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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**B.Tech I Year I Semester (R16) Regular Examinations December 2016****ENGINEERING GRAPHICS**

(Electronics & Communication Engineering)

(For Students admitted in 2016 only)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 X 12 = 60 Marks)

UNIT-I

- Q.1** a. The distance between a fixed straight line and a fixed point is 65. Trace the path of a point 'p' moving in such a way that the ratio of its distance from the fixed point, to its distance from the straight line is '2/3'. Name the curve. Draw a tangent and normal to the curve at a point on it 50 from the fixed point. 8M
- b. Construct a parabola with the base 120 and axis 50 long. 4M

OR

- Q.2** Draw an epi-cycloid of rolling circle of diameter 40 mm which rolls outside another circle (base circle) of 150 mm diameter for one revolution. Draw a tangent and normal at any point on the curve. 12M

UNIT-II

- Q.3** a. A point P is 15 mm above H.P and 20 mm in front of V.P. Another point Q is 25 mm behind V.P and 40 mm below H.P. Draw projections of P and Q keeping the distance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views. 6M
- b. The top view of a 75 mm long line measures 55 mm. The line is in V.P and its one end being 25 mm above H.P. Draw its projections and locate its traces. 6M

OR

- Q.4** A line AB, 50mm long, has its end A away from the HP and VP than end B. The line is inclined to the HP at 30° and to the VP at 45° . Draw the projections if end A is 35mm above the HP and 50mm in front of the VP. 12M

UNIT-III

- Q.5** a. An equilateral triangular plane of side 40 has its plane parallel to V.P and 20 away from it. Draw the projections of the plane when one of its sides is (i) perpendicular to H.P (ii) parallel to H.P and (iii) inclined at an angle 45° to H.P. 7M
- b. Draw the projections of a regular pentagon of 25mm side, with its surface making an angle 45° with H.P, and one of the sides of the pentagon is parallel to H.P and 15 away from it. 5M

OR

- Q.6** A pentagonal prism of base side 30mm and axis 60mm has one of its rectangular faces on the HP and the axis inclined at 60° to the VP. Draw its projections. 12M

UNIT-IV

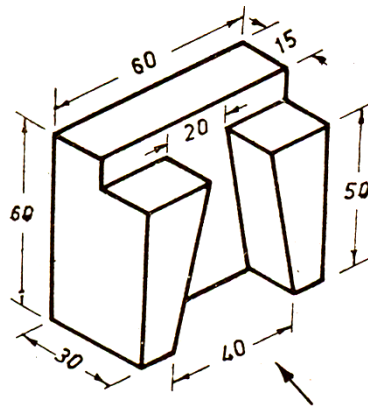
Q.7 A cube of 65 long edges has its vertical faces equally inclined to the V.P. A section plane perpendicular to V.P. cuts it, so that the true shape of the section is a regular hexagon. Determine the inclination of the cutting plane with the H.P and draw the sectional top view and true shape of the section. 12M

OR

Q.8 A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone. 12M

UNIT-V

Q.9 Draw the F.V, T.V, L.S.Vof the following figure according to first angle projection. 12M



OR

Q.10 Draw the isometric projection of a pentagonal prism of base side 35 mm and axis 60mm. The prism rests on its base on the HP with an edge of the base parallel to the VP. 12M

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