HTET TGT Maths - 100 MCQs

CTET, HTET, UPTET

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HTET TGT Maths MCQs (1–20): Arithmetic

1. The sum of two numbers is 80 and their difference is 20. What is the smaller number?
A) 30
B) 20
C) 40
D) 50
Answer: A

2. LCM of 18 and 24 is:
A) 54
B) 72
C) 36
D) 48
Answer: B

3. What is 25% of 200?
A) 25
B) 30
C) 50
D) 75
Answer: C

4. 1/4 of a number is 12. What is the number?
A) 36
B) 48
C) 60
D) 50
Answer: B

5. A man bought a cycle for ₹1500 and sold it for ₹1800. His profit percent is:
A) 10%
B) 15%
C) 20%

D) 25%
Answer: D

6. If 3x = 9, then the value of x is:
A) 1
B) 2
C) 3
D) 4
Answer: C

7. The simple interest on ₹5000 at 4% per annum for 2 years is:
A) ₹400
B) ₹300
C) ₹200
D) ₹250
Answer: C

8. A shopkeeper sells an article at a loss of 10%. If the cost price is ₹500, the selling price is:
A) ₹450
B) ₹480
C) ₹470
D) ₹460
Answer: A

9. What is the smallest 3-digit number divisible by 6?
A) 100
B) 102
C) 104
D) 108
Answer: B

10. If 5 pencils cost ₹30, then the cost of 1 pencil is:
A) ₹5
B) ₹6
C) ₹7

D) ₹8
Answer: B

11. The average of 10, 20, and 30 is:
A) 15
B) 20
C) 25
D) 10
Answer: B

12. If a car travels 60 km in 1 hour, how far will it travel in 2.5 hours?
A) 120 km
B) 140 km
C) 150 km
D) 180 km
Answer: C

13. The reciprocal of 5/6 is:
A) 6/5
B) 5/6
C) 11/6
D) 1/2
Answer: A

14. What is $10^2 - 5^2$?
A) 75
B) 100
C) 25
D) 50
Answer: A

15. $2^3 + 3^2 = ?$
A) 17
B) 12
C) 13
D) 20
Answer: A

16. What is the unit digit of 2^5?
A) 2
B) 4
C) 8
D) 6
Answer: C

17. If A:B = 2:3 and B:C = 4:5, then A:C = ?
A) 8:15
B) 2:5
C) 3:5
D) 4:15
Answer: A

18. 20% of x is 40. Find x.
A) 100
B) 150
C) 200
D) 250
Answer: C

19. A person walks 1 km in 10 minutes. How much distance will he cover in 1 hour?
A) 4 km
B) 5 km
C) 6 km
D) 7 km
Answer: C

