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Question Paper Code: 41108

B.E./B.Tech. DEGREE EXAMINATION, DECEMBER 2014.

First Semester

Mechanical Engineering

14UME107 – ENGINEERING GRAPHICS

(Common to CIVIL, EIE, ICE and IT branches)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

(5 x 20 = 100 Marks)

1. (a) A line NS, 80 mm long has its end N, 10 mm above the HP and 15 mm in front of VP. The other end S is 65 mm above the HP and 50 mm in front of VP. Draw the projections of the line and find its true Inclination with HP and VP. (20)

Or

- (b) A circular plate of diameter 70 mm has the end P of the diameter PQ in the HP and the plate is inclined at 40° to HP. Draw its projections when the diameter PQ appears to be inclined at 45° to VP in the top view. (20)

2. (a) A square prism of base side 35mm and axis length 60mm lies on the HP on one of its longer edges with its faces equally inclined to the HP. Draw its projections when its axis is inclined at 30° to the VP. (20)

Or

- (b) Draw the projections of a cube of side 50mm when it rests on the ground on one of its corners and a face containing that corner is inclined to the ground at 45° to HP and perpendicular to V.P. (20)

3. (a) A hexagonal pyramid of base side 25mm and axis 55 mm rests on its base on the HP with two base edges perpendicular to VP. It is cut by a plane perpendicular to VP and inclined at 30° to HP, meeting the axis at 20mm from the vertex. Draw its front view, sectional top view and true shape of the section. (20)

Or

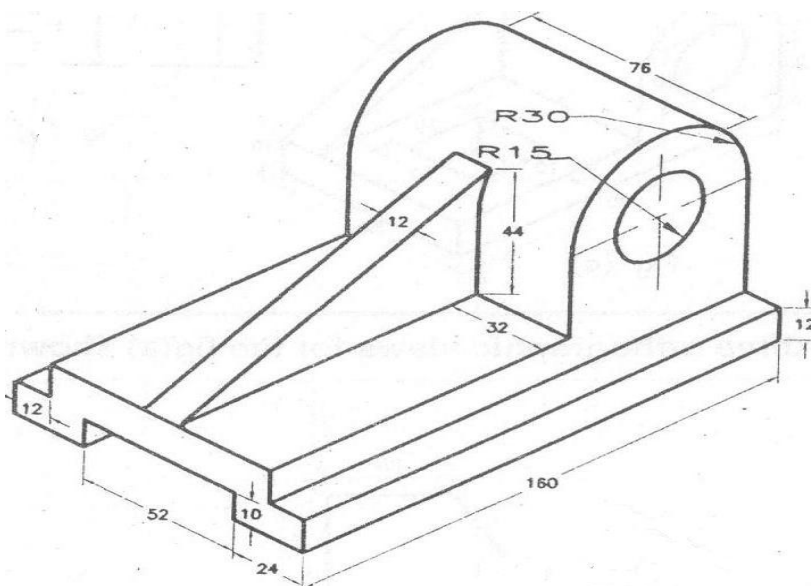
- (b) A circular hole of diameter 30mm is drilled through a vertical cylinder of diameter 50mm and height 65mm. The axis of the hole is perpendicular to the VP and meets the axis of the cylinder at right angles at a height of 30mm above the base. Draw the development of the lateral surface of the cylinder. (20)

4. (a) A cone of 50 mm diameter and height 70 mm stands on HP with its base. It is cut by a cutting plane perpendicular to VP and inclined at 30° to HP, cutting the axis of the cone at a height of 40 mm from the base. Draw the isometric view of the remaining part of the cone. (20)

Or

- (b) Draw the isometric view of a pentagonal pyramid, side of base 40 mm and height 80mm which rests base centrally on a cylinder of diameter 120 mm and height 40 mm. (20)

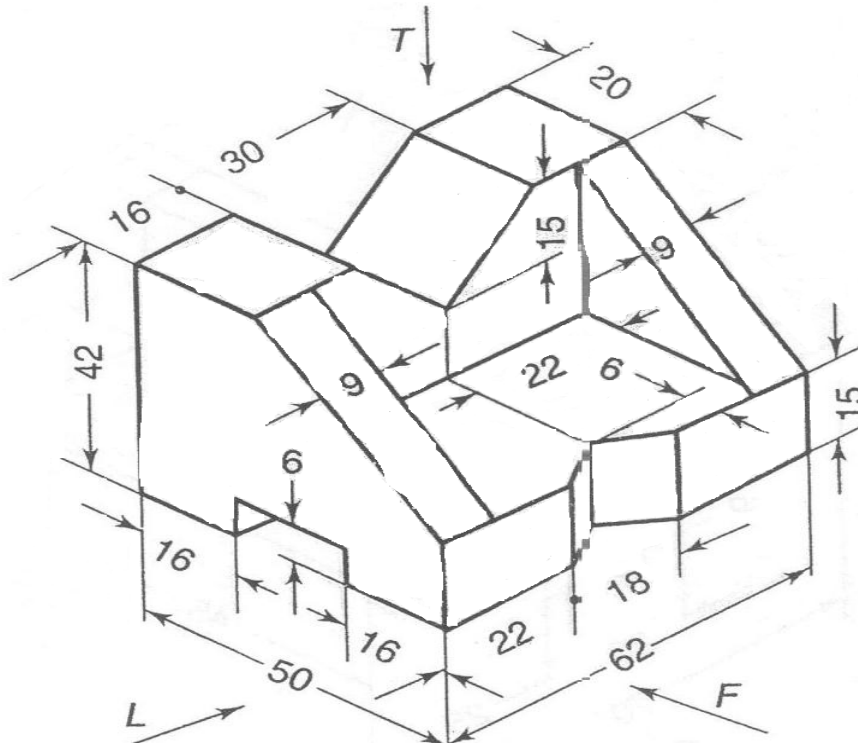
5. (a) Draw the possible orthographic views for the given isometric drawing shown in figure below. All the dimensions are in mm.



(20)

Or

- (b) Draw the front, left side and top view for the given isometric drawing shown in figure below. All the dimensions are in mm.



(20)