VR TUITION

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MODEL ANNUAL EXAMINATION – 2025

STD: VIII **MARKS : 100**

SUB : MATHEMATICS **TIME : 2.30 Hrs**

I. CHOOSE THE CORRECT ANSWER 10x1=10

1. Inclusive series is a _____series.
   (A) continuous (B) discontinuous (C) both (D) none of these
2. What is the eleventh Fibonacci number?
   (A) 55 (B) 77 (C) 89 (D) 144
3. The hypotenuse of a right angled triangle of sides 12cm and 16cm is _____.
   (A) 28 cm (B) 20 cm (C) 24 cm (D) 21 cm
4. $(x+4)$ and $(x-5)$ are the factors of _____
   $(A)x^2-x+20$ $(B)x^2-9x-20$ $(C)x^2+x-20$ $(D)x^2+x-20$
5. The number of digits in the square root of 123454321 is _____.
   (A) 4 (B) 5 (C) 6 (D) 7
6. _____ is added to 24^2 to get 25^2
   (A) 4^2 (B) 5^2 (C) 6^2 (D) 7^2
7. What sum of money will earn Rs.500 as simple interest in 1 year at 5% per annum?
   (A) 50000 (B) 30000 (C) 10000 (D) 5000
8. The single discount in % which is equivalent to two successive discounts of 20% and 25% is
   (A) 40% (B) 45% (C) 5% (D) 22.5%
9. How many outcomes can you get when you toss three coins once?
   (A) 6 (B) 8 (C) 3 (D) 2
10. If $\Delta ABC \sim \Delta PQR$ in which $\angle A = 53°$and $\angle A = 77°$, then $\angle R$ is
    (A) 50° (B) 60° (C) 70° (D) 80°

II. FILL IN THE BLANKS 5X1=5

11. The range of the data 200,15,20,103,3,196 is____.
12. The symbol ≡ is used to represent ____ triangles .
13. A mixer grinder marked at Rs.4500 is sold for Rs.4140 after discount. The rate of discount is__.
14. In an equation $a+b=23$ .The value of 'a' is 14 then the value of 'b' is ___.
15. The number of perfect square numbers between 300 and 500 is _____.

III. MATCH THE FOLLOWING 5X1=5

16. Circumference of a semicircle - (7,24,25)
17. Orgin - (a^2-b^2)
18. Additive identity - $2\pi r$
19. $(a+b)(a-b)$ - 0
20. Pythagorean triplet - (0,0)

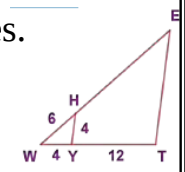
IV. ANSWER THE FOLLOWING QUESTIONS 12X2=24

21. Evaluate: $\left(\frac{1}{2}\right)^3$
22. Subtract : $\frac{-8}{44}$ from $\frac{-17}{11}$
23. A spinner of radius 7.5 cm is divided into 6 equal sectors. Find the area of each of the sectors.
24. Verify Euler's formula for faces-12; vertices-20; Edges-30
25. Divide : $(3xy)^2$ by $9xy$.
26. Find x : $\frac{2x}{3}-4=\frac{10}{3}$

27. When a number is decreased by 25%, it becomes 120. Find the number.
28. The value of a motor cycle 2 years ago was ₹70000. It depreciates at the rate of 4% p.a. Find its present value.
29. Check whether 9,40,51 are the sides of right-angled triangles, using Pythagoras theorem.
30. Represent the following data in ungrouped frequency table which gives the number of children in 25 families. 1, 3, 0, 2, 5, 2, 3, 4, 1, 0, 5, 4, 3, 1, 3, 2, 5, 2, 1, 1, 2, 6, 2, 1, 4
31. If you have 2 school bags and 3 water bottles then, in how many different ways can you choose each one of them, while going to school ?
32. Using repeated subtraction method, find the HCF of the 280 and 420
33. Frame Additive cipher table (key = 4).
34. Find the best buy of the following purchases: A pack of 5 chocolate bars for Rs.175 or 3 chocolate bars for Rs.114?

V. ANSWER ANY 8 OF THE FOLLOWING QUESTIONS **8X5=40**

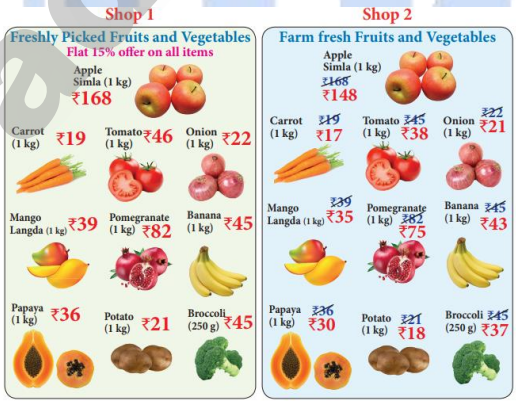
35. Simplify: $\left[\frac{4}{3} \div \left(\frac{8}{-7}\right)\right] - \left[\frac{3}{4} \times \frac{4}{3}\right] - \left[\frac{4}{3} \times \left(\frac{-1}{4}\right)\right]$
36. What is the square root of cube root of 46656?
37. A circle is formed with 8 equal granite stones as shown in the figure each of radius 56 cm and whose central angle is 45°. Find the area of each of the granite stones. $\left(\pi = \frac{22}{7}\right)$
38. Find the volume of the cube whose side is $(x + 1)\ cm$
39. A total of 90 currency notes, consisting only of Rs.5 and Rs.10 denominations, amount to Rs.500. Find the number of notes in each denomination.
40. A cement factory makes 7000 cement bags in 12 days with the help of 36 machines. How many bags can be made in 18 days using 24 machines?
41. In the given figure YH ∥ TE. Prove that $\Delta WHY \sim \Delta WET$ and also find HE and TE



42. Draw a histogram for the following data.

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	5	15	23	20	10	7

43. Using repeated division method, find the HCF of the following:6765 and 610
44. Using the given picture find the total special offer price of fresh sweets and bakery products to buy ½ kg laddu, 1 kg cake, 6 pockets of bread.



V. ANSWER THE FOLLOWING QUESTIONS **2x8=16**

45. a) Draw the graph of $y = -3x$ ***(OR)***
    b) Plot the following points in a graph sheet. A(5,2), B(− 7, − 3), C(− 2,4), D(− 1, − 1), E (0, − 5), F(2,0), G(7, − 4), H(− 4,0), I(2,3),J(8, − 4), K(0,7).
46. a) Construct a rectangle LIME with LI = 6 cm and IE = 7 cm. Also find its area.

(OR)

    b) Construct the following quadrilaterals with the given measurements and also find their area. ABCD, AB = 5 cm, BC = 4.5 cm, CD = 3.8 cm, DA = 4.4 cm and AC= 6.2 cm.