



[4261] – 106

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| Seat<br>No. |  |
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F.E. (Semester – I) Examination, 2012  
ENGINEERING GRAPHICS  
(2008 Pattern)

Time : 4 Hours

Max. Marks : 100

- Instructions:** 1) Answer **03** questions from Section – I and **03** questions from Section – II.
- 2) Answers to the **two** Sections should be written in **separate** books.
- 3) Black figures to the **right** indicate **full** marks.
- 4) Assume suitable data, if **necessary**.

SECTION – I

UNIT – I

**Engineering Curves**

1. A) A plot of land in the shape of parallelogram 28 m × 20 m sides. The angle between two sides being 70°. Show graphically how an elliptical shaped flower bed can be inscribed in it. **7**
- B) A circle of 50 mm diameter rolls on outside the circumference of the directing circle of the same diameter without slipping.
- Draw and Epi-cycloid of point 'P' touching the point of contact of both circles for one complete revolution. **8**
- OR
2. A) A line OS is at 70° with another horizontal line OS'. A third line OP is at 35° to OS' and 50 mm long.
- Draw the Hyperbola through point 'P' to which OS and OS' as asymptote. **7**
- B) A line AB 100mm long revolves about its midpoint 'O'. A point 'P' moves along this line AB from A to B. During one complete revolution by uniform rate. Find the locus of the point 'P'. **8**

P.T.O.



