ANALYTICAL GEOMETRY

- 1. The centroid of the triangle whose sides are x = 0, y = 0 and x+y = 6 is _____ 2. The inclination of the line x+y + 10 = 0 is 3. If D,E,F are the mid points of the sides BC, CA, AB respectively and area of \triangle ABC is 64 sq.units then area of \triangle DEF = _____ 4. The area of the triangle formed by the line $\frac{x}{a} + \frac{y}{b} = 1$ with co-ordinate axis is _____ The equation of a line passing through (-5,7) and having a slope 4 is _____ 5. The point of intersection of the lines y = 2x+1 and y = 3x-2 is _____ 6. 7. If ax+by+c = 0 represents a straight line then the condition is 8. Slope of the line perpendicular to 3x+4y-10 = 0 is _ 9. The distance between the points (0,1) and (8, K) is 10 then K =_____ 10. Equation of the line making equal intercepts on the axis and passing through (-2,3) is _____ 11. If 2x-3y + 5 = 0 and 4x-ky+3 = 0 are parallel then K =_ 12. Equation of a line with intercepts 3 and 2 untis on x-axis and y-axis is _ 13. The center of the circle is (0,0) if one end of a diameter is (1,2) then the other end is 14. If $\sqrt{3}$ is the slope of the line then its inclination is ______ degrees. 15. Equation of y-axis is _ 16. If (2,-4) and (6,-2) are the two vertices of diameter of circle then its centre is _____ 17. The perimeter of the triangle whose vertices are A(0,0), B(1,0) and C(0,1) is 18. The equation of the line having slope 2 and Y - intercept - 2 is _____ 19. The equation of the line joining the points (1,2) and (3,4) is 20. The X and Y intercepts made by the line 4x+6y-9 = 0 are _____ 21. If the line $\frac{x}{a} + \frac{y}{2a} = 1$ passes through the point (2,-3) then a =_____ 22. If the angle between two lines is 90° then the product of their slopes is 23. The Area of the triangle formed by the point A(0,0), B(a,0) and C(0,a) is _____ 24. Slope of X-axis is _ 25. Equation of a line intercept form is _____ 26. The lines y=2x+5, y=2x-5 are ______ to each other. 27. Slope of the line joining the points (-a,a) and $(0, a + a\sqrt{3})$ is 28. Equation of a straight line passing through (-1,-1) with 60° is 29. The lines y = 3x + 4 and x = -3y are ______ to each other. 30. Slope of $\frac{x}{a} + \frac{y}{b} = 1$ is _____ 31. The equation of a straight line parallel to 3x+4y = 10 and passing through origin is _____ 32. In ______ratio is the segment joining the points (4,-3) and (5,2) divides by the x-axis 33. The centroid divides the median in the ratio _____ 34. The line $\sqrt{3}$ x-y+50 = 0 makes an angle of x-axis is 35. The mid point of $(\sin^2\alpha, \sec^2\alpha)$ and $(\cos^2\alpha, -\tan^2\alpha)$ is _____ 36. The angle between x - 2 = 0 and y+3 = 0 is _____ 37. The line x = 3y + 1 cuts x-axis at _____ 38. Distance between the points (a $\cos\theta$, 0) and (0, a $\sin\theta$) is _____ 39. The line y = mx passes through 40. If the line joining the points (x_1, y_1) and (x_2, y_2) is divided by a point R internally in the ratio m:n then x-coordinate is _____ 41. The line y = mx+c intersects the x-axis at the point _____ (June 2009) 42. The line parallel to x-axis through (h,k) is _____ (June 2009) 43. If (1,3), (2,5) and (3,k) are collinear then K = _____ (June 2009) 44. The slope of a line parallel to the line 3x - 2y + 1 = 0 is _____ (March 2009) 45. (4,7), (1,4), (3,2), (6,5) are the vertices of a parallelogram, then the intersect point of its diagonal is _____ (March 2009) 46. The slope of x = 2y is _____ (March 2009) __ (March 2009) 47. Analytical geometry was introduced by ____ 48. Slope-intercept form of an equation is _____ (March 2009) 49. Slope of ax+by+c = 0 is _____ (March 2009) 50. If two straight lines are parallel, their slopes are _____ ____ (March 2008) 51. Sum of the intercepts made by 3x+4y=12 on the axis is _____ (March 2007) 52. Slope of the line y = 5 is _____ (March 2007) 53. The point - slope form of an equation of a straight line is _____ (June 2007) 54. Y-intercept made by line 3x+4y = 0 is _____ (June 2007)
 - 55. The distance between origin to the given point (a,b) is _____ (June 2005)
 - 56. If two straight lines are parallel their equations differ only by a _____

54. 0 55. $\sqrt{a^2 + b^2}$

56. constant

4 Marks

- 1. Find the equation of the line perpendicular to the line joining (-1,3), (4,6) and passing through the point (2,-5)?
- 2. Find the equation of a line whose slope is 4/5 and which bisects the line joining the points P (1,2) and Q (4,-3)?
- 3. Find the equation of a line passing through the point (5,-3) and whose sum of the intercepts on the coordinate axis is 5/6?
- 4. Find the coordinates of the points of trisection of a segment joining A (-3,2)and B (9,5)?
- 5. Show that the points A (1,2), B (-3,4) and c (7,-1) are collinear and find the ratio in which A divides BC?

2 Marks

- 1. If the three points A (P,2) B (-3,4) , C (7,-1) are collinear find the volue of 'p'.
- 2. In what ratio is the segment Joining the points (4,6) and (-7,-1) divided by the X- axis?
- 3. Find the third vertice of the triangle, if two of its vertices are (-1,4) and (5,2) and the medians intersect at (0,-3)?
- 4. Find the equation of the line passing through the point (3,4) and is parallel to 4x+7y=8?
- 5. Find the area of the triangle formed by the points (-2,3), (-7,5) and (3,-5)?
- 6. One end of the diameter of a circle is (3,2) and the centre is (0,0). Find the co-ordinates of the other end of the diameter?
- 7. Find the point on X-axis which is equidistant from (2,3) and (4,-2)?
- 8. Find the area of the triangle formed by the line 2x-4x-7 = 0 with the co-ordinate axis?

1 Mark

- 1. Find the equation of the line passing through (4-7) and (1,5)?
- 2. A straight line makes intercepts 4 and -7 on the X and Y -axis what is the equation of that line?
- 3. Find the equation of the line making an angle 150° with X-axis and having Y-intercept -1?
- 4. Find the co-ordinates of the centroid of the triangle whose vertices are (-4,4),(-2,2) and (6,12)?
- 5. Find the intercepts of the equation 2x+3y-5=0 ?
- 6. Find the slope of the line perpendicular to the line 3x-2y+1=0?
- 7. Find the area of a triangle with vertices at (3,0), (0,4) and (0,0)?
- 8. Find the slope of the line whose equation is 2x-7y = 12?
- 9. Find the slope of the line joining (4,6) and (2,-5)?
- 10. Find the equation of the line passing through the point (3, -5) and whose slope is 7/3?