PM SHRI KENDRIYA VIDYALAYA SITAPUR
P.T. 2 EXAMINATION (2023-24)
SUBJECT: MATHEMATICS
CLASS: VII

MAX. MARKS:40   **DURATION: 1.30 HRS**

All questions are compulsory.

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Section A

Question N0. 1 to 12 are M.C.Q. Choose the correct option. Each question carries 1 mark.

1. The Rational number $\frac{21}{28}$ in standard form is,

   (a) $\frac{21}{28}$ {b) $\frac{3}{8}$ (c) $\frac{3}{4}$ (d) $\frac{2}{3}$

2. The rational number $\frac{-2}{3}$ with denominator 15 is:

   (a) $\frac{10}{15}$ (b) $\frac{2}{15}$ (c) $\frac{3}{15}$ (d) $\frac{-10}{15}$

3. The rational number $\frac{3}{5}$ equivalent to:

   (a) $\frac{4}{5}$ (b) $\frac{6}{10}$ (c) $\frac{3}{15}$ (d) $\frac{-10}{15}$

4. $\frac{3}{5}$ $+\frac{2}{5}$

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

5. The region occupied by a closed figure is called its :

   (a)Volume   (b) Perimeter   (c) Area   (d) None of these

6. *Circumference* of a circle whose radius is 7 cm

   (a) 22 cm   (b) 66 cm   (c) 44 cm   (d) 88 cm

7. The area of a parallelogram whose base is 12 cm and altitude is 5 cm is

   (a) 30 sq cm   (b) 20 sq cm   (c)   10 sq cm   (d) 60 sq cm

8. The area of a Circle whose radius is 14 cm is

   (a) 166 sq cm   (b) 661 sq cm   (c)   616 sq cm   (d) 606 sq cm

9. The value of the expression a^2+b^2 for a=1 and b=1

   (a)1   (b) 0   (c) -1   (d) 2

10. Identify the numerical coefficients of terms in the expressions 7xy – 5y.

    (a)   7 , - 5   (b)   7, 5   (c)   -7, -5   (d)   -7, 5

11. What is the coefficient of x in the expression ax^3+bx^2+d?

    (a) a   (b) b   (c) d   (d) 0

12. How many terms are there in the expression 7xy + 5x²y:?

   (a) 1   (b) 2   (c) 3   (d) 4

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Section B

13. SolRahul pays Rs500 in advance on his account at a sports club. Each time, he visits the club, Rs 10 is deducted from the account.
    (i) Which of the following expression represent the balance left in his account after "t" number of days?
    (a) 500 + 10t   (b) 500 – 10t   (c) 500t   (d) 10t
    (ii)   How much balance (in Rs.) is left in Rahul's account after 30 visits   [4]

14.. From a circular card sheet of radius 14 cm, two circles of radius 3.5 cm and a rectangle
    of length 3 cm and breadth 1cm are removed. (as shown in the adjoining figure). Find
    the area of the remaining sheet. (Take $\pi = \frac{22}{7}$ [4]

Section C

15.. ABC is right angled at A. AD is perpendicular to BC. If AB = 5 cm, BC = 13 cm and
    AC = 12 cm, Find the area of ΔABC.

(3)
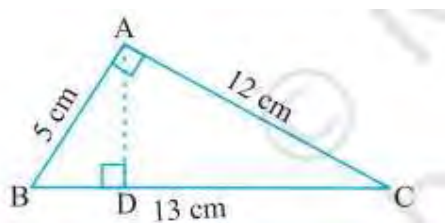
16..LRepresent the following on a number line

   (a) $\frac{5}{6}$ (b) $\frac{-4}{3}$

17 Find the value of the following expressions for a = 3, b = 2.

   (i) $a^2 + b^2$ (ii) $a^2 - b^2 + 2ab$ [3]

18 .Consider the following expressions carefully and answer the questions given below.
    $3r^2s$, $- 2s^2$, $- 12rs$, $yx + y$, $x + y + 2$, $7 + xy^2 + z$, $4r^2s^2$, $+6rs$
    (i) Which one of the above expressions is a binomial?
    (ii) Write any one term containing constant.
    (iii) Write the coefficient of the term which contain r^2s^2 [3]

19 .(I) Find the product of $\frac{-7}{5}$ with its reciprocal.
    (ii)Find : $\frac{-2}{5} - (\frac{-3}{5})$

(3)

20. A circular flower bed is surrounded by a path 4m wide. The diameter of the   (5)
    flower bed is 66 m. What is the area of this path? (Use $\pi= 3.14$)

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