BENGAL ENGINEERING AND SCIENCE UNIVERSITY, SHIBPUR

B.E. First-Semester (AE, CE, M.E) Final Examination, 2013

Subject: Engineering Drawing-I (DR-101)

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

(Answer any two questions from each half)

One mark is kept for neatness in each half

FIRST HALF

Q1. Draw a vernier scale of R. F. = 1:25 to read up to 4 m and show on it lengths representing 2.48 m and 0.93 m.

Q2. 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 (1). 30^0 to V. P. (ii) plan of the diagonal makes 30^0 to V. P. Draw the projections.

Q3. A cone, base 50 mm. diameter and axis 65 mm long, rests with its base on H.P. It is cut by a section plane perpendicular to V. P., inclined at 45^0 to H. P. and passing through a point on the axis 35 mm. above the base. Draw the sectional top view and the true shape of section.

Second half

Answer any TWO questions.

4. A wheel having 60 mm diameter rolls on a horizontal road surface without any slippage. For one complete revolution of the wheel, trace the path of a point on its circumference. Draw the tangent and normal to this curve at a point situated at a height of 40 mm above the road.

5. A line *AB* is 100 mm long. Its end *A* is 25 mm below H.P. and 15 mm behind V.P. while the end *B* is in the first quadrant. The line is inclined at an angle of 45° to H.P. and 30° to V.P. Draw the plan, elevation and one side view of the line. Also locate the H.T. and V.T.

6. A solid right hexagonal prism having base edge 20 mm and height 60 mm having one of its base edges on H.P. which makes an angle of 45^{0} with V.P. The rectangular face containing the edge is inclined at an angle of 30^{0} with H.P. Draw the plan, elevation and one side view of the prism. The prism lies on the first quadrant.