Duration : 1 hr 20 mins.   **M.M. : 40**
No. of printed pages : 2

General Instructions :
(i)   **All the questions are compulsory.**
(ii) **Attempt the paper neatly.**
(iii) **There is no overall choice. However internal choice has been given in one question of**
      1 mark, one question of 2 marks, two questions of 3 marks each and one question of 4 marks.
(iv) **Draw a column on the right side of the answer sheet for rough work.**

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SECTION A   **(1 x 10 = 10)**

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I.   Choose the correct option :

1. The perimeter of an equilateral triangle with side of length l units is given by

    a) $l + 3$ b) $3l$ c) $3(l + 3)$ d) $3l + 1$

2. Which of the following is the equivalent ratio of $10 : 4$?

    a) $5 : 2$ b) $8 : 2$ c) $20 : 12$ d) $2 : 2$

3. 2 added to $7m$ is written as

    a) $7m + 2$ b) $7 + 2m$ c) $7(m + 2)$ d) $2(7 + m)$

4. The ratio of the least odd composite number to the least prime number is

    a) $2 : 1$ b) $3 : 2$ c) $9 : 2$ d) $4 : 1$

5. The coefficient of y in $7y + 2 = 3$ is

    a) 2   b) 7   c) y d) 3

II. Fill in the blanks :

6. The number of toffees each friend got if y toffees were divided equally among 5 friends
    is_____.
7. The ratio of the number of months to the number of days in a non-leap year is _____.
8. If $5q = 25$, the value of q is _____.

III. Answer the following :

9. Write the simplest form of the ratio $275 : 25$.

10. If there are 20 balls in a box, express the total number of balls in terms of the number of boxes.
    (Use b for the number of boxes.)

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OR

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    Laksh bought some chocolates. He gave m chocolates to his sister; still 4 chocolates were left with
    him. How many chocolates did he buy?

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SECTION – B **(2 x 3 = 6)**

11. Which is greater :
    $3 : 7$ or $4 : 9$

    OR

    Fill in the missing numbers. $\dfrac{24}{40} = \dfrac{}{5} = \dfrac{12}{}$

12. Find the ratio of 20 cm to 1.5 m.
13. Give expressions for the following cases.
    a) q multiplied by -6 b) 6 times m subtracted from 5

SECTION – C **(3 x 4 =12)**

14. Is the following statement true?
    $50 \text{ cm} : 3 \text{ m} = 60 \text{ cm} : 360 \text{ cm}$

    OR

    If $63 : x :: 27 : 12$, find the value of x.

15. Divide ₹ 1200 among A, B and C in the ratio of $2 : 3 : 5$.
16. Verify by substituting that $y = 3$ is the solution of $5y - 8 = 7$.
17. Solve : $5x - 4 = 16$

    OR

    Solve : $\dfrac{x}{3} + 1 = 10$

SECTION – D **(4 x 3 =12)**

18. There are 45 students in a class. If the number of boys is 20 and the remaining are
    girls, find the ratio of
    a) Number of boys to the number of girls.
    b) Total number of students to the number of boys.
    c) Number of girls to the total number of students.

19. If the cost of 14 m of cloth is ₹ 1890, find the cost of 6 m of cloth.

    OR

    Nitin bought 10 pens for ₹ 80 and Vishal bought 12 pens for ₹ 84. Who paid less for each pen
    and by how much?

20. Let Pakhi's age be x years
    a) What will be her age after 8 years?
    b) What was her age 3 years ago?
    c) Pakhi's grandfather is 6 times her age. What is the age of her grandfather?
    d) Pakhi's grandmother is 2 years younger than her grandfather. What is her grandmother's age?