UNIT – II  
**Orthographic Projection**

3. Figure 1 shows a pictorial view of a 'Shaft guide'. Draw the following views using first angle method of projection :

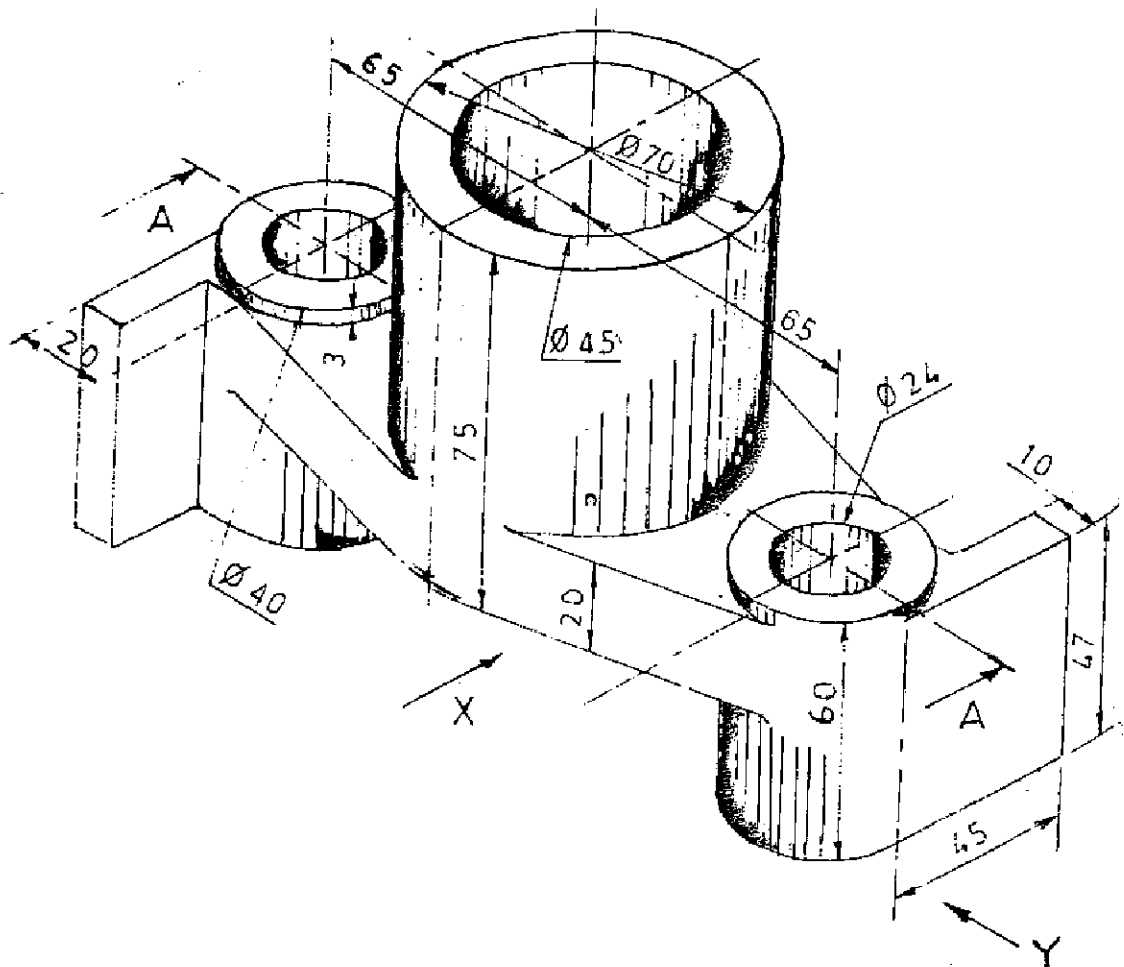


Figure 1

**(Shaft Guide)**

- |  |   |
|--|---|
| a) Sectional elevation in the direction of X (Section along A-A) | 7 |
| b) Plan  | 5 |
| c) Side view looking along arrow Y.                              | 5 |
| Give all dimensions.   | 3 |

OR



4. Figure 2 shows a pictorial view of a machine component. Draw the following views using first angle method of projection :

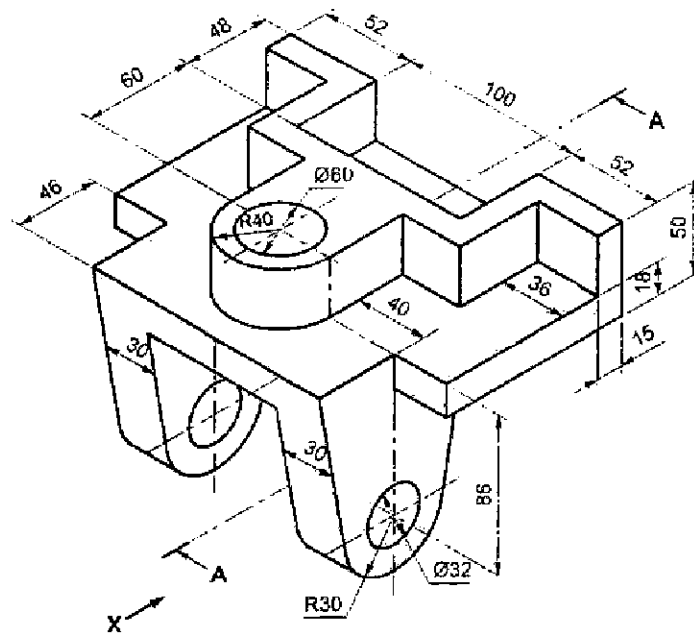


Figure 2

- |  |   |
|--|---|
| a) Elevation in the direction of X                     | 5 |
| b) Plan  | 5 |
| c) Sectional Right hand side view (Section along A-A). | 7 |
| Give all dimensions.                                   | 3 |



UNIT – III  
**Auxiliary Projection**

5. Figure 3 shows incomplete F.V, top view and partial auxiliary front view :

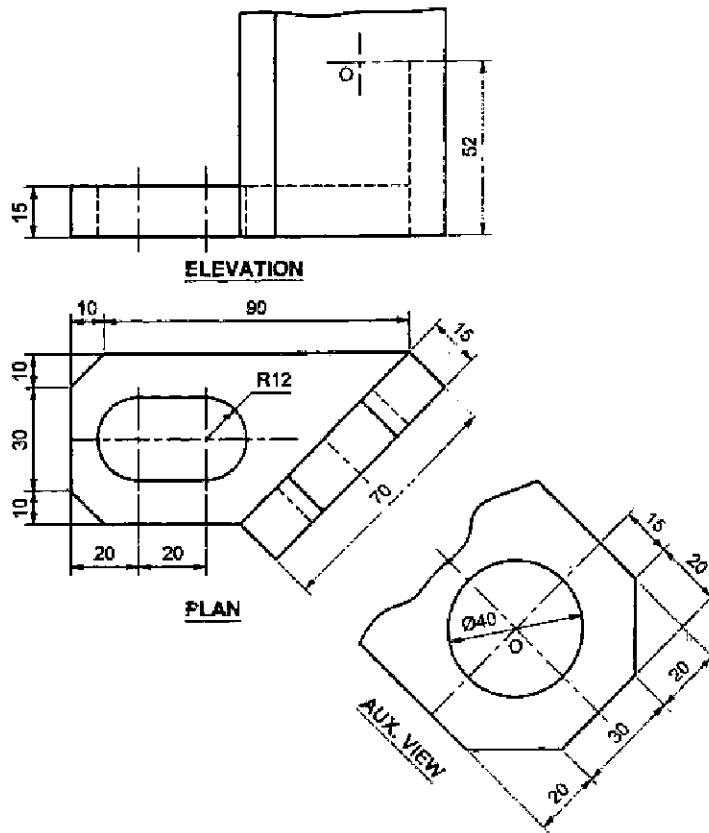


Figure 3

- a) Redraw the given views
  - b) Complete the front view
- Give all dimensions.

