

Grade
6

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) <input checked="" type="radio"/> (C) (D)

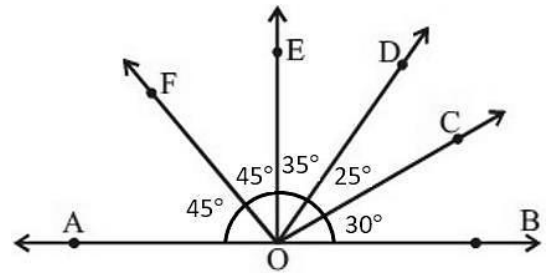
The Wrong Methods	
Q.	Answer
1	(A) <input checked="" type="radio"/> (B) <input checked="" type="radio"/> (C) (D)
1	(A) (B) <input checked="" type="radio"/> (C) (D)
1	(A) (B) <input checked="" type="checkbox"/> (C) (D)
1	(A) (B) (C) (D)

- Use pencil to mark your answer.
- If you wish to change your answer, erase the previous mark completely.

1. What is the number seven billion six hundred thousand and fifty written in expanded form?
 - a. $7,000,000,000 + 600,000 + 50$
 - b. $7,000,000,000 + 60,000 + 50$
 - c. $7,000,000,000 + 650,000$
 - d. $7, 00,000 + 6,000 + 50$
2. Which is the whole number that does not have a predecessor?
 - a. 100
 - b. 0
 - c. 1
 - d. 9
3. How many faces (F), vertices (V) and edges (E) does a triangular prism have?
 - a. $F = 5, V = 8, E = 6$
 - b. $F = 5, V = 9, E = 5$
 - c. $F = 5, V = 8, E = 5$
 - d. $F = 5, V = 6, E = 9$
4. The opposite of -136 is 136. Which of the following is the only integer that does not have an opposite?
 - a. -100
 - b. 0
 - c. No such number exists in the integer set
 - d. 476
5. Which of the following represent group of numbers separated by commas in a number in any number system?
 - a. Place
 - b. Digit
 - c. Period
 - d. None of these
6. Which of the following is the CORRECT decimal form of 'Six hundred and six and seven-hundredths'?
 - a. 606.007
 - b. 606.07
 - c. 606
 - d. 606.7
7. Angle which is less than 360° but larger than 180° is classified as _____.
 - a. Acute angle
 - b. Obtuse angle
 - c. Reflex angle
 - d. Right angle
8. Which of the following is the smallest six-digit number that can be formed using the digits 7, 0, 9, 8, 6 and 5?
 - a. 0, 56, 789
 - b. 5, 67, 890
 - c. 5, 06, 789
 - d. 0, 98, 765

9. How many obtuse angles are there in the given figure?

- a. 1
- b. 2
- c. 3
- d. 5



10. List the integers between -3 and 1 .

- a. $-4, -5, 4, 5$
- b. $-2, -1, 0, 1$
- c. $3, 4, 5, 6, 7$
- d. $-3, -2, -1, 0, 1, 2, 3$

11. Fill in the blank: Prime factorization means breaking the number into a set of _____.

- a. Even Numbers
- b. Odd numbers
- c. Prime numbers
- d. Composite numbers

12. The difference between the smallest 3-digit number and greatest 2-digit number is _____.

- a. 1
- b. XX
- c. XC
- d. C

13. Which of the following is the decimal form of $200 + 30 + 3 + \frac{2}{10} + \frac{9}{100}$?

- a. 23.29
- b. 23.29
- c. 233.29
- d. 23.359

14. If ' a ' and ' b ' are two whole numbers and the difference ($b - a$) is given, then under what condition can it be said that the closure property is applicable to subtraction?

- a. $a < b$
- b. $a > b$
- c. Both a & b
- d. Cannot determine

15. Find the length of a side of an equilateral triangular garden whose perimeter is 660 m.

- a. 660 m
- b. 110 m
- c. 30 m
- d. 220 m

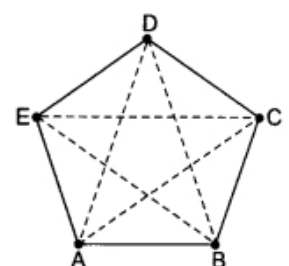
16. Three lights blink at intervals of 32 sec, 24 sec and 12 sec. After how much time will all the three lights blink together?

- a. 96 sec
- b. 98 sec
- c. 36 sec
- d. 38 sec

17. You are standing in a classroom facing north. In what direction will you be facing after making five quarter turns in clockwise direction?
- East
 - West
 - North
 - South
18. Which of the following is used to represent points in geometrical shapes?
- Numerals
 - Capital letters of alphabet
 - Lower case letters of alphabet
 - All of the above
19. How does the value of a digit change as it moves from the right to the left in a place value chart?
- Decreases by 10 times
 - Decreases by $\frac{1}{10}$ times
 - Increases by 10 times
 - Increases by $\frac{1}{10}$ times
20. A machine produces 2938 screws in a day. Which of the following is the best estimate nearest to thousands for the number of screws?
- 3500
 - 5000
 - 3000
 - 2900
21. Siddharth's age is $3x$ years and Sahil is 7 years older than Siddharth. What is Sahil's age?
- $3x + 7$
 - $7x/3$
 - $3x - 7$
 - $21x$
22. The product of two whole numbers is $(6 + 3) \times (6 + 4)$. One of the whole numbers is 5 more than the smallest possible whole number. Find the difference between the two numbers.
- 18
 - 13
 - 5
 - 0
23. How many pairs of adjacent angles are there in a quadrilateral?
- 1
 - 2
 - 3
 - 4

