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

B.Tech I Year II Semester Regular & Supplementary Examinations October-2022

ENGINEERING GRAPHICS

(Common to CE, CSE, CSIT & CCC)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Construct an ellipse having major axis is equal to 100 mm and the minor axis is equal to 70 mm. Use the concentric circle method. **L3 6M**
- b Construct a parabola in a parallelogram of sides 100 x 60 with an included angle of 75°. **L3 6M**

OR

- 2 a Draw a parabola having a distance of 50 mm between the focus and directrix and identify normal and tangent to the parabola at a point 35 mm from the focus **L3 6M**
- b Construct a parabola with base 120 and length of the axis 60 by using Rectangle method. **L3 6M**

UNIT-II

- 3 Draw the projections of the following points, keeping the distance between the projectors as 25mm on the same reference lines. **L3 12M**
- A – 20mm above HP and 30mm in front of VP
B – 20mm above HP and 30mm behind VP
C – 20mm below HP and 30mm behind VP
D – 20mm below HP and 30mm in front of VP
E – On HP and 30mm in front of VP
F – On VP and 20mm above HP
G – Lying on both HP and VP

OR

- 4 End P of a line PQ 70mm long is 15mm above HP and 20mm in front of VP . Q is 40mm above HP. The top view of the line is inclined at 45° to VP. Draw the projections of the line and find its true inclinations with VP and HP. **L3 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°. **L3 12M**

OR

- 6 A pentagonal prism of base side 30 mm and axis 60mm is resting on one of its rectangular faces on HP, with the axis parallel to VP. Draw its projections. **L3 12M**

UNIT-IV

- 7 A cube of side 40 mm is resting on HP on one of its faces, with a vertical face inclined at 30° to VP. It is cut by a section plane inclined at 45° to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and also show the true shape of the section. **L3 12M**

OR

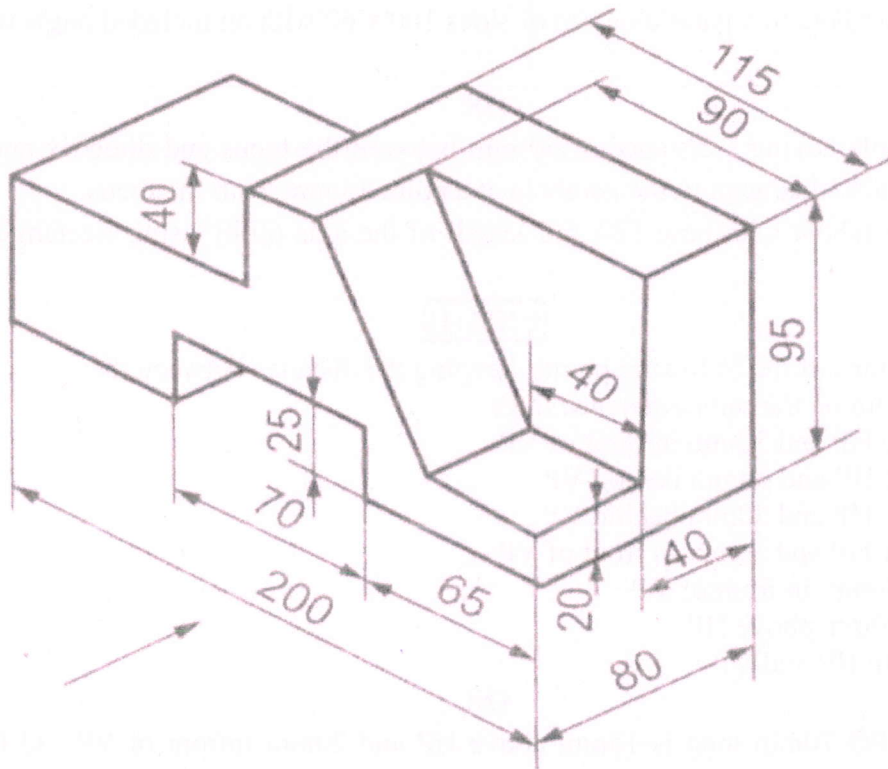
- 8 A square pyramid, with side of base 30 mm and axis 50 mm long, is resting on its base on HP with an edge of the base parallel to VP. It is cut by a section plane, perpendicular to VP and inclined at 45° to HP. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid. **L3 12M**

UNIT-V

- 9 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. **L3 12M**

OR

- 10 Draw three views of the blocks shown pictorially in figure according to first angle projection (All Dimensions are in mm). **L3 12M**



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