Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER– 1st / 2nd • EXAMINATION – SUMMER 2016

Subject Code: 110013 Date:09/06/2016

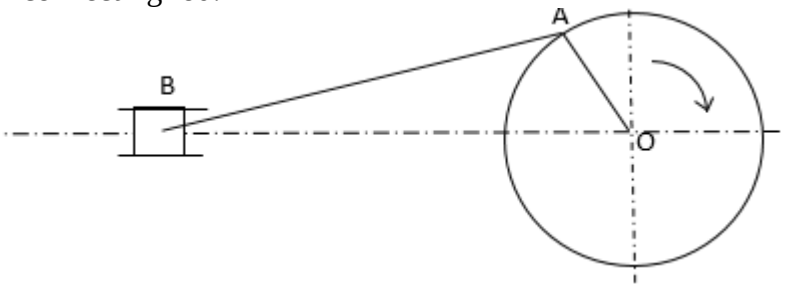
Subject Name: Engineering Graphics

Time: 02:30 PM to 05:30 PM Total Marks: 70

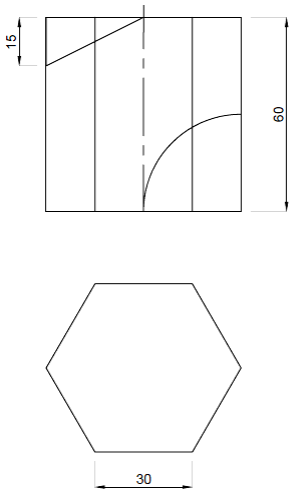
Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Differentiate between first angle and third angle projection system	**4**
	(b)	Draw an isometric scale and show the length of 52 mm on it.	**5**
	(c)	The distance between two places is 300 km. on map it is shown by 15 cm. find the R.F.	**5**
Q.2	**(a)**	Draw a rectangle of 120mm × 60 mm. draw ellipse in it.	**7**
	(b)	A string is unwound from a hexagon of 25 mm side. Draw the locus of end P for unwinding the one turn of string.	**7**
Q.3	**(a)**	Distance between the end projectors of a line AB is 50 mm. end A is 20 mm above HP and 30 mm infront of VP. End B is 50 mm below HP and 50 mm behind VP. Draw its projections and find true length and true inclination of a line with HP & VP.	**7**
	(b)	A pentagonal plate having 30 mm side is resting on HP on one of its side which makes 30° with VP. Plate makes 45° with HP. Draw its inclination.	**7**
Q.4	**(a)**	A square pyramid side of its base 30 mm and height 50 mm is resting on HP on one side of its base. Axis is inclined at 45° to HP. The side on which it rest makes 30° with VP. Draw its projection.	**7**
	(b)	As shown in figure, a slider crank chain has a crank OA 30 cm and connecting rod AB 120 cm. crank rotate in clockwise direction. Draw the locus of midpoint of connecting rod.	**7**



Q.5	**(a)**	A cone diameter off its base 50 mm, height 70 mm is resting on HP on its base. It is cut by an A.I.P bisecting the axis and inclined at 45° to its base. Draw its sectional plan and true shape of the section.	**7**
	(b)	Figure shows a cut prism. Draw the development of lateral surface of a prism.	**7**

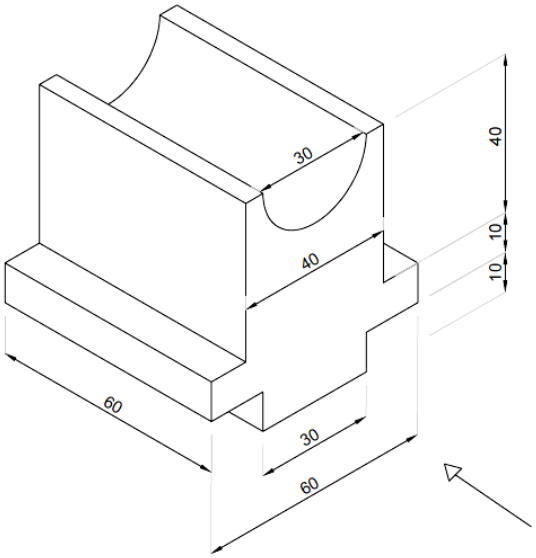


Q.6 Using first angle projection method. Draw the following views for figure. **14**

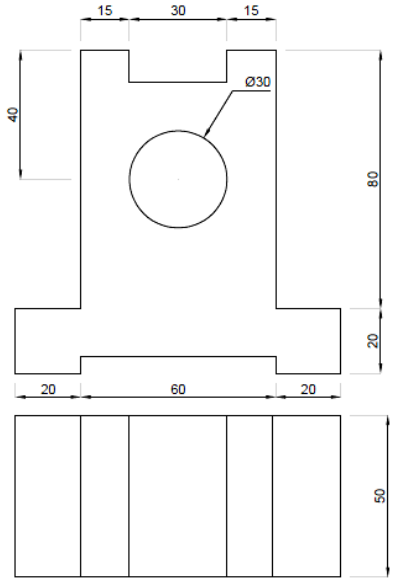
(a) Front view (from direction of arrow)

(b) Top view

(c) Left hand side view



Q.7 The orthographic views of an object using first angle projection method are shown in figure. Draw its isometric view. **14**



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