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Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER– 1st / 2nd (OLD SYLLABUS) EXAMINATION –SUMMER 2015

Subject Code: 110013 **Date: 06/06/2015**

Subject Name: Engineering Graphics

Time: 10.30am-01.30pm **Total Marks: 70**

Instructions:

1. **Attempt any five questions.**
2. **Figures to the right indicate full marks.**
3. **All dimensions are in mm.**
4. **Take suitable scale wherever required.**
5. **Don't rube construction lines.**
6. **Figures in the question papers are not to the scale.**

Q.1	**(a)**	Without using protractor draw a regular pentagon of 40mm side.	**05**
	(b)	A customer asked the shopkeeper to give an Aluminum sheet of 1m X 1m. Shopkeeper gave the sheet by measuring with isometric scale. How much percentage less sheet is given by shopkeeper to customer ?	**05**
	(c)	Draw an Isometric scale long enough to measure 12 cm .	**04**
Q.2	**(a)**	A straight line AB is 80mm long and inclined at 45^0 to H.P. its Elevation measures 60mm. End A is 20mm above H.P & 30mm in front of V.P. Draw its projections and find the inclination of line with V.P.	**07**
	(b)	A Pentagonal plate having 30mm side is resting on V.P on one of its corner plate makes 45^0 with V.P. The side opposite to the corner on which it rest makes 30^0 with H.P. Draw its projection.	**07**
Q.3	**(a)**	A Pendulum OA, 110mm long vertically swing about O. It swing 30^0 towards right then it swing 75^0 towards left, then came back to initial position. During the same time point P, 10mm from O moves along the pendulum and reaches at A. Draw the locus of point P.	**07**
	(b)	Draw a rectangle of 110mm X 55mm. Draw a biggest semicircle in it. This figure represents the development of a cylinder. Draw its plan and Elevation.	**07**
Q.4	**(a)**	A tetrahedron of 50mm edge is resting on H.P on one of its edge. Face passing through that edge is perpendicular to H.P and parallels to V.P. Draw its projections.	**07**
	(b)	Draw an Archemedian spiral of 2/3 convolution . When maximum and minimum radii being 60mm and 20mm respectively.	**07**
Q.5	**(a)**	A Elliptical plane of major axis 70mm and minor axis 50mm is resting on H.P on one end point of major axis. Its appears as circle in the top view. Minor axis makes 45^0 with V.P. Draw its projection.	**07**
	(b)	Distance between the end projectors of a line AB is 50mm end is 20mm above H.P and 30mm in front of V.P. End B is 50mm above H.P. Length of the line is 80mm. Draw its projection.	**07**

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Q.6 **(a)** A Fish pond of elliptical shape is to be inscribed inside a rectangular plot of size 100m X 50m. Draw the boundary line of fish pond (use suitable scale) **04**

(b) Using the first angle projection method. Draw the following views for fig. 1

(a) Front view (From direction of Arrow X) **04**

(b) Top view **04**

(c) Right hand side view **02**

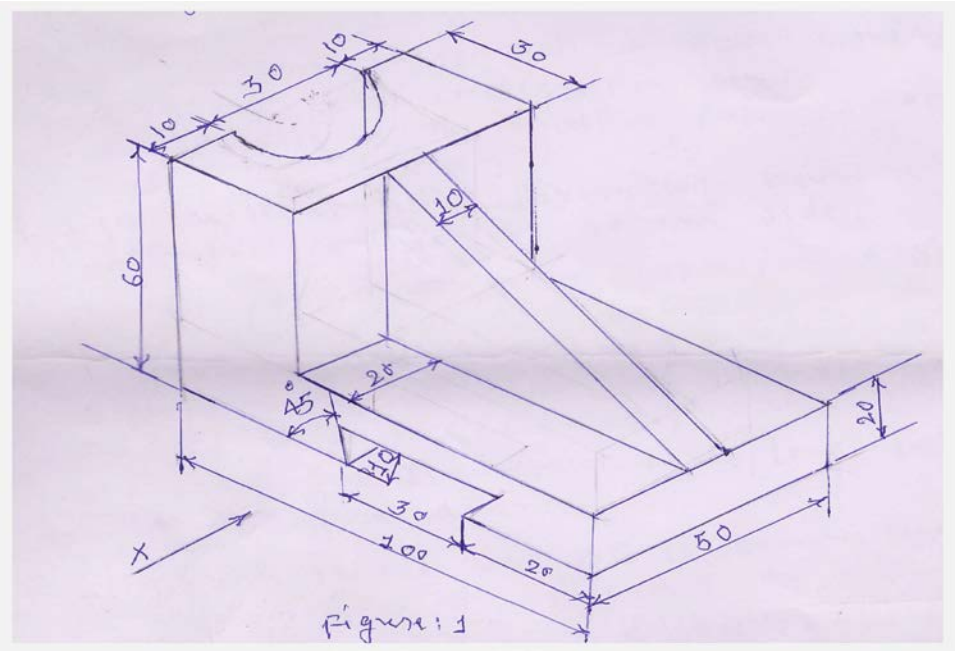

Fig.1

Q.7 **(a)** The distance between two places is 240 km and its equivalent distance on map is 12 cm. Draw plain scale & indicate 270 km and 120 km. **04**

(b) Draw the Isometric view for the fig. 2 **10**

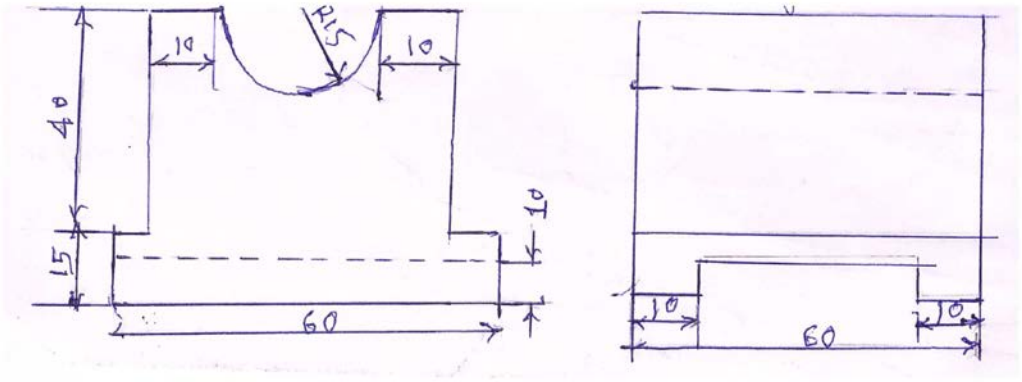

Fig . 2

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