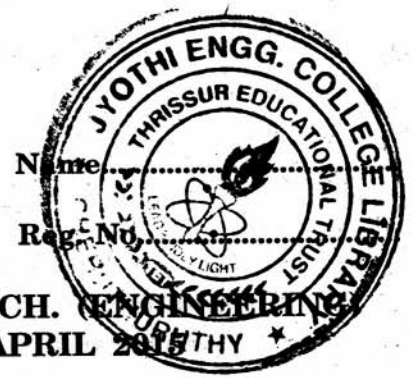


C 80667

(Pages : 2)



**COMBINED FIRST AND SECOND SEMESTER B.TECH. ENGINEERING
[14 SCHEME] DEGREE EXAMINATION, APRIL 2015**

EN 14 108 A—ENGINEERING GRAPHICS (A)

Time : Three Hours

Maximum : 100 Marks

*Answer three questions from Part A and any two questions from Part B.
All questions carry equal marks.*

Part A

1. (a) One end of a line is 15 mm below HP and the other end is 30 mm above it. The length of its top view is 60 mm and makes an angle of 30° with ref. line. Show the projections of the line, find its true length and inclinations to the co-ordinate planes if its HT is 20 mm in front of VP.

Or

- (b) A hexagonal lamina of 30 mm. side stands with one of its edges parallel to and 16 mm. in front of VP such that the surface is 40° inclined to VP. If the edge parallel to VP is inclined at 50° to HP. Draw the projections of the lamina.
2. (a) A square pyramid side of base 30 mm. and the height 60 mm. is resting on HP on its vertex in such a way that one of its slant edges is vertical and the triangular face containing that slant edge is perpendicular to the VP. Draw the projections of the solid.

Or

- (b) A tetrahedron of 70 mm. long edges is resting on one face on the ground. It is cut by a plane perpendicular to VP so that the true shape of the section is isosceles triangle of base 30 mm. and altitude 40 mm. Draw sectional top view of the solid and true shape of section. What is the angle made by the cutting plane with HP.
3. (a) A frustum of a cone 60 mm top diameter 120 mm. bottom diameter and 75 mm. high is cut with a triangular hole of base 75 mm. and altitude 40 mm. The base of the hole is 15 mm. above the base of the cone and parallel to it. Draw the development of the frustum showing the shape of the hole in it.

Or

- (b) A hemisphere of 50 mm. diameter rest centrally with its flat surface facing upwards over a frustum of a cone of 70 mm. base diameter, 50 mm. top diameter and 40 mm. height. Draw the isometric view of the combination.

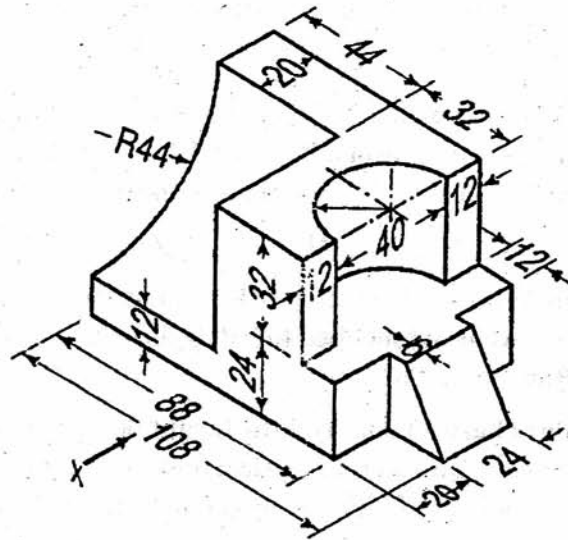
(3 × 20 = 60 marks)

Turn over

Part B

Answer any two questions.

4. (a) Draw the perspective view of a hexagonal pyramid of base 30 mm. and height 70 mm. The nearest edge of the base is inclined 30° to picture plane and 10 mm behind it. The station point is at a distance of 120 mm. from the PP, 50 mm. above and 80 mm. to the right of the apex of the solid.
- (b) Draw neat dimensioned sketch of Rag foundation bolt having a diameter of 30 mm.
- (c) Draw the dimensioned orthographic views (all three) of the object shown in Figure below.



[2 × 20 = 40 marks]