Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-I Remedial Examination March / April 2010

Subject code: 110013 Subject Name: Engineering Graphics

Date:10 / 04 / 2010 Time: 12.00 Noon – 03.00 pm

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Lines , dimensions etc. should be as per BIS SP-46.**
5. **Retain all construction line**

Q.1 **Figure No.1** shows the Pictorial view of an object. Draw the following view using first angle projection method (a) Sectional Front elevation at arrow X (b) Top view (c) Side view from left. **14**

Q.2 **(a)** Draw an ellipse if the distance of focus from the directrix is 70mm and the eccentricity is 3 / 4. **07**

(b) The length of the Khandala tunnel on the Mumbai-Pune expressway is 330m. On the road map, it is shown by a 16.5 cm long line. Construct a scale to show metres and to measure up to 400m. show the length of a 289 metre long on the expressway. **07**

OR

(b) A link AB 80mm long rotates about its centre for one revolution. During the same time an insect moves along the link from A to B and reaches at B . Draw the locus of an insect. **07**

Q.3 **(a)** A line CD has its end C is 15mm above H.P. and 10mm in front of V.P. The end D is 60mm above H.P. The distance between the end projectors is 50mm. The line is inclined to H.P. by 25^0 . Draw the projections and find its inclination with V.P. and true length of line CD and draw also traces. **07**

(b) A pentagon plate, side 40mm is resting on H.P. on one of its corners with opposite edge to the corner making 30^0 with V.P. The plate is inclined to H.P. by 45^0 . Draw its projections. **07**

OR

Q.3 **(a)** A line AB, 75 mm long, has its end A 20mm below H.P. and 25mm behind V.P. The end B is 50 mm below H.P. and 65 mm behind V.P. Draw the projections of line AB and find its inclinations with H.P. and V.P. **07**

(b) A pentagon of 40mm side is resting on one of its corners on the VP. The edge opposite to that corner makes an angle of 30^0 to the HP. The surface of the pentagon is inclined at 45^0 to the VP. Draw its projections **07**

Q.4 A pentagonal pyramid of 35mm base edge and 70mm height is resting on the HP with one of its triangular surfaces perpendicular to the HP, and parallel and nearer to VP. Draw its projections. **14**

