Comprehensive Test Series-01

Straight lines

TIME: 1 hr. **MM: 30**

General Instructions:

- All Questions are compulsory.
- Marks are given alongwith the questions individually.
- Use of calculator is not permitted.

Q.1 Find the slope of a line which passes through the origin and mid-point of the line segment joining the points P (0,-4), B (8, 0)

Q.2 Without using the Pythagoras theorem show that the points (4, 4), (3,5) and (- 1,- 1) are the vertices of a right angled triangle.

Q.3 Find the slope of the line which makes an angle of 30^0 with the positive direction of y-axis (measure anticlockwise).

Q.4 Without using distance formula, show that the points (- 2,-1), (4,0), (3,3),(-3,2) are the vertices of a parallelogram.

Q.5 If three point (h, 0), (a, b) and (0, k) lies on line, show that $\frac{a}{h}+\frac{b}{K}=1$

Q.6 A line perpendicular to the line segment joining the points (1, 0) and (2, 3) divides it in the ratio 1: n. Find the equation of the line.

Q.7 Find the equations of the lines passing through the point (3, 4) such that the sum of their intercepts on the axes is 14.

Q.8 The owner of a milk store finds that, he can sell 980 litres of milk each week at Rs. 14/liter and 1220 liter of milk each week at Rs. 16/litre. Assuming a linear relationship between selling price and demand, how many liter could he sell weekly at Rs. 17/litre?

Q.9 P (a, b) is the mid-point of a line segment between axes.

Show that the equation of the line is $\frac{x}{a}+\frac{y}{b}=2.$

Q.10 Point (h, k) divides a line segment between the axes in the ratio 1:2. Find equation of the line