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Second Semester B.E Degree Examination, July/August 2004

Common to all Branches

(Old Scheme)

Engineering Graphics

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

Note: 1. *Use only First Angle Projection.*
2. *All drawings have to be drawn to 1:1 scale except where specified.*
3. *Answer any FOUR questions from 1 to 6 and any TWO questions from questions 7 to 9*
4. *Show all calculations on drawing sheet.*
5. *Retain all construction lines.*
6. *Missing data if any may be suitably assumed.*

1. (a) Print the following words using ISO type A letters of height 18 mm.
INFORMATION TECHNOLOGY. **(4 Marks)**

(b) Represent the following materials as per ISO conventions.
i) Wood ii) Mild Steel iii) Concrete. **(4 Marks)**

(c) An area covered by a triangle of a base 12cm and altitude 24cm represents an area of $36km^2$. Find the RF of the scale and construct a diagonal scale to read km, hectometre and decametre. Mark on it the distances of 1.05km and 8.82km. **(7 Marks)**

2. A line has one end in HP and the other end in VP. It is inclined at 30^0 to HP and 45^0 to VP. Length of the line is 80mm. Draw the two views of the line and measure the distance between the end projectors in the front view. How far the end A is in front of VP? **(15 Marks)**

3. Two poles are fixed on the ground so that they are 12 metres apart. The guy ropes are attached to a point 15 metre above the ground on the top of a building. The points of attachment on the poles are 7.5 metre and 4.5 metre above the ground, the ropes make 45^0 and 30^0 respectively with the ground. Draw the top and front views of the arrangement. Find the true length of the guy ropes. What are the inclinations of the guy ropes with VP? Scale 1:100. **(15 Marks)**

4. ABC is an equilateral triangular plate of 40mm sides. It is lying on its edge BC on HP which is making an angle of 45^0 with VP. The two edges AB and AC measure 30mm in the top view. Determine the slope angle of the plate with HP. Draw the projections of the plate. **(15 Marks)**

5. A thin circular plate of 60mm diameter having a triangular hole of 20mm sides in the middle is resting on its rim on HP in such a way that its surface makes an angle 60^0 with HP and two edges of the triangular hole make equal inclinations with HP and VP. Draw the projections of the plate. **(15 Marks)**

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