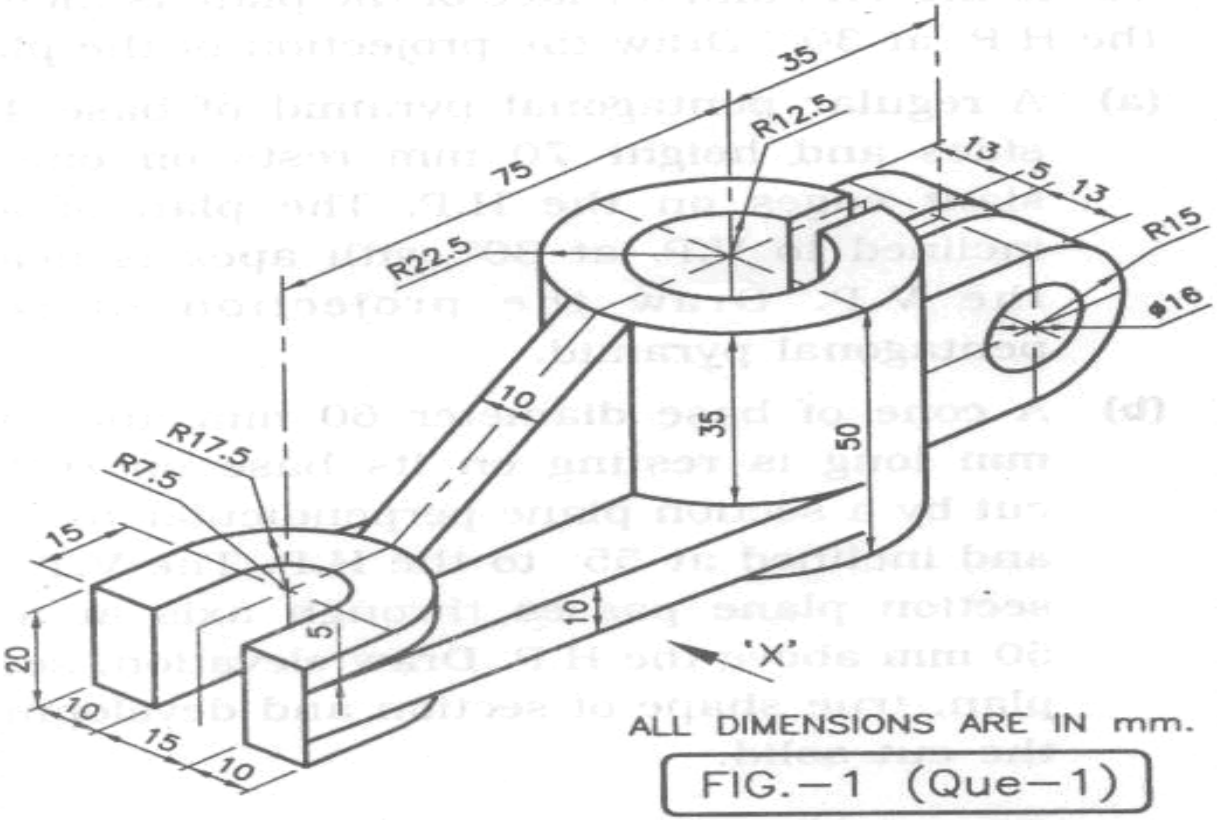
OR

Q.4 A triangular prism, with a base side of 50mm and an axis length of 70mm, is resting on a rectangular face on the HP, the axis being parallel to the VP. An AIP inclined at 45^0 to the HP cuts the prism. The cutting plane intersects the axis at a distance of 30mm from one end of the prism. Draw Front View, Sectional Top view and sectional side view of the prism **14**

Q.5 **Fig. No. 2** shows two views of an object. Draw the Isometric Projection using isometric scale. **14**

OR

Q.5 The development of a cone is a semicircle of 80mm radius having a circular hole of 80mm diameter. Draw the plan and elevation of the cone along with periphery of a circular hole shown on them. **14**



ALL DIMENSIONS ARE IN mm.

FIG.—1 (Que—1)

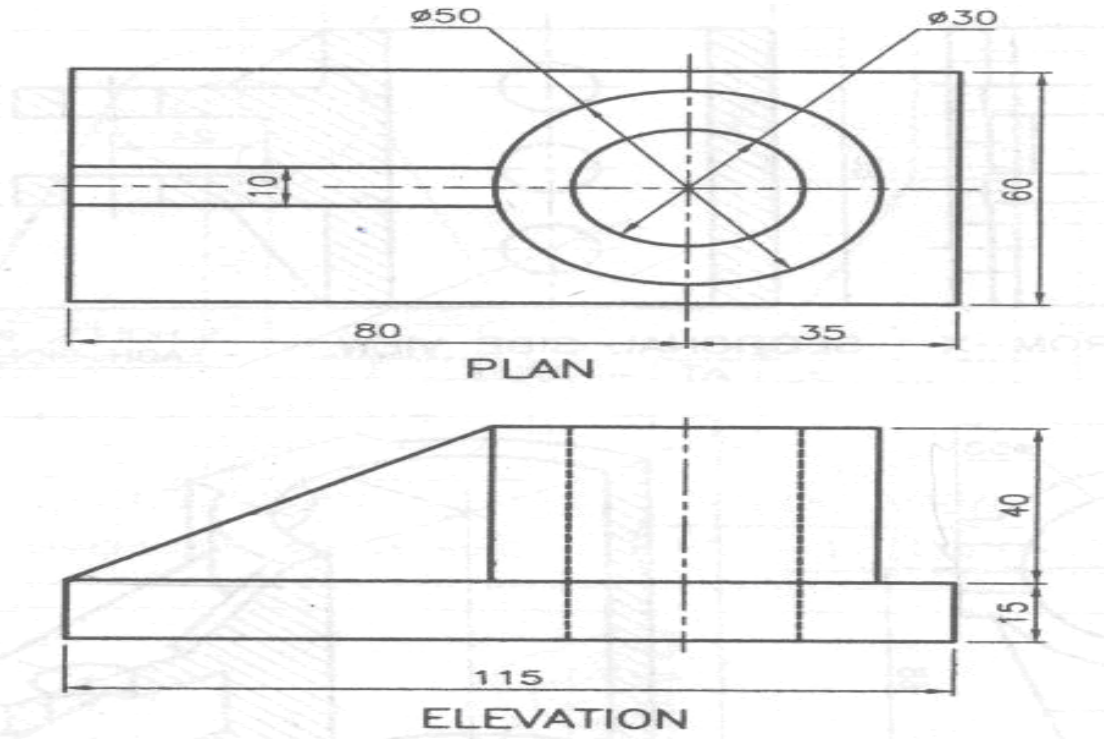


FIG. No-2 (Que-5) (All Dimensions are in mm)