SECTION 1
(Mental Maths Calculation)

1. $\frac{6}{24}$ = _____

(a) 0.025 (b) 0.25
(c) 2.5 (d) 0.24

2. 123 × 53 × 7 = _____

(a) 45633 (b) 46533
(c) 43655 (d) 45363

3. Average of 38, 54, 42, 62, 44 is _____

(a) 47 (b) 52
(c) 46 (d) 48

4. The L.C.M. of two number is 27. If one of the number is 9 then the other number is _____

(a) 6 (b) 27
(c) 18 (d) 9

5. 1013^2 = _____

(a) 1206169 (b) 1026169
(c) 1626169 (d) 1062162

6. 951^2 = _____

(a) 940401 (b) 904410
(c) 904401 (d) 904014

7. $\sqrt{0.0324}$ = _____

(a) 0.18 (b) 0.0018
(c) 0.018 (d) 1.8

8. The bridge A is 0.256 km and bridge B is 1.378 km long. Find difference between their lengths.

(a) 0.1122 (b) 112.2
(c) 11.22 (d) 1.122

9. $\square$ % of 80 = 16

(a) 30 (b) 12
(c) 15 (d) 20

10. How do you write $\frac{4}{25}$ as percentage.

(a) 40% (b) 16%
(c) 25% (d) 15%

11. What is a cube of 16

(a) 4086 (b) 4196
(c) 4096 (d) 4186

12. 267 + 33 = 30 × $\square$

(a) 10 (b) 20
(c) 30 (d) 40

13. By what length 52.7 km is longer than $46\frac{1}{4}$ km

(a) 64.5 km (b) 0.645 km
(c) 4.65 km (d) 6.45 km

14. Which of these numbers is multiple of 13 & 7 both

(a) 182 (b) 143
(c) 117 (d) 85

15. $50 \times 2\frac{3}{4} = \square$

(a) 138.5 (b) 139.5
(c) 137.5 (d) 136.5

16. $6^3 - 6^2 = \square$

(a) 170 (b) 180
(c) 150 (d) 160

17. The sum of two integers is – 12 is one is 3, find the other.

(a) –15 (b) – 9
(c) 15 (d) 9

18. If x = 3, y = 1
$(-x)^y + (y)^x = \square$

(a) –4 (b) 2
(c) 4 (d) – 2

19. Which decimal number is the same as $\frac{3}{4}$

(a) 0.34 (b) 0.51
(c) 0.75 (d) 3.4

20. A man buys a radio for ₹ 650 and sells it at profit of 20%. He sold the radio for _____

(a) ₹ 760 (b) ₹ 780
(c) ₹ 740 (d) ₹ 720

21. The sum of 1.8, 16.3 and 72.985 is

(a) 91.85 (b) 9108.5
(c) 91.085 (d) 9.1085

22. 162 km/h = _____ m/s

(a) 270 m/s (b) 272 m/s
(c) 452 m/s (d) 45 m/s

23. (–13) + (–5) × (4) × (– 7) =

(a) 127 (b) – 127
(c) 8.5 (d) – 85

24. 24 : 3 :: x : 1
Value of x is _____

(a) 12 (b) 8
(c) $\frac{1}{8}$ (d) 16

25. When a number is reduced by 2 it becomes 80% of itself. Find the number

(a) 14 (b) 15
(c) 12 (d) 10

26. If $\frac{5}{7}$ of 49 + 20% of 130 = x + 38 then x = _____

(a) 10 (b) 23
(c) 16 (d) 18

27. Which of the following number is greater than $\frac{1}{4}$?

(a) 0.2 (b) 0.15
(c) 0.3 (d) 0.031

28. $\frac{5}{100} + \frac{7}{1000} =$ _____

(a) 0.057 (b) 0.0057
(c) 0.57 (d) 5.70

29. $95 - \square = -400$

(a) 305 (b) 205
(c) –205 (d) 495

30. 3 times of 41 – 7 times of 16

(a) 11 (b) 21
(c) –11 (d) 19

31. $\frac{8}{\sqrt{12} + \sqrt{4}} =$

(a) $8(\sqrt{12} - \sqrt{4})$ (b) $(\sqrt{12} - \sqrt{4})$
(c) $\frac{1}{2}$ (d) $(\sqrt{12} - 4)^2$

