NEW SCHEME

GRA24

USN | | | | | | | | | | |

Second Semester B.E Degree Examination, February/March 2005

Common to all Branches

Engineering Graphics

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

Note: *1. Answer any FIVE full questions*
2. All questions carry equal marks.
3. Use first angle projection method and BIS conventions.
4. Retain all construction lines.

1. (a) i) A point is 30 mm in front of VP. 20 mm above HP and 25mm in front of right PP. Draw its projections. **(3 Marks)**

ii) A point P is 40 mm above HP, 60mm behind VP and 50mm in front of right PP. Draw the projections of point P. **(2 Marks)**

(b) Draw the projections of a straight line PQ 100mm long, inclined at 45^0 to HP and 30^0 to VP. The end P is in HP and the end Q is in VP. **(15 Marks)**

2. (a) i) A point lying 20 mm above the XY line represents the front views of two points E and F. The top view of E is 35mm above XY and the top view of F is 40 mm below XY. Draw the projections of the two points. **(3 Marks)**

ii) A point touches all the three principal planes of projections. Draw its projections. **(2 Marks)**

(b) The point B of the line AB is on HP and the top view ab of the line makes an angle of 30^0 with the line of intersection of VP & HP, ab being 80mm. The point A lies on the VP and 50mm above HP. Draw the top and front views of the line and obtain the truse length. **(15 Marks)**

3. A hexagonal lamina of 30 mm sides rests on HP with one of its corners touching VP and its surface is inclined at 45^0 to VP. One of the edges is inclined to HP at 30^0, Draw the projections. **(20 Marks)**

4. Draw the top, front and left views of a hexagonal pyramid of sides of base 30mm and height 60mm resting on one of its triangular faces on HP and axis parallel to VP. The apex of the pyramid lies on the left side. **(20 Marks)**

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5. Draw the top, front and left views of a pentagonal prism of sides of base and height 55mm resting on an edge of base on HP such that the inclined at 30^0 to HP and parallel to VP. (2

6. Draw the development of the truncated portion of the lateral faces of tagonal prism 20mm side of base and 50mm high staanding verticall one of its rectangular faces parallel to VP and nearer to it so as to proc one-piece development. The inclined face of the truncated prism is 30^0 axis and passes through the right extreme corners of the top face of the p (20

7. A cylinder of 20mm diameter and height 25mm is placed vertically a centre of the rectangular face of a hexagonal prism of 25mm sides anc 60mm. Draw the isometric projection of the combination of solids. (20

8. A sphere of diameter 40*mm* rests centrally on the top smaller end of a frus of a hexagonal pyramid. The frustrum of the pyramid has 25mm sides a top, 40 mm sides at the base and is 80mm high. Draw the isometric proje of the combination of the solids. (20

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