20. 0.25 + 0.75 = ?
A) 1
B) 0.5
C) 0.75
D) 1.25
Answer: A

HTET Maths MCQs (21–40): Algebra

21. If $x + 3 = 7$, then $x = ?$
A) 3
B) 4
C) 5
D) 6
Answer: B

22. Solve: $2x – 5 = 9$
A) $x = 2$
B) $x = 5$
C) $x = 7$
D) $x = 8$
Answer: C

23. If $x^2 = 49$, then $x = ?$
A) ± 7
B) 7
C) $–7$
D) 0
Answer: A

24. The value of $(a + b)^2$ is:
A) $a^2 + b^2$
B) $a^2 + b^2 + 2ab$
C) $a^2 – 2ab + b^2$
D) None
Answer: B

25. If $a = 3$, $b = 2$, then the value of $ab + b^2$ is:
A) 10
B) 12
C) 14

D) 15
Answer: C

26. Factor of $x^2 - 4$ is:
A) $(x + 4)(x - 4)$
B) $(x - 2)(x + 2)$
C) $(x + 2)(x + 2)$
D) $(x - 2)(x - 2)$
Answer: B

27. Simplify: $(x + 2)(x - 2)$
A) $x^2 + 4$
B) $x^2 - 4$
C) $x^2 - 2x$
D) $x^2 + 2x$
Answer: B

28. The identity used in $(x - y)^2$ is:
A) $x^2 - 2xy + y^2$
B) $x^2 + 2xy + y^2$
C) $x^2 - y^2$
D) None
Answer: A

29. If $x = 2$, $y = 3$, then $x^2 + y^2 = ?$
A) 13
B) 12
C) 10
D) 9
Answer: A

30. If $a = 5$ and $b = 2$, then $(a + b)^2 = ?$
A) 49
B) 35
C) 36
D) 25
Answer: A

31. The value of x if $2x^2 = 50$ is:
A) 5
B) ±5
C) 10
D) ±10
Answer: B

32. Simplify: $x(x + 1)$
A) $x^2 + x$
B) $x^2 – x$
C) x^2
D) x
Answer: A

33. If $x^2 – 5x + 6 = 0$, then the roots are:
A) 3 and 2
B) –3 and –2
C) 1 and 6
D) 5 and 6
Answer: A

34. Which is a linear equation?
A) $x^2 + 2x = 4$
B) $2x + 3 = 9$
C) $x^3 – 5 = 0$
D) $x^2 = 0$
Answer: B

35. Solve for x: $4x + 3 = 19$
A) 3
B) 4
C) 5
D) 6
Answer: C

36. Which of the following is a quadratic expression?
A) $2x + 3$

B) $x^2 + 4x + 4$
C) $3x + 2y$
D) $x - 7$
Answer: B

37. Find the value of x: $3(x + 2) = 15$
A) 3
B) 4
C) 5
D) 6
Answer: A

38. What is the degree of the expression $4x^3 + 3x^2 - 5$?
A) 1
B) 2
C) 3
D) 4
Answer: C

39. The solution of the equation $x/2 = 6$ is:
A) 2
B) 3
C) 6
D) 12
Answer: D

40. If $a + b = 10$ and $ab = 21$, then value of $a^2 + b^2 = ?$
A) 100
B) 58
C) 80
D) 65
Answer: B
$(a^2 + b^2 = (a + b)^2 - 2ab = 100 - 42 = 58)$

📐 HTET Maths MCQs (41–60): Geometry

41. How many sides does a hexagon have?
A) 5
B) 6
C) 7
D) 8
Answer: B

42. What is the sum of interior angles of a triangle?
A) 90°
B) 180°
C) 270°
D) 360°
Answer: B

43. A right-angled triangle has one angle of 90°. The sum of the other two angles is:
A) 45°
B) 60°
C) 90°
D) 180°
Answer: C

44. The number of diagonals in a square is:
A) 1
B) 2
C) 3
D) 4
Answer: B

45. The name of a triangle with all sides equal is:
A) Isosceles
B) Scalene
C) Equilateral
D) Right-angled
Answer: C

46. In a parallelogram, opposite angles are:
A) Equal
B) Unequal
C) Right
D) None of these
Answer: A

47. What is the measure of each angle in a regular pentagon?
A) 90°
B) 100°
C) 108°
D) 120°
Answer: C

48. A line joining two points is called a:
A) Ray
B) Line
C) Line Segment
D) Curve
Answer: C

49. An angle more than 90° but less than 180° is called:
A) Acute
B) Obtuse
C) Right
D) Straight
Answer: B

50. How many lines can pass through two distinct points?
A) 0
B) 1
C) 2
D) Infinite
Answer: B

51. A quadrilateral with all sides equal and angles 90° is called:
A) Square

B) Rhombus
C) Rectangle
D) Parallelogram
Answer: A

52. The longest side of a right triangle is called:
A) Perpendicular
B) Base
C) Hypotenuse
D) Side
Answer: C

53. The sum of all exterior angles of any polygon is:
A) 180°
B) 360°
C) Depends on polygon
D) None
Answer: B

54. The number of edges in a cube is:
A) 6
B) 8
C) 12
D) 10
Answer: C

55. The shape with no vertices is:
A) Circle
B) Triangle
C) Square
D) Rectangle
Answer: A

56. A triangle with no equal sides is called:
A) Isosceles
B) Scalene
C) Equilateral

D) Right-angled
Answer: B

57. Which instrument is used to measure angles?
A) Compass
B) Divider
C) Protractor
D) Ruler
Answer: C

58. The angle between the hands of a clock at 3 o'clock is:
A) 90°
B) 180°
C) 120°
D) 60°
Answer: A

59. What is a polygon with 8 sides called?
A) Heptagon
B) Hexagon
C) Octagon
D) Nonagon
Answer: C

60. In a circle, a line that touches it at exactly one point is called:
A) Chord
B) Radius
C) Tangent
D) Diameter
Answer: C

📏 HTET Maths MCQs (61–80): Mensuration

61. Area of a square with side 5 cm is:
A) 25 cm²
B) 10 cm²
C) 20 cm²

D) 15 cm²
Answer: A

62. Perimeter of a rectangle = 2 × (length + breadth). If l = 6 cm, b = 4 cm, then perimeter = ?
A) 10 cm
B) 20 cm
C) 25 cm
D) 30 cm
Answer: B

63. Area of a triangle = ½ × base × height. If base = 8 cm and height = 4 cm, area = ?
A) 32 cm²
B) 16 cm²
C) 20 cm²
D) 40 cm²
Answer: B

64. Volume of a cube = side³. If side = 3 cm, volume = ?
A) 9 cm³
B) 27 cm³
C) 12 cm³
D) 18 cm³
Answer: B

65. Circumference of a circle = 2πr. If r = 7 cm, then circumference = ?
A) 44 cm
B) 22 cm
C) 38 cm
D) 14 cm
Answer: A
(Using π = 22/7)

