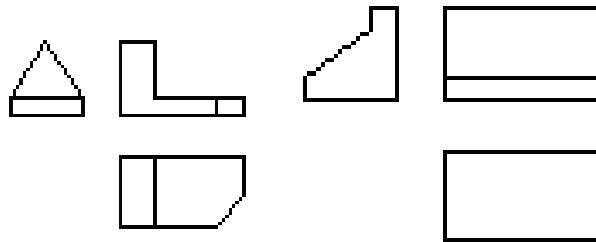


GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER 2013****Subject Code: 132001****Date: 30-11-2013****Subject Name: Industrial Drafting****Time: 02.30 pm - 05.30 pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) Classify the assembly drawing. Explain any two of them. **07**
- (b) Draw missing line or lines, full or dotted, in the orthographic views of the objects shown in Figure below. The answer must be supported by the rough sketch of an isometric view of the objects, without which no credit will be given for the answer. **07**



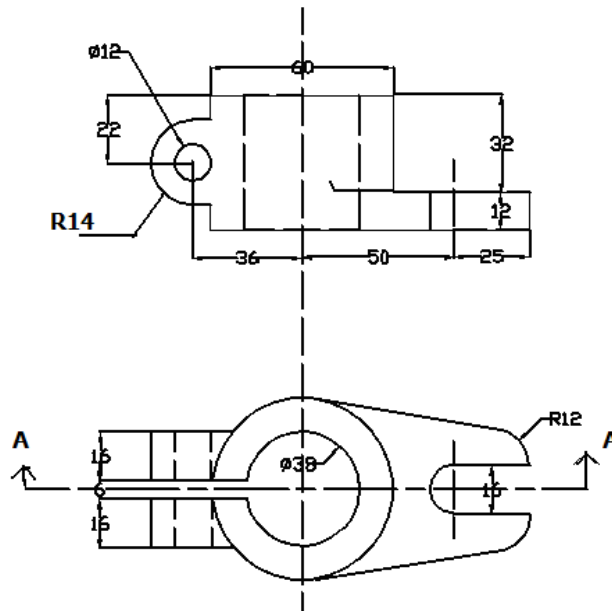
- Q.2** (a) Draw two views of a hexagonal headed bolt, 24 mm diameter and 100 mm long, with a hexagonal nut and a washer. **07**
- (b) A square prism, side of base 55 mm and height 90 mm, is resting on H.P. on its base with all rectangular faces equally inclined to V.P. It has a horizontal square hole 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 cylinder, diameter of base 50 mm and height 70 mm, is resting on H.P. on its base. It is penetrated by a horizontal cylinder, diameter of base 35 mm and height 70 mm. Axes of two cylinders bisect each other at right angles. Draw their projections showing on them curves of intersection assuming the axis of penetrating cylinder parallel to V.P. **07**
- Q.3** (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) Explain the full section and half section with suitable example. **07**

OR

- Q.3** (a) 1. Draw the conventional representation for indicating the oil, steel, concrete and tin? **04**
2. What is the conventional representation for indicating the square on the shaft, straight knurling and bevel gear? **03**
- (b) Draw according to the first-angle projection method: **07**
1. Sectional front view, along section A-A
 2. Top view



Q.4 (a) Explain the use of foundation bolts. With the help of a neat sketch explain Rag foundation bolt. **07**

(b) Explain the use of Castle nut and Wile's lock nut with neat sketches. **07**

OR

Q.4 (a) Explain with the aid of sketches, the use of **07**

1. Flat saddle key

2. Spline shaft

(b) Draw a dimensioned sketch, of a knuckle joint for two 40 mm diameter rods. **07**

Q.5 (a) Explain the advantages and disadvantages of a Computer Aided Drafting (CAD). **07**

(b) Define the following terms in context of screw threads: **07**
Crest , Root , Pitch, Nominal Diameter, Flank, Lead, Minor Diameter

OR

Q.5 (a) Enlist the various commands available in Draw tool box of AUTO CAD. Explain any two of them by giving suitable example. **08**

(b) With help of sketches show the following: **06**

1. Parallelism tolerance

2. Perpendicularity tolerance

3. Symmetry tolerance
