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10CED14 / 24

First / Second Semester B.E. Degree Examination, May / June 2012

COMPUTER AIDED ENGINEERING DRAWING

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 1. Answer three full questions
2. Use A4 sheets supplied
3. Draw to actual scale
4. Missing data, if any, may be suitably assumed

13 **Q1.a) i.** A point M is on HP and 30 mm in front of VP. Another point N is 20 mm below HP and 20 mm in front of VP. The distance between their projectors measured parallel to XY line is 50 mm. Find the distance between front views of the points M and N **(10 Marks)**

65 **ii.** Draw the projections of a straight line AB, 100 mm long inclined at 45^0 to HP and 30^0 to VP. The end A is in HP and end B is in VP. Find the distance between the straight line AB and the line of intersection of planes of projection **(20 Marks)**

OR

122 **b)** A Pentagonal lamina of sides 25 mm is resting on one of its edges on HP with the corner opposite to that edge touching VP. The edge is parallel to VP and the corner, which touches VP is at a height of 15mm above HP. Draw the projections of the lamina and determine the inclinations of the lamina with HP and VP and the distance at which the parallel edge lies from VP. **(30 Marks)**

153 **Q2.** A square prism 35mm sides of base and 60 mm axis length rests on HP on one of its corners of base such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the prism when the axis of the prism is inclined to HP at 40^0 and to VP at 30^0. **(40 Marks)**

205 **Q3. a)** A cube of side 40 mm is resting on HP with its base on HP such that one of its vertical faces is inclined at 30^0 to VP. It is cut by a section plane perpendicular to VP inclined to HP at an angle of 45^0 and passes through the midpoint of the axis. Draw the development of the lower lateral surface of the cube. **(30 Marks)**

OR

265 **b)** A hemisphere of diameter 50 mm is centrally resting on top of a square prism of base side 60 mm and height 30 mm such that the curved surface of the hemisphere is touching the top face of the prism. Draw the isometric projections. **(30 Marks)**