Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III (New) EXAMINATION – WINTER 2015

Subject Code:2132001 Date:21/12/2015

Subject Name: Industrial Drafting

Time: 2:30pm to 5:30pm Total Marks: 70

Instructions:

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

Q.1		**Short Questions**	**14**
	1	Explain the deviation.	
	2	Define crest.	
	3	Define pitch.	
	4	Define lead.	
	5	What is maximum material condition?	
	6	Explain the unilateral tolerance by giving example.	
	7	Draw the conventional representation of cast iron?	
	8	Draw the conventional representation of porcelain?	
	9	Draw the conventional representation of petrol?	
	10	Draw the conventional representation of splined shaft?	
	11	Draw the conventional representation of straight knurling?	
	12	Draw the conventional representation of worm?	
	13	What is the use of washer?	
	14	What is the use of split pin?	
Q.2	**(a)**	Draw the conventional representation for the internal and external threads.	**03**
	(b)	Draw the conventions for the following: Straightness , Flatness , Perpendicularity and Circularity	**04**
	(c)	A vertical square prism, base 55 mm side is completely penetrated by a horizontal square prism, base 30mm side so that their axes are 8 mm apart. The axis of the horizontal prism is parallel to V.P. while the faces of both prisms are equally inclined to the V.P. Draw the projections of the prisms showing the line of intersection.	**07**
		OR	
	(c)	Explain the full section and half section with suitable examples.	**07**
Q.3	**(a)**	What is a T-bolt and how is it used?	**03**
	(b)	Enlist various types of nut. Explain any one of them with rough sketch.	**04**
	(c)	Draw a neat sketch of gib and cotter joint.	**07**
		OR	
Q.3	**(a)**	Differentiate between machine and production drawing.	**03**
	(b)	Enlist various locking arrangements of nut. Explain any one of them in detail.	**04**
	(c)	A vertical cone, base 70mm diameter, axis 90mm long is penetrated by a horizontal cylinder of 35 mm diameter the axis of which is 30mm above the base of the cone, parallel to the V.P. and 5 mm away from the axis of the cone. Draw the projections, showing curves of intersection.	**07**

Q.4 **(a)** Explain the removed section with example. **03**

(b) Explain the use of rag foundation bolt with rough sketch, **04**

(c) Draw two views of a hexagonal headed bolt, 30 mm diameter and 100 mm long, with a hexagonal nut and a washer. **07**

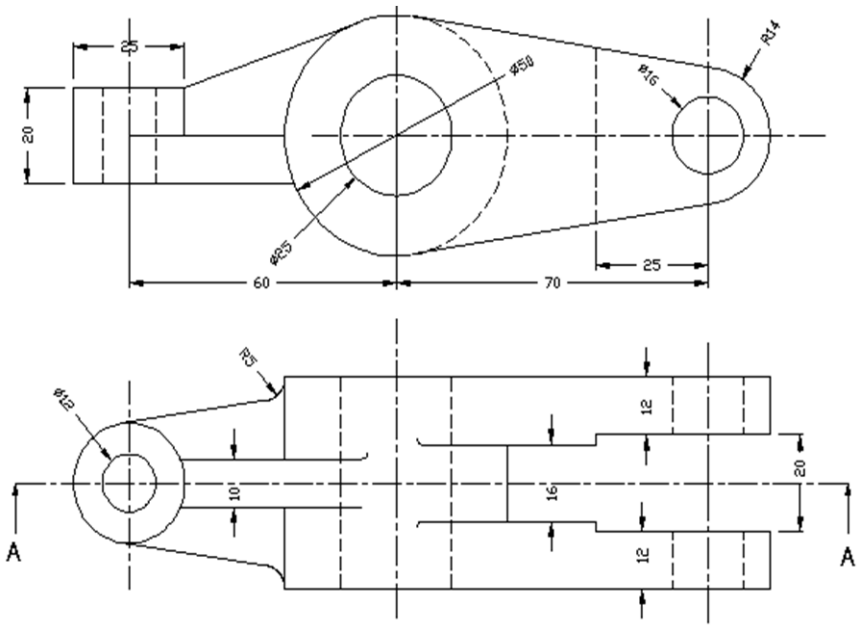
OR

Q.4 **(a)** Differentiate between sunk key and saddle key with rough sketch. **03**

(b) Explain with the aid of sketches, the use of Woodruff key. **04**

(c) Draw according to first angel projection method: **07**

- Sectional front view along A-A
- Side view from the left



Q.5 **(a)** Explain the use of square thread along with its geometry. **03**

(b) Why gib head is provided in key? **04**

(c) Enlist the various commands available in draw tool box of AUTO CAD. Explain any two of them by giving suitable example. **07**

OR

Q.5 **(a)** Explain various types of fits. **03**

(b) Justify the need of dimensional and geometrical tolerances with suitable example. **04**

(c) Explain the various command in the dimension tool box of AUTO CAD. **07**

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