GRA24

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NEW SCHEME

Second Semester B.E. Degree Examination, July 2006
Common to all Branches
Engineering Graphics

Time: 4 hrs.] [Max. Marks:100

Note: 1. ***Answer any FIVE full questions.***

1 a. The front and right views of a point is 35 mm above XY line and are at distances of 30 mm and 25 mm left from the X_1Y_1 line respectively. Draw the top, front and views of the point. How far the point is in front of VP? **(05 Marks)**

b. The differences between the distances of the top views of a point lying above the XY line is 20 mm. The top view itself is 45 mm above the XY line. Draw the top and front views of the point and state the quadrant in which the point lies. **(05 Marks)**

c. The mid point of a line AB is 25 mm above HP and 30 mm in front of VP. The line measures 75 mm and is inclined at 30° to HP and 45° to VP. Draw its projections. **(10 Marks)**

2 a. A point lying in the first quadrant is equidistant from all the three planes of projections. Both its front and top views are 40 mm from the line of inter section of HP and VP. Draw the projection of the point on all the three planes of projection. **(05 Marks)**

b. Draw the projections of a point lying 40 mm above HP and in the first quadrant when its shortest distances from the line of intersection of HP and VP is 50 mm. Find the distance of the point from VP. **(05 Marks)**

c. The top view ab of a straight line AB is 60 mm long and makes an angle of 30° with the XY line. The end A is in VP and 30 mm above HP. The end B is 65 mm above HP. Draw the projections of the line AB and determine i) length of the front view ii) its true length and true inclinations with the reference planes. **(10 Marks)**

3 A hexagonal lamina of side 30 mm is resting on HP with one of its corner in VP. The diagonal passing through the corner in VP, maker 30° to VP and 45° to HP. The closest corner is 25 mm in front of RPP. Draw front, top and profile view. **(20 Marks)**

4 A pentagonal prism of 25 mm side of base and 60 mm long lies on HP with one of its rectangular faces in VP such that the axis is inclined at 45° to HP. Draw its top view, front view and right profile view. The top pentagonal face is nearer to the observer in the profile view. **(20 Marks)**

5 The right hexagonal pyramid, base 30 mm and height 60 mm is so placed that one of its triangular faces is perpendicular to both HP and VP. Draw the top, front and right views when its base is visible in the profile view. **(20 Marks)**

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6 Draw the development of the joint shown in figure Q6. **(20 Marks)**

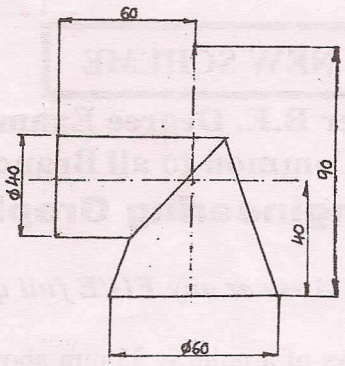

Fig. Q6

7 Draw the isometric projection of a combination of solids formed by a frustum of cone and coaxial frustum of pentagonal pyramid. The lower frustum of cone is of 80 mm base diameter, 60 mm top diameter and height 25 mm. The upper frustum of pyramid is of 30 mm side of base, 20 mm side of top face and height 40 mm. **(20 Marks)**

8 Draw the isometric projection of the object shown in figure Q8. **(20 Marks)**

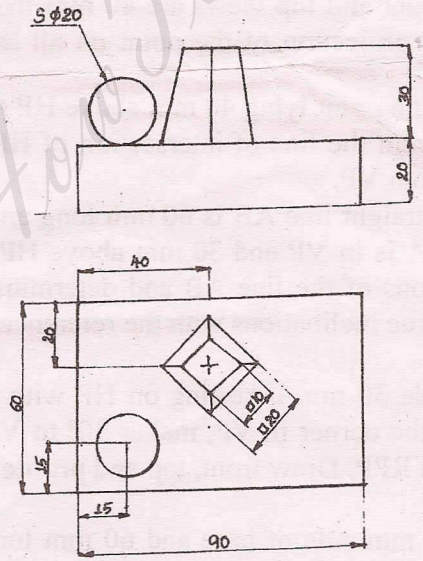

Fig. Q8