5  
8  
2

OR



6. Figure 4 shows Front View, auxiliary view and incomplete side view :

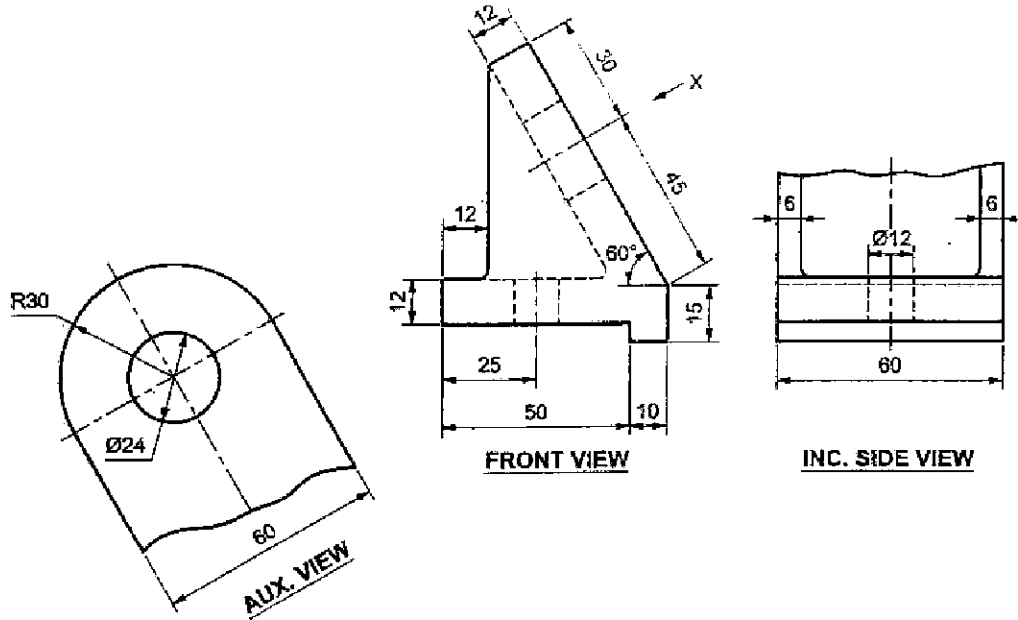


Figure 4

- a) Redraw the given views
  - b) Complete the side view
- Give all dimensions.

5  
8  
2

SECTION – II

UNIT – IV

Isometric

7. The figure 5 shows FV and RHSV of a machine part. Draw its isometric view by using natural scale and show overall dimensions.

