HALF YEARLY EXAMINATION - 2022

STD - VII
TIME : 2.00 Hrs

MATHS

MARKS : 60

PART - A

I. Choose the correct answer.   5 x 1 = 5

1. The decimal number which lies between 4 and 5 is
   a) 4.5   b) 2.9   c) 1.9   d) 3.5

2. 2 / 5 is equal to
   a) 0.04   b) 0.004   c) 4   d) 0.4

3. If the circumference of a circle is 82π, then the value of 'r' is
   a) 41 cm   b) 82 cm   c) 21 cm   d) 20 cm

4. The degree of $6x^3 - 7x^1 + 4$ is
   a) 7   b) 3   c) 6   d) 4

5. THe angles of triangle are in the ratio 2 : 3 : 4. Then the angles are
   a) 20, 30, 40   b) 40, 60, 80   c) 80, 20, 80   d) 10, 15, 20

II. Fill in the blanks.   5 x 1 = 5

6. The place value of 3 in 85.073 is ...One.

7. The ratio of the area of a circle to the area of its semicircle is ....½...

8. The formula to find the area of the circular path is .S. or S.a

9. When base is 12 and exponent is 17, its exponential form is .12^{17}.

10. The sum of the elements of nineth row in the Pascal's triangle is .256

III. Say True or false   5 x 1 = 5

11. 0.009 is equal to 0.000900   F

12. Circumference of a circle is always more than three times of its diameter. T

13. $3^4 \times 3^7 = 3^{11}$ T

14. $7a^2b$ and $-7ab^2$ are like terms. F

15. If two plane figures are congruent then they have same shape and same size. T

VI. Match the following   5 x 1 = 5

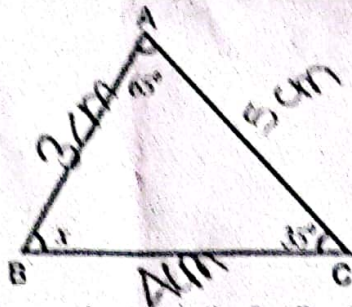|		
16. Area of a circle	-	4 2
17. Unit digit of 444^{41}	-	30.043 kg 4
18. Sum of three angles in a triangle	-	1, 5, 10, 10, 5, 1 5
19. 30kg and 43g	-	$180°$ 3
20. The sixth row of the Pascal's triangle	-	πr^2 sq.units 1

PART - B

V. Answer any 10 questions.   10 x 2 = 20

21. Express the following in metres using decimals. I) 7cm   II) 6m 6cm

22. Arrange in ascending order - 2.35, 2.53, 5.32, 3.52, 3.25

23. Represent the number 2.1 on the number line.

24. What is the circumference of the circular disc of radius 14cm?

25. In a grassland, a sheep is tethered by a rope of length 4.9m. Find the maximum area that the sheep can graze.

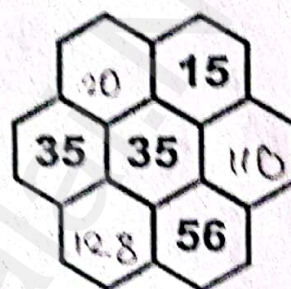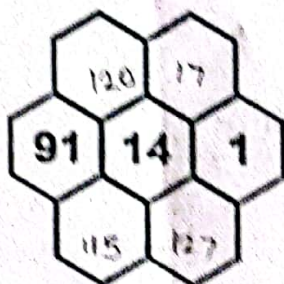26. The area of the circular region is 2464 cm². Find its radius and diameter.

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27. Find the value of $2^3 + 3^2$.
28. Find the degree of the following terms. i) $-3ab$ ii) $12 p^4 r^3$
29. Find the value of x.

30. If the three angles of a triangle are in the ratio 3 : 5 : 4, then find them.
31. Express 512 in exponential form.
32. Convert the following into simplest fractions.   i) 0.04   ii) 3.46
33. The following hexagonal shapes are taken from Pascal's triangle.
    Fill in the missing numbers.

PART - C

VI. Answer any 5 questions. $5 \times 3 = 15$

34. Express the numbers given in expanded form in the place value grid. Also write its decimal
    representation.

   i) $3 + \dfrac{5}{10} + \dfrac{3}{100} + \dfrac{4}{1000}$ ii) $40 + 6 + \dfrac{7}{10} + \dfrac{2}{100} + \dfrac{6}{1000}$

35. Write each of the following as decimals.
    i) Four hundred four and five hundredths.   ii) Two and twenty five thousandths.
36. The diameter of the bullock cart wheel is 1.4m. Find the distance covered by it in 150
    rotations?
37. A floor is 10m long and 8 m wide. A carpet of size 7m long and 5 m is laid on the floor. Find
    the area of the floor that is not covered by the carpet.
38. Simplify by using the low of exponents. i) $(3^2 \times 3^3)^4$ ii) $(5^2 \times 5^8) \div 5^3$
39. Add the expressions $4x^2 + 3xy + 9y^2$ and $2x^2 - 9xy + 6y^2$ and find the degree.
40. In $\triangle ABC$, if $\angle B$ is 3 times $\angle A$ and $\angle C$ is 2 times $\angle A$, then find the angles.
41. Can row sum of elements in a Pascal's triangle form a pattern?

PART - D

VII. Answer any one question. $1 \times 5 = 5$

42. Draw a triangle ABC given that AB = 6 cm, AC = 5 cm and $\angle A = 60^0$
43. Draw a triangle PQR given that $\angle P = 60^0$, $\angle R = 35^0$ and PR = 7.8cm

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