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Code No: 131AF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year I Semester Examinations, December - 2017
ENGINEERING GRAPHICS
(Common to CE, AE, MIE, PTM, CEE)

Time: 3 hours Max Marks: 75

Answer all five questions
All questions carry equal marks

1.a) Draw a regular hexagon of 40 mm side using General method.
b) The distance between two points on a map is 15 cm. The real distance between them is 20 km. Draw a diagonal scale to measure up to 25km and show a distance of 18.6 km on it [5+10]

OR

2. Construct a hypocycloid taking the diameter of the generating circle and radius of directing circle as 60 mm. [15]

3.a) A point is 30 mm from the H.P. and 50 mm from the V.P. Draw its projections keeping it in all possible positions.
b) A 70 mm long line PQ has its end P is 20 mm above the HP and 40 mm in front of the VP. The other end Q is 60 mm above the HP and 10 mm in front of the VP. Draw the projections of PQ and determine its inclinations with the reference planes. [5+10]

OR

4. A thin circular plate of diameter 60 mm appears in the front view as an ellipse of major and minor axes 60 mm and 40 mm respectively. Draw its projections when one of the diameters is parallel to both the reference planes. [15]

5. A cylinder of base diameter 50 mm and axis 65 mm rests on a point of its base circle on the HP. Draw its projections when the axis is inclined at 30^0 to the HP and top view of the axis is perpendicular to the VP. [15]

OR

6. A cone of base diameter 40 mm and axis 60 mm has one of its generators in the VP and inclined at 30^0 to the HP. Draw its projections when the apex is 15 mm above the HP. [15]

7. A pentagonal prism of base side 30 mm and axis 60 mm lies on one of its rectangular faces on the HP with its axis inclined at 45^0 to the VP. A vertical section plane parallel to the VP cuts the prism at a distance of 20 mm from one of the end faces. Draw its sectional front view and top view. [15]

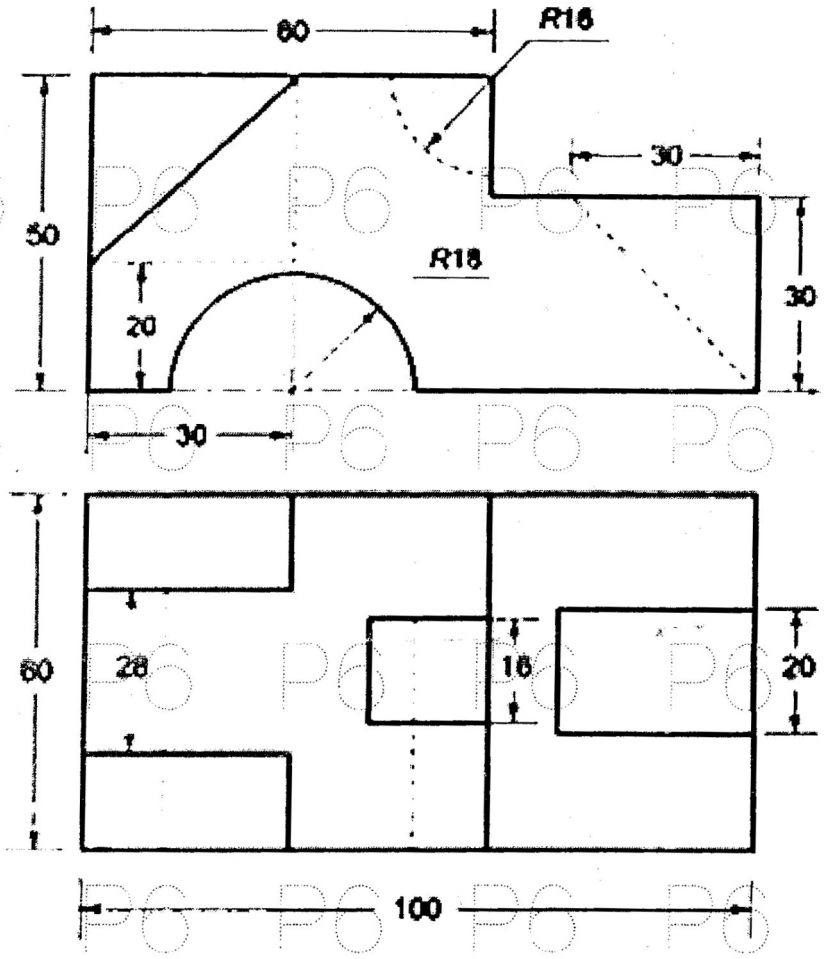
OR

8. A cone of base diameter 50 mm and axis 60 mm is resting on its base on the HP. Draw the development of its lateral surface when it is cut by an auxiliary inclined plane inclined at 60^0 to the HP and bisecting the axis. [15]

9. A hexagonal pyramid of base side 30 mm and axis 60 mm long has an edge of its base on the HP. Its axis is inclined at 30^0 to the ground and parallel to the VP. Draw the isometric view of the pyramid in the stated section. [15]

OR

10. The front and top views of an object are shown in figure. Draw its isometric view. All the dimensions are in mm only. [15]



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