

Vasishtha Model Test Paper - 2025

(12)(E)

Standard Maths Paper - 3

Shree Vasishtha Vidhyalaya - Vav

Piyush Sojitra

[Time: 3 Hour]

[Marks: 80]

● **Instructions:**

- 1) Write in a clear legible handwriting.
- 2) This question paper has four Sections A, B, C & D and Question Numbers from 1 to 54
- 3) All Sections are compulsory. General options are given.
- 4) The numbers to the right represent the marks of the question.
- 5) Draw neat diagrams wherever necessary.
- 6) New sections should be written in a new page. Write the answers in numerical order.
- 7) Calculator and smart watch are not allowed.

SECTION -A

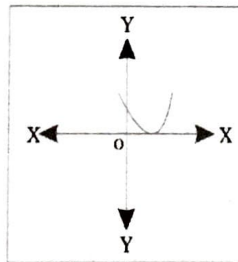
● Answer the following questions as required(Que. 1 to 24) (1 mark each)

(24)

● Choose the right option So that the statement become true (Que. No. 1 to 6)

(06)

1. HCF (85,153)=85m-153 then m = _____
 (A) 1 (B) 2 (C) 3 (D) 4
2. The graph of $y = p(x)$ is given below, the number of zeroes of $p(x) =$ _____
 (A) 1 (B) 2 (C) 3 (D) 0



3. $x+2y-4=0$ and $2x+4y-12=0$ the geometrical representation of the pair so formed is
 (A) Interesting lines (B) Coincident lines (C) Parallel line (D) None of the above
4. quadratic equation $3x^2-4\sqrt{3}x+k=0$ has two equal real roots, then $k =$ _____
 (A) 2 (B) -4 (c) -2 (D) 4
5. 30th term of the AP: 10, 7, 4, is
 (A) 97 (B) 77 (C) -77 (D) -87

6. E and F are points on the sides PQ and PR respectively of a ΔPQR and $EF \parallel QR$. If $PE = 4$ cm, $PF = 8$ cm and $RF = 9$ cm then $QE =$ _____ cm.
 (A) 1.5 (B) 2.5 (C) 4.5 (D) 3.5

Choose the correct answers from the answer given in brackets and write the following statement as true or false (Que. No. 7 to 12)

7. If the distance between $(-5, 7)$ and $(a, 3)$ is $4\sqrt{2}$ then $a =$ _____ $[0, -1, 1]$
 8. $\sqrt{1 - (\sec^2\theta - \tan^2\theta)} =$ _____ $(2, 0, \sqrt{2})$
 9. A line intersecting a circle in two points is called a _____ $[\text{secant, chord, tangent}]$
 10. The minute hand of a clock swept _____ angle in 5 minutes $[10^\circ, 20^\circ, 30^\circ]$
 11. The total surface area of a cone is _____. $[\pi rl, 2\pi rh, \pi rl + \pi r^2]$
 12. Relation between the measures of central tendency is $Z = 3M - 2\bar{X}$, then $\frac{M - \bar{X}}{Z - M} =$ _____ $(\frac{1}{2}, -\frac{1}{2}, 2)$

State whether the following statements are true or false (Que. No. 13 to 16)

13. The sum of the probability of all the elementary events of an experiment is zero.
 14. The zero of the linear polynomial $ax + b$ is $-\frac{b}{a}$
 15. A quadratic equation $100x^2 - 20x + 1 = 0$ has two equal real roots.
 16. The distance of a point $P(-6, 8)$ from the origin is -10 .

Answer the following questions in one sentence, word or numbers (Que. No. 17 to 20)

17. If the radius of a sphere is increased by 10% then what percentage of increased in surface area of sphere?
 18. What is the mean of first ten natural numbers?
 19. What is the HCF of 18 and 81?
 20. A quadratic equation $9x^2 - mx - 1 = 0$ has two opposite roots then what is the value of m ?

Match following: (Que. No. 21 to 24)

A	B
21. $\alpha + \beta + \gamma$	(a) $-\frac{b}{a}$
22. $\frac{1}{\alpha} + \frac{1}{\beta}$	(b) $\frac{c}{a}$
	(c) $-\frac{b}{c}$

A	B
23. $\cot 30^\circ$	(a) 1
24. $\tan 45^\circ$	(b) $\sqrt{3}$
	(c) $\sqrt{\frac{1}{3}}$