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

B.Tech I Year II Semester Supplementary Examinations July-2021

ENGINEERING GRAPHICS & DESIGN

(Common to ECE, CSE, CSIT)

Time: 3 hours

Max. Marks: 60

(Answer all the Questions 5 x 12 = 60 Marks)

UNIT-I

- 1 Draw an ellipse having major axis is equal to 100 mm and the minor axis is equal to 70 mm. Use the concentric circle method **12M**

OR

- 2 The vertex of a hyperbola is 60 mm from its focus. Draw the curve, if the eccentricity is $3/2$. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix. **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. Draw the projections of the points. Draw lines joining their FVs and TVs. **12M**

OR

- 4 Draw the projections of a straight line AB of 70 mm long, in the following positions: **12M**
a) Inclined at 30 degree to VP, in HP and one end on VP
b) Inclined at 45 degree to HP, one end 20 mm above HP and parallel to and 30 mm in front of VP
c) Inclined at 60 degree to VP, one end 20 mm in front of VP and parallel to and 25 mm above HP

UNIT-III

- 5 A regular hexagonal plane of 45 mm side has a corner on HP, and its surface is inclined at 45° to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 30° with VP. **12M**

OR

- 6 Draw the projections of a cone, base 30 mm diameter and axis 50 mm long, resting on HP on a point of its base circle with (a) the axis making an angle of 45° with HP and its top view making an angle of 30° with 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. A section plane, inclined at 60 degree to HP, cuts it and perpendiculars to VP at bisect the axis. Draw the projections and obtain the true shape of the section. **12M**

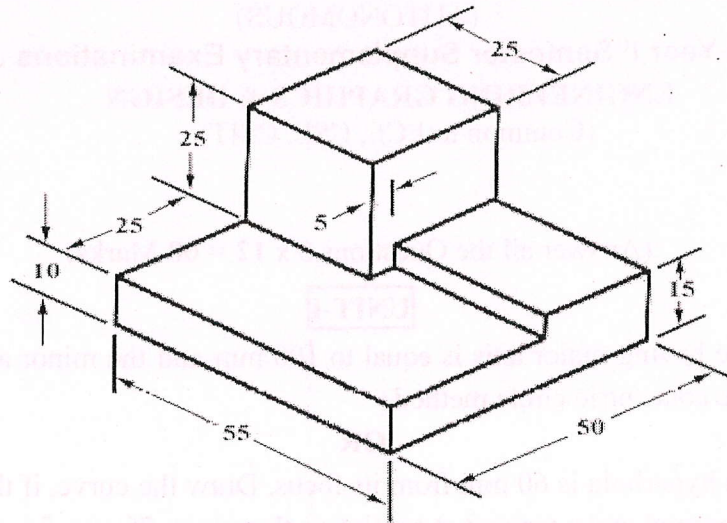
OR

- 8 A cylinder of diameter of base 40 mm and axis 55 mm long, is resting on its base on HP. It is cut by a section plane, perpendicular to VP and inclined at 45 degree to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder. **12M**

UNIT-V

- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection

12M



OR

- 10 Draw the isometric projection of the frustum of a hexagonal pyramid of base side 40 mm ,top side 25mm,and height 70mm. The frustum rests on the HP.

12M

END