

Code No: **R201111**

R20

SET - 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM

I B. Tech I Semester Supplementary Examinations June 2025

ENGINEERING DRAWING AND DESIGN

(Only for EEE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions. **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Construct an hexagon and pentagon by using general method of side 40mm. [7M]
b) Sketch a cycloid when a circle of radius 20 mm is rolling inside a circle of radius 60 mm. [7M]

(OR)

2. Show the length of the minor axes and construct an ellipse, when the major axis AB of an ellipse is 140 mm long with P as its mid-point. The foci F_1 and F_2 of the ellipse are 48 mm away from the mid-point P. [14M]

UNIT-II

3. a) Sketch projections of the below points: [7M]
 - i. A point P lies in HP and 20 mm in front of VP.
 - ii. A point Q lies in HP and 20 mm behind VP.
 - iii. A point R lies in VP and 30 mm above HP.
 - iv. A point S lies in VP and 30 mm below HP.b) The top view of a 75mm long line AB measures 65mm, while its front view measures 50mm. It's one end A is in H.P and 12mm in front of V.P. Draw the projections of AB and determine its inclination with H.P and V.P. [7M]

(OR)

4. Find the true length and all inclinations when Front view and top views of line PQ measures 55 mm and 45 mm respectively and front view inclined at 52° to XY and end P is 30 mm above HP and 20 mm in front of VP. [14M]

UNIT-III

5. Construct the projections of a hexagonal plane of side 25 mm, resting on HP with a side which is inclined at 30° to VP and surface is inclined at 45° to HP. [14M]

(OR)

6. A thin circular plate of 70 mm diameter is resting on its circumference such that its plane is inclined 60° to the HP and 30° to the VP. Draw the projections of the plane. [14M]

UNIT-IV

7. Construct the projection of a square pyramid of base side 25 mm and height 60 mm when resting on HP on a base side which is perpendicular to VP and axis inclined at 45° to HP. [14M]

(OR)

8. Construct projections of a pentagonal prism of base side 25 mm and height 70 mm when the prism is resting on VP on a base side and axis parallel to HP and inclined to VP at 30° . [14M]

UNIT-V

9. Develop the isometric view of the object whose orthographic projections are given in figure.1 below. All dimensions are in mm. [14M]

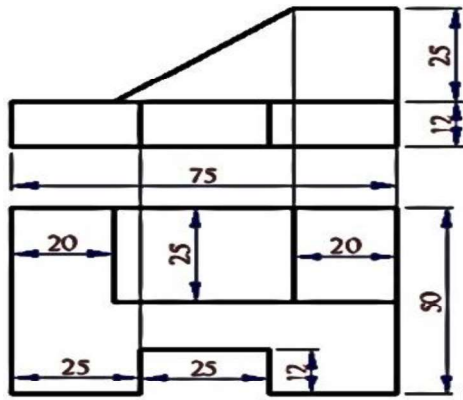


Figure:1
(OR)

10. Draw the front view, top view and side view of the figure.2 [14M]

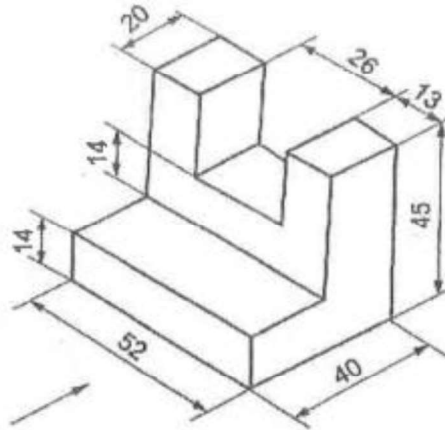


Figure:2