32. If $a + b = 9$, $a^2 + b^2 = 41$ find $a \times b$

(a) 16 (b) 20
(c) 18 (d) 22

33. $\frac{1}{2}$ of 256 – $\frac{1}{3}$ of 96 =

(a) 256 (b) 32
(c) 96 (d) 54

34. In what time will ₹ 56 becomes ₹ 70 at 6¼% p.a.

(a) 3½ years (b) 4½ years
(c) None (d) 4 years

35. $\frac{7}{5} x + 8 = 29$, $x = \square$

(a) 15 (b) –15
(c) 24 (d) – 24

36. What is a percentage change from 5,00,000 to 20,000

(a) 122% increase (b) 122% decrease
(c) 96% increase (d) 96% decrease

37. A number 72 is divided into two parts in the ratio 3:5. Find the product of the numbers

(a) 1215 (b) 1251
(c) 1125 (d) 1521

38. 12.5% of 72 = 3 × $\square$

(a) 9 (b) 3
(c) 6 (d) 12

39. Area of square is 625 sq.m. Its perimeter is _____

(a) 100 m (b) 125 m
(c) 50 m (d) 25 m

40. Cirumference of circle = πd. Find the circumference when π = 3.14 and d = 5cm

(a) 2.198 (b) 157
(c) 0.219 (d) 15.7

SECTION 2
(Mental Maths Concepts)

41. What is a distance travelled in 45 min at 88 km/hr ?

(a) 66 km (b) 22 km
(c) 44 km (d) 55 km

42. Which of these numbers is equivalent to $\frac{8}{3}$?

(a) $\frac{72}{27}$ (b) $\frac{24}{51}$
(c) $\frac{51}{24}$ (d) $\frac{27}{72}$

43. 30 tins of sweetcorn are bought for ₹480 and sold at ₹20 per tin. Find profit % after selling all the tins.

(a) 30% (b) 15%
(c) 20% (d) 25%

44. A boy's walking pace measures 50 cm. How many meter has he walked after taking 70 paces.

(a) 32 m (b) 34 m
(c) 35 m (d) 36 cm

45. An angle is one fifth of its supplement find its measure.

(a) 52° (b) 28°
(c) 30° (d) 36°

46. Half of a number is added to 13 then the sum is 51. The number is ☐

(a) 62 (b) 76
(c) 46 (d) 48

47. An article costing ₹ 910 is reduced by $\frac{1}{13}$ for cash payment, the cash down price is _____

(a) ₹ 70 (b) ₹ 820
(c) ₹ 840 (d) ₹ 860

48. The area of hall is 192m². Its length is 24 m find its perimeter

(a) 64 m (b) 46 m
(c) 56 m (d) 54 m

49. Ratio of Radii of two circles is 3:7. Their circumference's ratio is _____

(a) 49:9 (b) 14:21
(c) 21:14 (d) 9:21

50. Two sums of money are in the ratio 3:7, If the second sum is ₹ 84, the first sum is _____

(a) ₹ 24 (b) ₹ 36
(c) ₹ 42 (d) ₹ 18

51. In $\frac{a}{4} + \frac{a}{5} = 54$, the value of a is _____

(a) 160 (b) 140
(c) 120 (d) 130

52. In a Δ ABC AB + BC = 18 cm BC + CA = 28 cm, CA + AB = 36 cm. The perimeter of Δ ABC is _____

(a) 41 cm (b) 52 cm
(c) 48 cm (d) 39 cm

53. A sum of Five consecutive odd numbers is 185, find the smallest of them.

(a) 31 (b) 35
(c) 32 (d) 33

54. $\left(a^{\frac{1}{7}} \times a^{\frac{1}{5}}\right)^{35} = a$ □

(a) 12 (b) 13
(c) 35 (d) 14

55. $24 - [11 - \{4 - (2 - 5 - 7)\}] =$

(a) 24 (b) 25
(c) 27 (d) 26

56. Value of x in $\frac{x}{6} + \frac{7}{3} = 14$

(a) 35 (b) – 35
(c) –70 (d) 70

57. In what time a sum will become double of itself at 30% p.a. simple interest.

(a) $3\frac{1}{3}$ yrs (b) $2\frac{1}{2}$ yrs
(c) $3\frac{1}{5}$ yrs (d) 4 yrs

58. The three even consecutive integers whose sum is 96. The smallest of them is ___

(a) 26 (b) 30
(c) 32 (d) 28

59. 6 taps can fill a tank in 4 hrs. How much time will be required for 3 taps to fill the tank.

