Straight Lines

Exercise Questions –module 2

1. By using the concept of equation of lines, prove that the three points (3,0),(-2,-2) and (8,2) are collinear.
2. Find the equation of the line whose inclination is $\frac{5\pi}{6}$ and which cut off an intercept of an intercept of 4 units on negative direction of y-axis.
3. Find the equation of the line containing the point P(4,-5) and parallel to the line joining the points (3,7)and (-2,4).
4. The perpendicular from the origin to a line meets it at the point (-2,9), find the equation of the line.
5. Find the equation of the right bisector of the line segment joining the points (3,4) and (-1,2).
6. Find the equation of the line which passes through the point (-4,3)and portion of the line intercepted between the axes is divided internally in the ratio 5:3by this point.
7. Find the equation of the straight line which passes through the point (3,4) and the sum of its intercepts on the axes is 14.
8. Find the equation of the straight line whose perpendicular distance from the origin is 4 units and this perpendicular makes an angle α, with the positive direction of x axis, given by $\tan\alpha = \frac{5}{12}$.
9. A straight line passing through the point A(-1,2) has inclination $\frac{\pi}{3}$,and intersects the line $x + y = 5$ at P, find AP.
10. Find the equation of the line whose perpendicular distance from the origin is 4 and the angle between x-axis and the perpendicular is 15^{o}.