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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations November 2020

ENGINEERING GRAPHICS & DESIGN

(Common to ECE, CSE & CSIT)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1** 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**

OR

- 2** Inscribe an ellipse in a parallelogram having sides 150 mm and 100 mm long and an included angle of 120°. **12M**

UNIT-II

- 3** A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured parallel to xy, is 75mm. **12M**

OR

- 4** A line AB of 100mm length is inclined at an angle of 30 degree to HP and 45 degree to VP. The point A is 15mm above HP and 20mm in front of VP. Draw the projections of the line. **12M**

UNIT-III

- 5** An equilateral triangular plane ABC of side 40mm, has its plane parallel to VP and 20mm away from it. Draw the projections of the plane when one of its sides is (i) perpendicular to HP (ii) parallel to HP and (iii) inclined to HP at an angle of 45°. **12M**

OR

- 6** A semi circular plane of diameter 70mm has its straight edge on the VP and inclined at 30 degree to the HP. Draw the projection of the plane when its surface is inclined at 45 degree to VP. **12M**

UNIT-IV

- 7** A pentagonal pyramid with edge of base 25 mm and axis 65 mm long, its base is resting on HP. It is cut by a section plane, inclined at 60 degree to HP and perpendicular to VP at bisect the axis. Draw the projections and obtain the true shape of the section. **12M**

OR

- 8** A square prism of side of base 40 mm and axis 80 mm long, is resting on its base on HP such that, a rectangular face of it is parallel to VP. Draw the development of the prism. **12M**

UNIT-V

- 9** Draw the isometric view of a cone of base diameter 50mm and axis 60 mm. The cone has its base on (a)HP (b)VP. **12M**

OR

- 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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