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MATHEMATICS

(Special)

(Lower Grade Mathematics for Candidates with Special Learning Disabilities)

Full Marks : 100

Pass Marks : 30

Time : 3 hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) All questions are compulsory.
- (ii) The question paper consists of 35 questions divided into four Sections A, B, C, and D.
- (iii) Section—A consists of 10 questions of 1 mark each.
Section—B is of 10 questions of 2 marks each.
Section—C is of 10 questions of 4 marks each.
Section—D is of 5 questions of 6 marks each.
- (iv) In Question Nos. **1** to **7** of Section—A there are four answers marked (A), (B), (C) and (D). Only one of these answers is correct. The letter indicating the correct answer should be written in capital in the answer book.
- (v) Use of Electronic device is not permitted.

(2)

SECTION—A

(Marks : 10)

(Question Nos. 1 to 10 carry 1 mark each)

1. The product of two integers of same (like) sign is
 - (A) negative integer
 - (B) positive integer
 - (C) zero only
 - (D) None of the above

2. The value of $\frac{0}{6} \frac{3}{4}$ is
 - (A) 0
 - (B) $\frac{3}{4}$
 - (C) $\frac{3}{24}$
 - (D) $\frac{0}{24}$

3. The value of 25% of 300 stamps is
 - (A) 300 stamps
 - (B) 12 stamps
 - (C) 7500 stamps
 - (D) 75 stamps

(3)

4. The value of $\frac{2}{3}$ of $\frac{3}{4}$ of 18 is

(A) 9

(B) $\frac{1}{2}$

(C) 18

(D) 24

5. The perimeter of a rectangle $ABCD$, with length 13 cm and breadth 8 cm is

(A) 21 cm

(B) 21 cm^2

(C) 42 cm

(D) 42 cm^2

6. The value of $\frac{7}{8} \times \frac{3}{6}$ is

(A) $\frac{7}{16}$

(B) $\frac{7}{16}$

(C) $\frac{7}{4}$

(D) $\frac{7}{4}$

(4)

7. The value of $(11)^2$ is

- (A) 121
- (B) 22
- (C) 11
- (D) None of the above

8. State the following statements as 'True' or 'False': : $\frac{1}{2} + \frac{1}{2} = 1$

- (a) A rational number is said to be in its standard form if the numerator and denominator are coprime.
- (b) A positive integer multiplied by a positive integer gives a negative integer.

9. Fill in the blanks : $\frac{1}{2} + \frac{1}{2} = 1$

- (a) If a , m and n are rational numbers, then $a^m \cdot a^n$ _____.
- (b) Percentages are fractions with the denominators equal to _____.

10. Define the range of a grouped data.

SECTION—B

(Marks : 20)

(Question Nos. 11 to 20 carry 2 marks each)

11. Calculate the simple interest on ₹ 250 at the rate of 7% for 4 years.

12. Find the value of $\frac{3}{7} - \frac{2}{3}$.

(5)

13. The radius of the base of a circular tank is 7 cm. Find the circumference of the circular base of the tank. Use $\frac{22}{7}$

Or

Find the area of rectangle, whose length is 7 cm and breadth is 3.5 cm.

14. Simplify $\frac{25}{32} \frac{65}{48}$.

15. If the weights of 5 students are 38 kg, 41 kg, 36 kg, 39 kg and 41 kg, find the mean weight of the students.

16. Find the value of $\frac{2}{3}^2$.

Or

Evaluate $\frac{1}{3} 6\frac{3}{10}$.

17. Find the median of the group data 6, 14, 5, 13, 11, 7, 8, 8.

18. Subtract $\frac{3}{8}$ from $\frac{4}{5}$.

19. Find the area of a square if its perimeter is 64 cm.

20. Simplify $(-3)^5 - (-3)^2$.

(6)

SECTION—C

(Marks : 40)

(Question Nos. **21** to **30** carry 4 marks each)

- 21.** A cable, $27\frac{1}{2}$ m long, is cut into equal pieces measuring $2\frac{3}{4}$ m each. Find how many pieces has the cable been cut into.
- 22.** If 1 m is equal to 3.28084 feet, how many feet will 15 m be equal to?
- 23.** Simplify $\frac{1}{3} - \frac{3}{4} + \frac{7}{8}$.
- 24.** The number of men and women who attended a concert was in the ratio 4 : 3. If there were a total of 777 people, how many men were there?

Or

The population of a village was 75000 in 1990. In 2000, the population became 93000. What is the increase percentage during these ten years?

- 25.** Simplify 2.13×1.65 .
- 26.** A square park is of side 100 m. A road 5 m wide is made all around the garden inside it. Find the area of the road.

Or

A wheel has a radius of 28 cm. How many revolutions will it make to travel 704 m? Use $\frac{22}{7}$

(7)

27. Solve :

Two packets of sweets weight $2\frac{7}{8}$ kg and $3\frac{1}{4}$ kg respectively.

How much is the total weight of the sweets?

28. The perimeter of a rectangle is $14\frac{8}{15}$ cm. If its length is $4\frac{2}{3}$ cm, find its area.

29. If a farmer paid ₹ 2025 as interest over 3 years at 2% per annum to a moneylender, how much loan had the farmer taken?

30. Simplify $\frac{2}{9} \frac{4}{5} \frac{3}{7}$.

SECTION—D

(Marks : 30)

(Question Nos. 31 to 35 carry 6 marks each)

31. Six friends were deciding where to go during the coming weekend. Everyone wrote their intentions on a slip of paper to show their choice :

Fishing

Cinema

Water Park

Cricket Match

Cricket Match

Hillside

Write the probabilities of the following :

(a) P (Water Park)

(b) P (Cricket Match)

(c) P (Fishing)

(d) P (Cinema)

(8)

Or

A survey was conducted in a class to find the preference of students for the soft drinks and recorded as follow :

<i>Soft drinks</i>	<i>Number of students</i>
Orange juice	15
Cola	13
Lime juice	9
Mango juice	7
Melon juice	11

Make a bar graph with a suitable scale for the above data.

- 32.** Arrange the rational numbers $\frac{13}{20}$, $\frac{6}{15}$, $\frac{7}{12}$, $\frac{9}{10}$ and $\frac{3}{5}$ in the descending order.
- 33.** Ramesh and Satish contested the election to the Panchayat Committee from their village. Ramesh scored 11484 votes which was 44% of the total votes. Satish scored 26% of the votes. Calculate—
- (a) the number of votes cast in the village;
- (b) the number of voters who did not vote for either Ramesh or Satish.
- 34.** The angles of a pentagon are in the ratio 2:4:2:1:1. The angles add up to 540° . What is the size of each angle?
- 35.** From a rectangular piece of metal sheet of length and breadth 1.60 m and 80 cm respectively, 3 circular sheets of 20 cm radius are cut out. What area of metal is left? (Use $\pi = 3.14$)

Or

A rectangular plot is 40 m long and 16 m broad. A path of uniform width of 2 m surrounded the plot inside it. Find the cost of paving the road with bricks at ₹ 15 per square meter and also the cost of covering the remaining part of the plot with grass at ₹ 9 per square meter.
