Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III • EXAMINATION – WINTER • 2014

Subject Code: 132001 Date: 30-12-2014

Subject Name: Industrial Drafting

Time: 02.30 pm - 05.30 pm Total Marks: 70

Instructions:

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

Q.1 **(a)** What is the need of Assembly drawing? Classify the assembly drawing. Explain any one of them with rough sketch. **07**

(b) Draw the conventional representation for indicating the oil, steel, concrete, tin, square on the shaft, holes on circular pitch and bevel gear? **07**

Q.2 **(a)** Enlist various methods of preventing rotation of a bolt while screwing a nut on or off it. Explain any two of them with rough sketch. **07**

(b) A square prism, side of base 50 mm and height 90 mm, is resting on H.P. on its base with all rectangular faces equally inclined to V.P. It has a horizontal square hole of 30 mm side with its axis parallel to V.P. and 10mm in front of the axis of the vertical prism. Flat faces of the hole are equally inclined to H.P. Draw the projections and show the lines of intersection. **07**

OR

(b) A vertical cone, base 80 mm diameter , axis 100 mm ling, is penetrated by a horizontal cylinder of 40 mm diameter, the axis of which is 25 mm above the base of the cone, parallel to the VP and 6 mm away from the axis of the cone. Draw the projections, showing lines of intersection. **07**

Q.3 **(a)** Explain flanged nut and wing nut with rough sketch. **07**

(b) What is the need of foundation bolts? Explain eye foundation bolt with neat sketch. **07**

OR

Q.3 **(a)** Explain the castle nut and wile's lock nut with rough sketch. **07**

(b) Explain in context of application with rough sketch : **07**

1. Flat saddle key
2. Taper sunk key
3. Woodruff key

Q.4 **(a)** Explain the gib and cotter joint with neat sketch. **07**

(b) 1. Hexagonal shape is preferred to square one for nuts. Why? **07**

2. Washers are used in bolted joints. Why?

OR

Q.4 **(a)** Explain with examples: **07**

1. Maximum and Minimum Material condition
2. Hole basis and shaft basis system

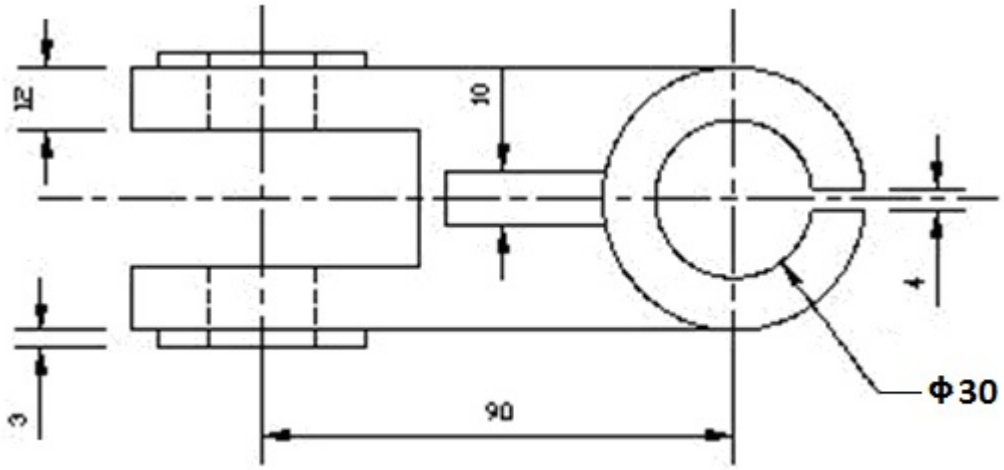
(b) Explain the revolved and removed sections with suitable examples. **07**

Q.5 **(a)** Enlist the various commands available in modify tool box of AUTO CAD. Explain any two of them by giving suitable example. **07**

(b) Draw the symbols of Straightness, flatness, circularity and radial run out. **07**

OR

Q.5 **(a)** Enlist the steps of auto cad to draw the following figure. **07**



(b) Explain various type of fits. **07**

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