66. Area of circle = πr². If r = 5 cm, area = ?
A) 78.5 cm²
B) 25 cm²

C) 50 cm²
D) 75 cm²
Answer: A

67. The surface area of a cube with side 4 cm is:
A) 96 cm²
B) 64 cm²
C) 48 cm²
D) 80 cm²
Answer: A
(6 × side² = 6 × 16)

68. Volume of cuboid = l × b × h. If l = 5 cm, b = 3 cm, h = 2 cm, volume = ?
A) 30 cm³
B) 15 cm³
C) 20 cm³
D) 25 cm³
Answer: A

69. Perimeter of an equilateral triangle with side 9 cm = ?
A) 18 cm
B) 27 cm
C) 36 cm
D) 24 cm
Answer: B

70. What is the area of a rectangle with length 10 m and breadth 5 m?
A) 50 m²
B) 100 m²
C) 25 m²
D) 60 m²
Answer: A

71. The diagonal of a square splits it into how many right-angled triangles?
A) 1

B) 2
C) 3
D) 4
Answer: B

72. Which unit is used for measuring area?
A) cm
B) cm^2
C) cm^3
D) km
Answer: B

73. Which unit is used for measuring volume?
A) cm
B) cm^2
C) cm^3
D) m
Answer: C

74. The area of a rhombus is calculated as:
A) $\frac{1}{2} \times d_1 \times d_2$
B) side × side
C) l × b
D) None
Answer: A

75. How many faces does a cube have?
A) 4
B) 5
C) 6
D) 8
Answer: C

76. Which formula is used to find the area of a parallelogram?
A) base × height
B) ½ × base × height
C) side × side

D) l × b
Answer: A

77. The area of a trapezium is:
A) ½ × (a + b) × h
B) a + b + h
C) a × b × h
D) a × b
Answer: A

78. The surface area of a cuboid is:
A) 2(lb + bh + hl)
B) l × b × h
C) l + b + h
D) 2(l + b + h)
Answer: A

79. Volume of a cylinder = ?
A) $\pi r^2 h$
B) $2\pi rh$
C) πrh
D) πr^2
Answer: A

80. The unit of perimeter is:
A) cm^2
B) cm^3
C) cm
D) m^2
Answer: C

📊 HTET Maths MCQs (81–90): Data Handling & Statistics

81. The average of 4, 8, 12, and 16 is:
A) 10
B) 12

C) 14
D) 8
Answer: A

82. The mode of 2, 4, 4, 6, 7 is:
A) 2
B) 4
C) 6
D) 7
Answer: B

83. Median of 10, 20, 30 is:
A) 20
B) 10
C) 30
D) 15
Answer: A

84. Which central tendency is most affected by extreme values?
A) Mean
B) Median
C) Mode
D) None
Answer: A

85. A bar graph is used to represent:
A) Equations
B) Numbers only
C) Categorical data
D) Only averages
Answer: C

86. What is the sum of frequencies in a frequency table called?
A) Median
B) Mean
C) Total frequency

D) Cumulative frequency
Answer: C

87. Pie charts are best used to show:
A) Speed
B) Fractions and percentages
C) Ratios
D) Volume
Answer: B

88. In a tally chart, |||| represents:
A) 1
B) 2
C) 5
D) 10
Answer: C

89. Mean = Sum of observations ÷ ?
A) Highest number
B) Total observations
C) Mode
D) 2
Answer: B

90. What is the range of the data: 8, 14, 6, 18, 10?
A) 10
B) 12
C) 14
D) 6
Answer: B *(Range = 18 – 6 = 12)*

🦉 HTET Maths MCQs (91–100): Math Pedagogy

91. Which method is best for concept clarity in mathematics?
A) Lecture
B) Activity-based learning
C) Rote learning

D) Dictation
Answer: B

92. The constructivist approach to mathematics learning focuses on:
A) Rote memorization
B) Solving more questions
C) Active participation and discovery
D) Strict rules
Answer: C

93. Diagnostic tests are conducted to:
A) Punish students
B) Rank students
C) Find learning gaps
D) Award marks
Answer: C

94. Continuous and comprehensive evaluation means:
A) One-time exam
B) Weekly test
C) Regular and all-round assessment
D) Only oral test
Answer: C

95. Which of the following helps in developing problem-solving skills?
A) Formula dictation
B) Word problems
C) Drawing diagrams
D) Reciting tables
Answer: B

96. NCF 2005 recommends teaching mathematics with:
A) Fear and discipline
B) Language focus
C) Joyful and practical understanding
D) Memorization
Answer: C

97. A child is not able to solve subtraction problems. As a teacher, you should:
A) Scold him
B) Give him more problems
C) Try to use concrete objects and re-teach
D) Ignore him
Answer: C

98. Group work in maths classroom helps in:
A) Competition
B) Speed
C) Peer learning and cooperation
D) Discipline
Answer: C

99. What is the role of errors in mathematics learning?
A) Should be punished
B) Must be discouraged
C) Indicate misunderstanding and provide learning opportunity
D) Are not useful
Answer: C

100. Which of the following is most important in teaching mathematics?
A) Memorizing rules
B) Conceptual understanding
C) Timed tests
D) Use of difficult language
Answer: B

✅ All 100 MCQs Completed!