**B.E. First-Semester (CE, ME & AE) Examination, 2011**

**Subject: Engineering Drawing I** **Subject Code: DR-101**

**Full Marks: 70** **Time : 3hours**

## FIRST HALF

*(Answer QUESTION NO. 1 AND ANY ONE from QUESTION NO. 2 and 3)*

1. A regular pentagonal pyramid of base side 20 mm and axis length 70 mm is resting on HP on one of its base edges which is inclined at 60° to V.P. The triangular face containing that edge is vertical. Draw its plan and elevation. [18]

2. On a map an area of 6 $cm^2$ represents a similar shaped 3456 $m^2$ area of land. Calculate the R.F. Draw a vernier scale with that R.F. to read up to single metre and long enough to show 300 metres. Also show distances of 246 m and 69 m on the scale. [17]

3. A straight line AB is 80 mm long and its plan and elevation are 70 mm and 60 mm, respectively. The end A is in H.P. and 10 mm in front of VP. Draw its projection and determine the true inclinations of the line with H.P. and V.P. Also mark the H.T. and V.T. of the line. [17]

## 2nd Half

**Answer Question no. 4 and any one from rest**

4. **A cone with 70 mm. diameter base and 90 mm. height, rests on its base on the H.P. It is cut by a section plane which is parallel to one of its generators and intersect the axis at a distance of 20 mm. from the apex. Draw sectional top view, sectional side view and true shape of the section.**

5. **A wheel of diameter 60 cm. rolls on a straight horizontal road. Draw the locus of a point *P* on the periphery of the wheel for one and half revolution of the wheel, if *P* is initially on the road.**

6. **A regular hexagonal plate of 50 mm. side is resting on one of its corners in H.P. The diagonal through that corner is inclined at $45^0$ to H.P. and (a) $30^0$ to V.P. (b) plan of the diagonal makes $30^0$ to V.P. Draw all the views**