PAPER-3

SECTION - A

▶ Do as directed. (Q. 1 to 24) [1 Marks Each]   (24)

- Choose the correct option. (Q. 1 to 6)

(1) 1 cm (a, 18) = 36 and HCF (9, 18) = 2 then a = ___.

    (A) 2   (B) 3

    (C) 4   (D) 1

(2) If the graph of the quadratic polynomial $y = ax^2 + bx + c$ is a parabola opening upwards, then _____ holds good.

    (A) $a < 0$ (B) $a = 0$

    (C) $a > 0$ (D) $a \neq 0$

(3) The line representing $4x + 3y = 24$ intersects the x-axis at point _____.

    (A) $(3, 0)$ (B) $(0, 4)$

    (C) $(6, 0)$ (D) $(0, 8)$

(4) $(2x + 1)(3x + 2) = 6(x + 1)(x - 2)$ is a _____ equation.

    (A) Linear   (B) Quadratic

    (C) Cubic   (D) Fourth degree

(5) If $a = 2$ and $d = 4$ then find $S_{20} = $ _____.

    (A) 600   (B) 800

    (C) 78   (D) 80

(6) which measure of side given below determine right angled triangle.

    (A) 6, 8, 12   (B) 3, 7, 9

    (C) 7, 15, 17   (D) 7, 24, 25

- Fill in the blanks. (Q. 7 to 12)

(7) The perpendicular distance of the point $(-4, 9)$ from y-axis is _____ . $(9, 4, 13)$

(8) $\tan 45° + \sin 90° - \sec 60°$ is _____ . $(0, 10, 12)$

(9) In $\triangle ABC$ $\angle B = 90°$, $\angle C = 60°$ and $BC = 6$ cm then $AB = $ _____ cm. $(12, 6\sqrt{3}, 2\sqrt{3})$

(10) The centre of the circle is _____ of the diameter of the circle. (midpoint, endpoint, centroid)

(11) _____ is the area of a sector by radius 5 cm, If radius makes a right angle. ($\frac{25\pi}{2}$, $\frac{25\pi}{3}$, $\frac{25\pi}{4}$)

(12) The perimeter of the base of the hemisphere is 2π then its volume is _____ cm^3.

($\frac{\pi}{3}$, $\frac{3\pi}{2}$, $\frac{2\pi}{3}$)

- **Write the statements true or false. (Q. 13 to 16)**

(13) sum and product at zero at polynomial is -14 and 3 respectively then quadratic polynomial $x^2 + 14x + 3$.

(14) In standard form the equation $\frac{x}{2} - \frac{y}{3} = 1$ can be written as $2x - 3y = 6$.

(15) $A = B$ if and only if $d(A, B) = 0$.

(16) Probability of any event can't be zero.

- **Match the following. (Q. 17 to 20)**

A	B
(17) Linear Polynomial	(a) Three Zeroes
(18) Cubic Polynomial	(b) One Zeroe
	(c) Two Zeroes

A	B
(19) $\sec^2\theta - \tan^2\theta$	(a) $\mathrm{cosec}\theta$
(20) $\dfrac{1}{\sin\theta}$	(b) $\cos^2\theta$
	(c) 1

- **Solve the following. (Q. 21 to 24)**

(21) What is the LCM of 120 and 216?

(22) Find the discriminant of the equation $5\sqrt{5}\, x^2 - 10x - 2\sqrt{5} = 0$.

(23) Fnd the curved surface area of a cylinder with diameter 60 cm and height 35 cm.

(24) Mean of the observations $6, 7, x, 8, y$ and 14 is 9 then find $x + y$.