(a) 8 hrs (b) 2½ hrs
(c) 3 hrs (d) 3½ hrs

60. Find the vertex angle of an isosceles triangle if its base angle is 80°

(a) 50° (b) 100°
(c) 40° (d) 20°

SECTION 3 (Mental Maths Challenge)

61. If a : b = 4 : 7 then a – b : a + b =

(a) $\frac{-3}{11}$ (b) $\frac{3}{11}$ (c) $\frac{11}{3}$ (d) $\frac{-11}{3}$

62. The difference between circumference and radius of a circle is 74 m. The circumference of that circle is _____

(a) 74 m (b) 84 m (c) 88 m (d) 14 m

63. The difference between the length and breadth of a rectangle is 22 m. If the perimeter is 60 m, then the area is _____

(a) 104 m^2 (b) 108 m^2 (c) 140 m^2 (d) 94 m^2

64. What is the missing term in the following product

$(4a^3 - 1)\quad (3a^3 - 4) = 12a^6 + \square + 4$

(a) 19 a^3 (b) – 19a^3 (c) 16a^3 (d) – 16a^3

65. Simplify $\sqrt{600} - \sqrt{54} + \sqrt{96} - \sqrt{150}$

(a) None (b) $\sqrt{6}$ (c) $3\sqrt{6}$ (d) $6\sqrt{6}$

66. A fort has enough food for 850 soldiers for 30 days. If after 5 days 225 soldiers left the fort, how long will the food last now?

(a) 42 days (b) 36 days (c) 34 days (d) 38 days

67. A big pipe can fill an aquarium in $\frac{1}{3}$ hr. A small pipe takes $\frac{3}{5}$ hr to fill the same aquarium. How long will both pipe take to fill the aquarium together.

(a) $12\frac{6}{7}$ min (b) $12\frac{6}{7}$ hrs (c) 13.7 min (d) 13.7 hrs

68. When 15 is added to $2\frac{1}{2}$ of a number, the answer is 4 times the number. Find the number.

(a) 10 (b) 12 (c) 15 (d) 30

69. Numbers 40, 36, 32, 24, 2x + 6, 3x + 1, 9, 8, 6, 5 are written in descending order and if their median is 11, then x equal to _____

(a) 8 (b) 3 (c) 12 (d) 7

70. If A:B = 3:4, B:C = 2:5 and C:D = 4:3 the A:D equal to _____

(a) 5:2 (b) 4:5 (c) 3:6 (d) 2:5

71. Simplify $(216)^{\frac{-2}{3}} \div (49)^{\frac{-1}{2}}$

(a) $\frac{6}{7}$ (b) $\frac{36}{7}$ (c) $\frac{7}{36}$ (d) $\frac{7}{6}$

72. Simplified value of

$2\frac{1}{3} + 4\frac{4}{6} \times \frac{3}{6} - \frac{3}{2} \div 2$ is $\square$

(a) $\frac{76}{12}$ (b) $\frac{47}{12}$ (c) $\frac{-103}{12}$ (d) $\frac{-76}{12}$

73. 18 years ago, when my parents got married, their average age was 21 years, now the average age of my family consisting of my parent & me only is 31 years. My present age is _____

(a) 16 years (b) 13 years (c) 12 years (d) 15 years

74. A number of apples are distributed among A, B and C in the ratio 4:7:5. If A gets 36 apples, then total number of apples is

(a) 161 (b) 144 (c) 181 (d) 191

75. A person travelled $\frac{3}{5}$th of the distance by train, $\frac{1}{3}$rd by bus and remaining 4 km by boat. The total distance travelled by him was _____ km.

(a) 65 km (b) 76 km (c) 56 km (d) 60 km

MENTAL MATHS COMPETITION®

Date : _____

Name of Student in Full (IN CAPITAL LETTERS) :-

_____
Name

_____
Father's Name

_____
Surname

School Name _____

Mobile No. _____

Std. _____ Centre _____

INSTRUCTIONS

1. Use HB Pencil only on this sheet
2. Darken the ovals fully.
3. Erase completely to change responses.
4. Do not make any stray mark on this sheet.

Incorrect way of shading

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Correct way of shading

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For Office Use Only

ANSWERS

Section - I

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5.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	25.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
6.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	26.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
7.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	27.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
8.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	28.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
9.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	29.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
10.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	30.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
11.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	31.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
12.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	32.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
13.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	33.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
14.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	34.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
15.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	35.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
16.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	36.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
17.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	37.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
18.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	38.	Ⓐ	Ⓑ	Ⓒ	Ⓓ
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Section - II

41.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	
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Section - III

61.	Ⓐ	Ⓑ	Ⓒ	Ⓓ	
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