ANANDALAYA
PERIODIC TEST – 2
Class : VIII

Subject: Mathematics

M.M: 50

Date   : 23-09-2023

Time: 2 Hours

General Instructions:
 i)   This question paper contains 24 questions divided into four sections A, B, C and D. Each section is compulsory.
 ii) Section A has 9 MCQ's each of 1 mark.
 iii) Section B has 7 very short answer type questions each of 2 marks.
 iv) Section C has 5 short answer type questions each of 3 marks.
 v)   Section D has 3 long-answer type questions each of 4 marks.

Section-A

1. The property of rational numbers illustrated by the mathematical expression (1)
   $\left(\frac{2}{7} + \frac{-3}{8}\right) \times \frac{5}{11} = \left(\frac{2}{7} \times \frac{5}{11}\right) + \left(\frac{-3}{8} \times \frac{5}{11}\right)$ is _____
   (A) Associative property of Addition   (B) Distributive property
   (C) Associative property of multiplication   (D) Commutative property of addition

2. The product of $-3\frac{2}{3}$ and $1\frac{1}{4}$ is _____ (1)
   (A) $\frac{56}{12}$ (B) $-\frac{49}{12}$ (C) $-4\frac{7}{12}$ (D) $4\frac{7}{12}$

3. If $5x - 3 = 3x - 5$, then value of x is _____ (1)
   (A) -1   (B) 1   (C) -2   (D) 2

4. The sum of the exterior angles of an octagon is _____ (1)
   (A) $180°$ (B) $360°$ (C) $540°$ (D) $720°$

5. In a game of chance, the probability of winning is $\frac{1}{5}$, the probability of losing the game is ___. (1)
   (A) 1   (B) 0   (C) $\frac{4}{5}$ (D) $\frac{3}{4}$

6. Which of these is not a perfect square? (1)
   (A) 2367   (B) 1225   (C) 784   (D) 3600

7. How many natural numbers lie between 9^2 and 10^2 ? (1)
   (A) 19   (B) 15   (C) 17   (D) 18

8. The value of $(0.8)^3 =$ _____ (1)
   (A) 5.12   (B) 0.512   (C) 51.2   (D) 512

9. Which will be the ones digit of the cube of a number ending with 2? (1)
   (A) 2   (B) 6   (C) 4   (D) 8

Section-B

10. Simplify: $\frac{3}{4} \times \frac{-2}{8} \times \frac{16}{18} \times \frac{24}{5}$ (2)

11. If $4(8x + 5) = 2x - 8$, find the value 3x (2)

12. Four-fifths of a number is greater than three-fourths of a number by 4. Find the number. (2)

13. A die is rolled once. What is the probability of getting (2)
    (i)   3   (ii)   7   (iii)   an even number   and   (iv) a prime number?

14. The circulation of newspapers in a town is shown by the bar graph. Study the graph and answer the following questions. (2)
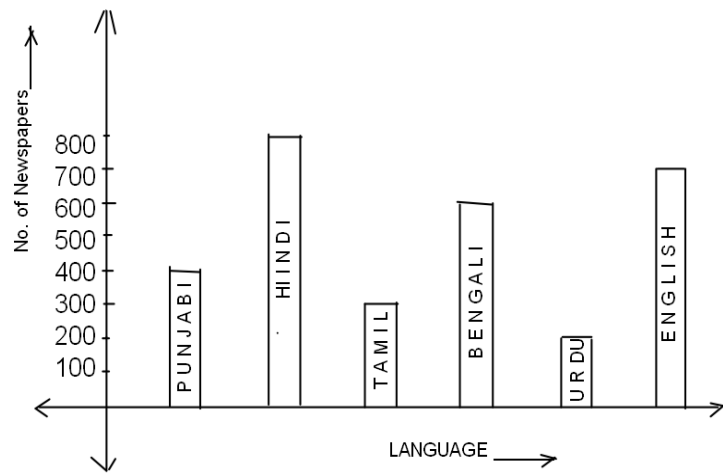
    a) What is the difference between the number of Bengali newspapers and English newspapers being circulated?

    b) Find the total number of newspapers in all the languages.

15. Find the Pythagorean triplet whose smallest number is 42. (2)

16. A metallic cuboid measuring 9 cm x 6 cm x 4 cm is melted and formed into a cube. Find the side of a cube so obtained. (2)
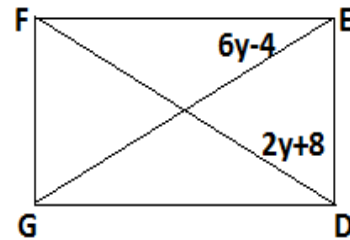
Section-C

17. From the sum of $\frac{2}{9}$ and $\frac{-3}{7}$, subtract $\frac{21}{63}$ (3)

18. An army contingent has 1296 men in total. They are required to stand for inspection in equal number of rows and columns. Find the number of men in each row. (3)

19. a) Find the number of sides of a polygon if the sum of the interior angles is $720°$ (3)
    b) Find y in the rectangle GFED if FD $= 2y + 8$ and GE $= 6y - 4$.

20. Solve the following linear equation : (3)
$$\frac{3(y - 5)}{4} - 4y = 3 - \frac{(y - 3)}{2}$$

21. Find the smallest number by which 10976 must be divided so that the quotient is a perfect cube. (3)

Section-D

22. The survey data on 200 children for popular Disney movies is shown below. (4)

Movies	Frozen	Wings of Life	Cars 2	Planes
No. of Children	70	40	60	30

Represent the data by a pie-chart.

23. Find the least number which must be added to 4931 to make it a perfect square. Also, find the square root of the perfect square so obtained. (4)

24. In a rhombus ABCD, $\angle AOB = (7z + 6)°$, $\angle DAO = (5z + 1)°$. Find $\angle CDO$ and $\angle DCB$ (4)