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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

- 16 **Q1. a) i.** The point P is 45 mm above HP, 60 mm behind VP and 30 mm from RPP. Draw the three principle views of the point. Also state the quadrant in which it lies. **(10 Marks)**
- 58 **ii.** The top view of a line 75 mm long measures 50 mm. The end P is 30 mm in front of VP and 15 mm above HP. The end Q is 15 mm in front of VP and above HP. Draw the projections of the line and find its true inclinations with HP and VP. **(20 Marks)**
- OR**
- 149 **b)** A circular lamina inclined to VP appears in its front view as an ellipse of major axis 30 mm and minor axis 15 mm. the major axis is parallel to both HP and VP. One end of the minor axis is in both HP and VP. Draw the projections of the lamina and determine the inclination of the lamina with VP. **(30 Marks)**
- 168 **Q2.** A square pyramid 35 mm 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 pyramid when the axis of the pyramid is inclined to HP at 40° to VP at 30° . **(40 Marks)**
- 229 **Q3. a)** A hexagonal pyramid 25 mm sides of base and axis 65 mm long is resting on HP with one of the edges of base parallel to VP. It is cut by a vertical section plane at a distance of 8 mm from the axis towards right side. Develop the lateral surface of the left part of the pyramid. **(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)**