

Code No: **R231107**

R23

SET - 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM

I B. Tech I Semester Supplementary Examinations June 2025

ENGINEERING GRAPHICS

(Common to EEE, ECE, MECH, CE & AME)

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 a diagonal scale to read kilometers, hectameters and decameters and long enough to measure up to 6 kilometers, when a line of length 1cm on the map represents a distance of 0.5 kilometers. Calculate the R.F and indicate a distance of 2.45 kilometers on the scale. [9M]
b. Draw a regular heptagon having 40 mm long side. [5M]
(OR)
2. Construct an ellipse when the distance of the focus from the directrix is equal to 50 mm and eccentricity is $\frac{2}{3}$. [14M]

UNIT-II

3. A line CD, 80 mm long, is inclined at 30° to the HP and at 45° to the VP. It's one end C 20 mm above the HP and 30 mm in front of the VP. Draw the projections of CD. [14M]
(OR)
4. A thin rectangular plate of sides 60 mm x 30 mm has its shorter side in the V.P. and inclined at 30° to the H.P. Project its top view if its front view is a square of 30 mm long sides. [14M]

UNIT-III

5. A pentagonal prism, side of base 25 mm and axis 50 mm long, rests with one of its edges on HP such that the base containing that edge makes an angle of 30° to HP and its axis is parallel to VP. Draw its projections. [14M]
(OR)
6. A hexagonal pyramid side of base 25 mm, axis 50 mm long lies with one of its triangular faces on the HP and its axis is parallel to the VP. Draw its projections. [14M]

UNIT-IV

7. A cone of base diameter 50 mm and axis 60 mm is resting on its base on the H.P. Draw the development of its lateral surface? [14M]
(OR)

8. A pentagonal pyramid, side of base 30 mm and axis 60 mm long, rests with its base on HP and an edge of its base is parallel to VP. A Section Plane perpendicular to VP and inclined at 45° to HP passes through the axis at a point 35 mm above the base. Draw the sectional top view. [14M]

UNIT-V

9. Develop the orthographic views from the given Figure:1 [14M]

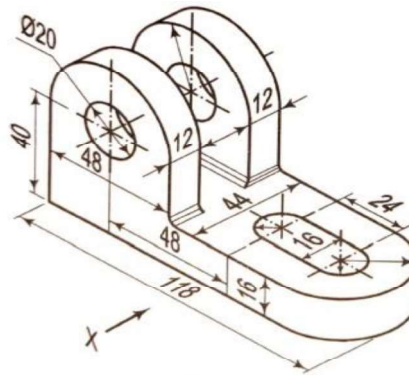


Figure:1

(OR)

10. Draw the isometric view from the given orthographic view as shown in Figure.2 [14M]

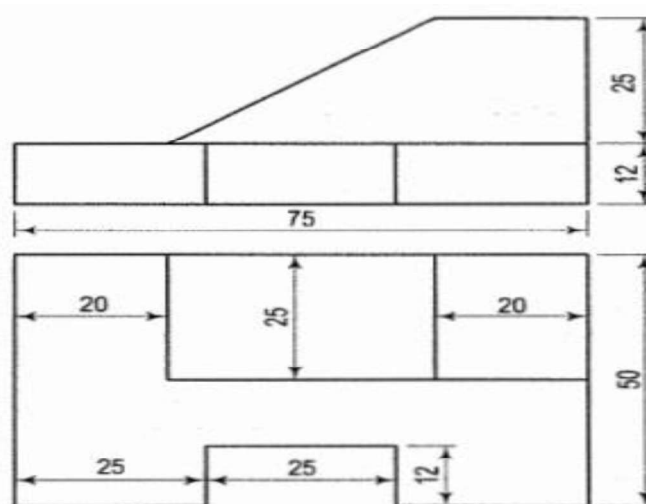


Figure: 2
