2006 CALICUT UNIVERSITY

I / II SEMESTER B.TECH ENGINEERING DEGREE EXAMINATIONS

ENGINEERING GRAPHICS

(INFORMATION TECHNOLOGY,COMPUTER SCIENCE ENGINEERING)

JUNE 2006

TIME::3 HOUR
MARK:100

ANSWER ALL QUESTIONS

MARKS [20*5=100]

I. (a) A line RS of length 120 mm has its end R. 50 mm in front of VP. The HT of the line is 40 mm in front of VP and the VT is 48 mm above the HP. If the distance HT and VT is 100 mm, draw the projections of the line.

Or

(b) Draw the projections of a line MN of true length 80 mm, situated in the first quadrant. The end M is in the HP and 30 mm. in front of VP. The line is inclined at 300 to HP and 450 to VP.

II. (a) A regular hexagonal lamina of 30 mm. side rests on one of its edges upon HP. Its plane is inclined at 450 to HP and the edge on which it rests is inclined at 300 to VP. Draw its projections using auxiliary plane method.

Or

(b) A tetrahedron of 40 mm side rests with one of its edges on HP and inclined at 450 to VP. The triangular face containing that edge is inclined at 350 to HP. Draw the top and front views of the solid.

III. (a) A cone of base diameter 40 mm and altitude 70 mm rests on its base on the HP. It is cut by a plane perpendicular to the VP and parallel to one of the extreme generators, 15 mm away from it. Draw the sectional plan and the true shape of the section.

Or

(b) A funnel tapers from a circular opening of diameter 70 mm to a circular opening of diameter 20 mm over an axial length of 50 mm and extends axially a further 40 mm. There is a cylindrical portion of height 15 mm above the tapering portion. Develop the funnel.

IV. (a) A cone of base diameter 60 mm and height 70 mm is resting on its base on HP. It is cut by a plane perpendicular to the VP and inclined at 300 to the HP. The plane meets the axis at a distance of 25 mm from the apex. Draw the isometric view of the truncated cone.

Or

(b) Steps provided for a building consists of three treads of 250 mm each and three rises of 150 mm each. The length of the step is 1.2 m. The steps are parallel to the picture plane. The nearest face of the steps is 500 mm behind the PP. The station point is 2 m in front of the PP and 900 mm above the ground. The station point lies in a central plane 1250 mm to the right of the right extreme face of the steps. Draw the perspective view of the steps.

V. (a) The bolt of total length 50 mm has a hexagonal head of side 20 mm and length 35 mm. The bolt is resting on HP with an edge of the head perpendicular to the VP. Draw its projection when the axis of the bolt is inclined at 450 to the HP.

Or

(b) Three spheres each of diameter 40 mm rest on the HP touching each other. The line of centres of two of them is inclined at 300 to the VP. Another sphere of diameter 50 mm is kept over the three sphere in a pyramidal form touching the bottom spheres. Draw the isometric projection of the sphere assembly.

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