24. How many diagonals are there in the given figure?

- 4
- 5
- 2
- 3



25. If A, B, C are three points on a line such that $AB = 12$ cm, $BC = 3$ cm and $AC = 15$ cm, which one of the points lies between the other two points?
- Point A lies between points B and C
 - Point B lies between points A and C
 - Point C lies between points A and B
 - Can't say
26. Which of the following may be expressed by the expression $2x - 3$?
- Ram's age is 3 years less than twice Shyam's age.
 - Ram's age is 3 years less than Shyam's age.
 - Ram's age is 3 years more than twice Shyam's age.
 - Ram's age is 3 years more than Shyam's age.
27. A school has 1000 students out of which 400 are girls. What is the ratio of the number of girls to the number of boys in the schools?
- 4: 1
 - 4: 10
 - 6: 10
 - 4: 6
28. What least value should be given to * so that the number $653*48$ is divisible by 2?
- 9
 - 6
 - 7
 - 1
29. What is the expanded form of 79.058?
- | | |
|--|--|
| a. $79 + \frac{5}{10} + \frac{8}{100}$ | b. $70 + 9 + 0 + \frac{5}{100} + \frac{8}{1000}$ |
| c. $70 + 9 + \frac{5}{10} + \frac{8}{100}$ | d. $79 + \frac{5}{100} + \frac{8}{1000}$ |
30. Choose the value of 'a' that satisfies the equation $13a = -65$.
- 5
 - 30
 - 5
 - 10
31. On a frame of dimensions 1050 cm x 850 cm wide, a square shaped picture is stuck at the centre whose side measure is 2.5 m. What is the cost incurred to paint the remaining part of the frame at the rate of ₹ 1.2 per sq. m?
- ₹ 89.25
 - ₹ 99.6
 - ₹ 830
 - ₹ 12

32. Which of the following is INCORRECT about ratio?

- a. Ratios do not have units.
- b. Ratio is an expression whereas proportion is an equation.
- c. Ratio is comparison between items with identical units and proportion represent the link between two ratios.
- d. Value of some units = value of two unit \times number required.

33. Arrange the given numbers in the ascending order: -46, 17, 0, -9, -103, -1

- a. -1, 0, 17, -9, -46, -103
- b. 0, -1, -9, 17, -46, -103
- c. -103, -46, -9, -1, 0, 17
- d. -103, -46, 17, -9, -1, 0

34. Solve: CXX + LV – XIV

- a. XCLI
- b. CLIX
- c. CLXI
- d. LCIX

35. If the cost of 15 watermelons is ₹ 1500, then what is the cost of 8 watermelons?

- a. ₹ 700
- b. ₹ 1000
- c. ₹ 300
- d. ₹ 800

36. Nikita's balloon shop has $\frac{2}{7}$ white balloons and $\frac{3}{7}$ blue balloons. What fraction of the balloon are neither white nor blue?

- a. $\frac{1}{7}$
- b. $\frac{2}{7}$
- c. $\frac{3}{7}$
- d. $\frac{4}{7}$

37. The length of a rectangle is twice its breadth. If its area is 242 sq. m., then which of the following expressions is CORRECT? (Hint: Let the breadth be b)

- a. $3b = 242$
- b. $l + b = 242$
- c. $b^2 = 121$
- d. $l \times b = 121$

38. The amount of surface enclosed by a closed figure called ____.

- a. Volume
- b. Area
- c. Space
- d. Perimeter


























39. Which of the following numbers has exactly 4 factors?

- a. 16
- b. 14
- c. 18
- d. None of these

40. The rule which gives the number of matchsticks required to make the matchsticks pattern S is ____.
- 3l
 - 4n
 - 5n
 - 6n
41. Amit wants to plough his triangular field. The base of the field is 250 m and its height is 600 m. What is the total cost of ploughing the field at the rate of ₹ 1.2 per m²?
- ₹ 90,000
 - ₹ 1,50,000
 - ₹ 1,80,000
 - ₹ 2,50,000
42. Given $X = -129$ and $Y = 0$, what is the difference between X and $3Y$?
- 258
 - 129
 - 129
 - 0
43. What is the value of $505 \times 149 - 505 \times 49$?
- 555,931
 - 1,210,321
 - 99,990
 - 50,500
44. A triangular wall hanging has sides measuring 57 cm, 32 cm and 71 cm. Calculate its perimeter.
- 80 m
 - 80 cm
 - 160 cm
 - 160 m
45. Which of the following statements is FALSE?
- Two diameters of a circle will necessarily intersect.
 - The center of a circle is always in its interior.
 - Every diameter of a circle is also a chord.
 - Every chord of a circle is also a diameter.
46. The length, breadth and height of a room are 400 cm, 425 cm and 450 cm respectively. Find the maximum length of tape required to measure the three dimensions of the room exactly.
- 31 cm
 - 30 cm
 - 25 cm
 - 35 cm

Answer questions 47 – 50 based on the below pictograph.

The following pictograph gives information about the number of students in various standards of a school.

Standard	Number of students
VII	    
VIII	     
IX	       
X	     

Key: 1  = 5 boys; 1  = 4 girls

47. How many girls are there in the school?

- a. 120
- b. 52
- c. 65
- d. 85

48. Which two classes have the same number of boys?

- a. VII and X
- b. VIII and IX
- c. VII and IX
- d. IX and X

49. Which of the following is true?

- a. Grade X has the same number of boys and girls.
- b. Grade X has 5 more girls as compared to boys.
- c. Grade X has 3 more boys as compared to girls.
- d. Grade X has 2 more boys as compared to girls.

50. If 4 new girls join grade IX then what is the difference between the number of girls and boys in the class?

- a. 4
- b. 2
- c. 1
- d. 0

