



Dnyansagar Coaching Classes, A'nagar

Unit Test

Std. 9th (Semi)

Sub-Algebra

Chapter- 2 and 3

Time - 1 hrs

Max Marks - 20

- Q.1 A) Find the relation between x and y from the following statement. 02**
- 1) $x > 5 ; y < -5$
 - 2) $4 = x ; 4 < y$
- B) Solve the following. (any two) 04**
- 1) Find the product.
 - i) $\sqrt{7} \times \sqrt{5}$
 - ii) $\sqrt[3]{3} \times \sqrt[4]{2}$
 - 2) Add the following.
 $3x + y - 8 ; y + 4 - 7x$
 - 3) Show $\sqrt{2}, \sqrt{3}$ on number line.
- Q.2 A) Factorise the following. (2/3) 02**
- 1) $5t + 25t^2$
 - 2) $2x^2 + 3x - 5$
 - 3) $x^2 + xy - 3x - 3y$
- B) Solve the following. (2/3) 04**
- 1) Subtract $4x + y + 2$ from the sum of $3x - 2y + 7$ and $5x - 3y - 8$.
 - 2) State which of the following are surds. Justify
 - i) $\sqrt{\frac{22}{7}}$
 - ii) $\frac{1}{\sqrt{15}}$
 - 3) $\left| x - \frac{1}{2} \right| = \frac{3}{2}$
- Q.3 A) Simplify. (2/4) 04**
- 1) $4\sqrt{8} + \sqrt{32} - 3\sqrt{2}$
 - 2) $27\sqrt[3]{18} \div 3\sqrt[3]{9}$
 - 3) $4\sqrt{2} - 2\sqrt{8} + \frac{3}{\sqrt{2}}$
 - 4) $5\sqrt[3]{4} \div \sqrt[3]{2}$
- B) Solve the following. (2/4) 04**
- 1) Rationalise the denominator.
$$\frac{\sqrt{a+x} + \sqrt{a-x}}{\sqrt{a+x} - \sqrt{a-x}}$$
 - 2) If $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$ find the values of a and b.
 - 3) Simplify $\sqrt[3]{24} \div (\sqrt[4]{2} \cdot \sqrt[3]{3})$

