Student

SECTION -A(1×7 = 7 marks)

1. Define a rational number.
2. Find five rational numbers between ¾ and 5/6.
3. 2 -√7 is .....type of number.
4. Simplify –
   √72 + √800 -√18.
5. Write the decimal expansion of 1/17.
6. Irrational numbers are always.....in decimal expansion.
7. Simplify:
   √ 125 × √ 5 .

Section B (2 × 5 = 10 marks)

8. Represent √5 on number line .
9. Simplify –

$$\sqrt{\frac{\sqrt{20}+\sqrt{11}}{\sqrt{20}-\sqrt{11}}}.$$

10. Represent 0.001 (bar on 001) in the form of p/q , where p and q are integer's and cannot be 0.
11. Rationalise the denominator –

$$\frac{1}{\sqrt{7}-\sqrt{6}}$$

12. Find eight rational numbers between 1/5 and 6/8 .

Signature of Principal/ Administrator

Section C (3 × 3 = 9 marks)

13. Prove that $\sqrt{5}$ is an irrational number.

14. Find the value –

$$\sqrt{\frac{2+\sqrt{3}}{2-\sqrt{3}}}, \text{ if } \sqrt{3} = 1.73.$$ [CBSE 2015]

15. Represent $\sqrt{9.3}$ on the number line using geometrical method.

Section D (4 × 1 = 4)

16. Prove that :

$$\frac{1}{3-\sqrt{8}} - \frac{1}{\sqrt{8}-\sqrt{7}} + \frac{1}{\sqrt{7}-\sqrt{6}} - \frac{1}{\sqrt{6}-\sqrt{5}} + \frac{1}{\sqrt{5}-2} = 5.$$