest number of tourists that visited any hill station is _____.**
   a.  10000
   b.  11000
   c.  25000
   d.  7000

**48. Which of the following hill stations had 8000 tourists?**
   a.  Ooty
   b.  Mysore
   c.  Dalhousie
   d.  Kashmir

**49. How many more tourists visited Manali as compared to Ooty?**
   a.  2000
   b.  5000
   c.  7000
   d.  1000

**50. What is the total number of tourists that visited Shimla or Dalhousie?**
   a.  8000
   b.  9000
   c.  10000
   d.  11000