20

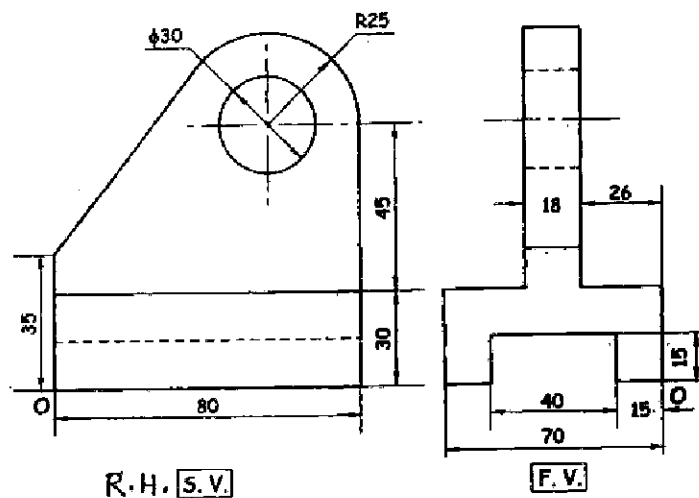


Figure 5

OR



8. The figure 6 shows elevation and LHSV of a machine part. Draw its isometric projections by using isometric scale.

20

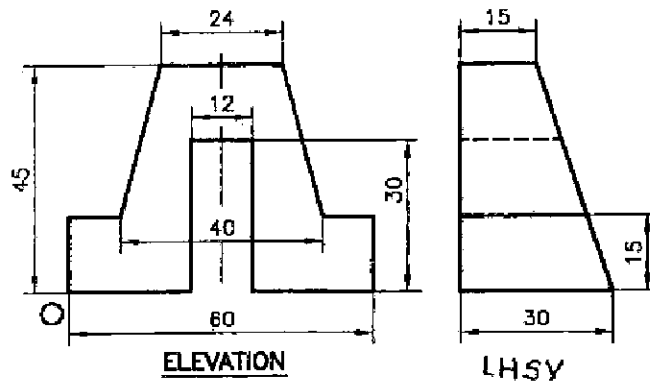


Figure 6

UNIT – V

**Missing Views**

9. The figure 7 shows FV and TV of a machine part. Draw

- A) Sectional Front View, along section A-A
- B) Top View
- C) Right Side View
- D) Dimensioning.

7  
3  
7  
3

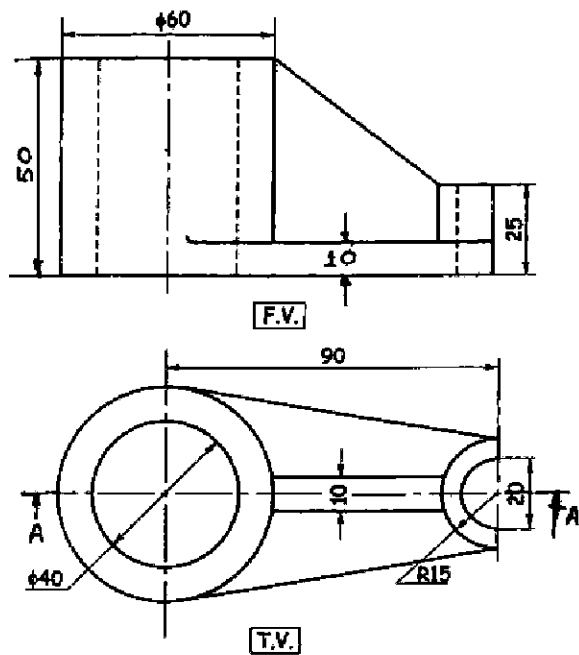


Figure 7

OR



10. The figure 8 shows FV and LHSV of a machine part. Draw

- A) Sectional Front View, along section A-A 7
- B) Top View 7
- C) Left Side View 3
- D) Dimensioning. 3

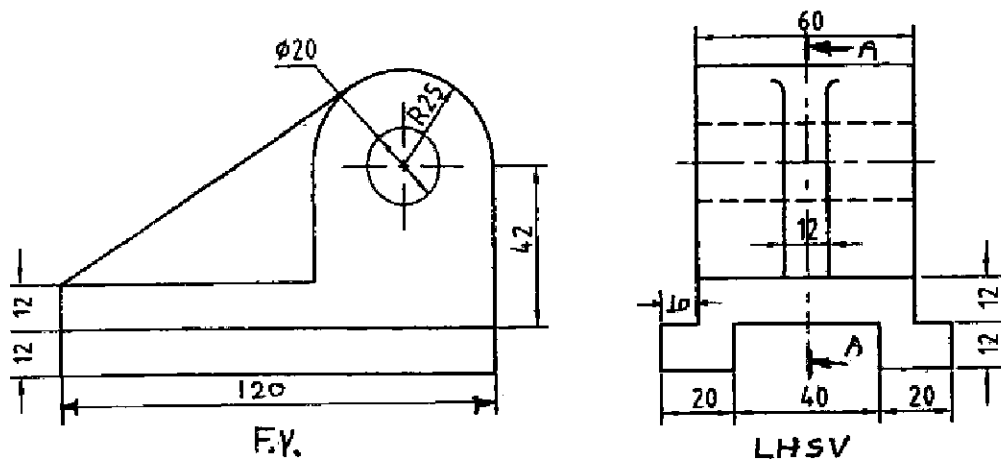


Figure 8

UNIT – VI

**Free Hand Sketches**

11. Draw proportionate freehand sketches of any two of the following : Rag Foundation bolt, Compression helical spring and Wing nut. 10

OR

12. Draw proportionate freehand sketches of any two of the following : Lifting eye bolt, square thread, Gib-headed key with assembly. 10