

Total No. of Questions : 12]

[Total No. of Printed Pages : 7

[3561]-105

F. E. (Semester - I) Examination - 2009

ENGINEERING GRAPHICS - I

(June 2008 Course)

Time : 4 Hours]

[Max. Marks : 100

Instructions :

- (1) Answer **any one** question from each **unit**.
- (2) Answer to the **two sections** should be drawn on **separate drawing sheet**, use back side of sheet.
- (3) Figures to the right indicate **full** marks.
- (4) Use of log table/electronic pocket calculator is allowed.
- (5) Assume suitable data, if necessary.
- (6) **Retain construction lines**; marks are reserved for dimensioning and good presentation.

SECTION - I

UNIT - I

Q.1) (A) Draw an ellipse with major axis 150 mm and minor axis 110 mm. Left side of minor axis is to be drawn by concentric circle method and right side of minor axis by rectangle method. Draw tangent and normal to the ellipse at 50 mm radius from center of ellipse. [08]

(B) A point P, initially at the apex of a cone of base 80 mm diameter and 96 mm axis height, moves around the curved surface and reaches the periphery of the base in one revolution. Draw the projection of the path traced out by point P. The axial descent of point p is uniform with its angular rotation. [07]

OR

- [08]

- [07]

UNIT - II

- [5+7+5+3=20]**



OR

-
- Isometric view of a mechanical part. Dimensions include: 110 c.c., $\phi 60$, $\phi 40$, 64, 10, 50, 10, 10, 40, R20, $\phi 25$, 12, 24, 20, 20, 60, and 10. Labels include 'A', 'X', and 'OVAL HOLE 30 x 10'.

Fig. 2

Q.5) SUPPORT BRACKET is shown in the **fig. 3** : Draw to full scale the following views; (1) Given views (2) An Auxiliary View in direction A (3) Give all dimensions. **[4+8+3=15]**

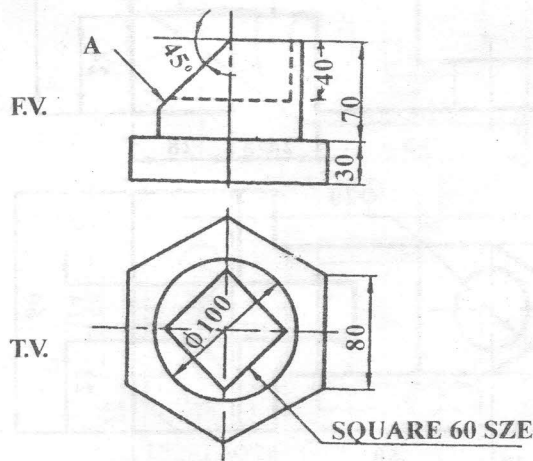


Fig. 3

OR

- Q.6)** PIPE SUPPORT is shown in the **fig. 4** : Draw to full scale the following views : (1) Given Views (2) An Auxiliary View in the direction of X (3) Give all dimensions. [4+8+3=15]

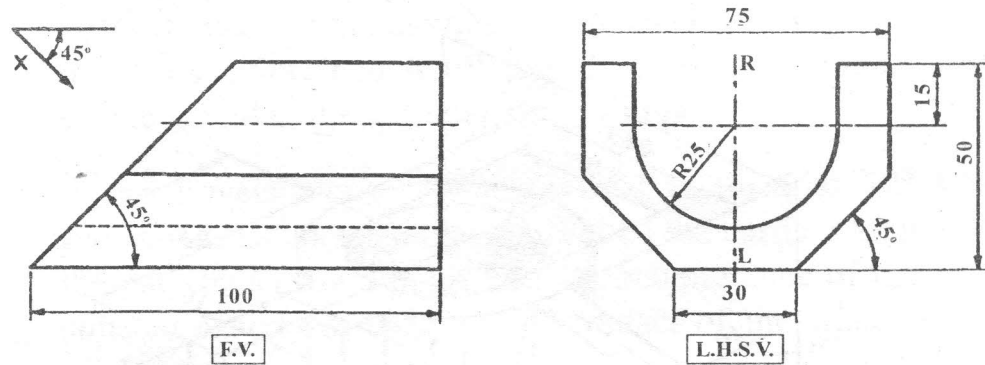


Fig. 4

SECTION - II

UNIT - IV

- Q.7)** Elevation and Plan of an object are shown in **fig. 5** : Draw its Isometric View about 'O' and give overall dimensions. [17+3=20]

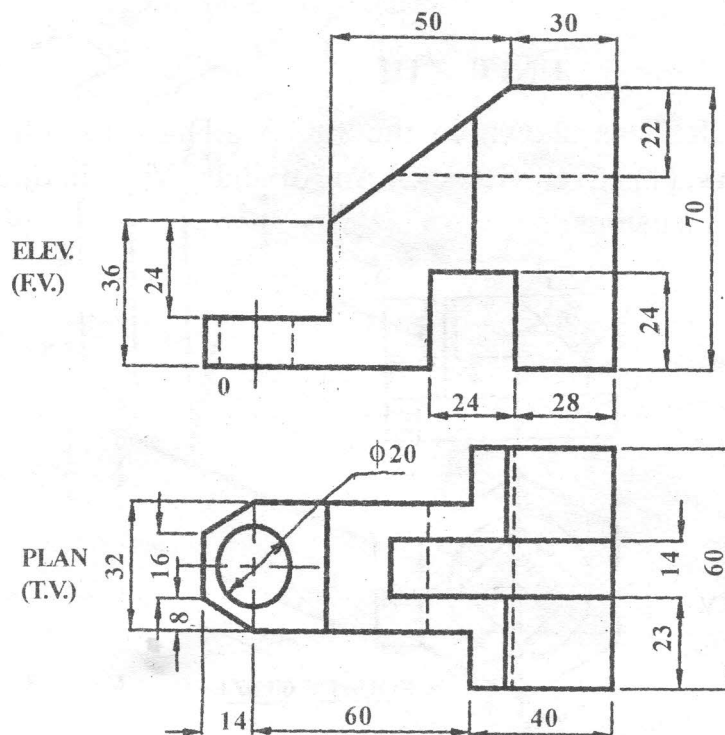


Fig. 5

OR

- Q.8)** Elevation and Plan of an object are shown in **fig. 6** : Draw its Isometric View about 'O' and give overall dimensions. [17+3=20]

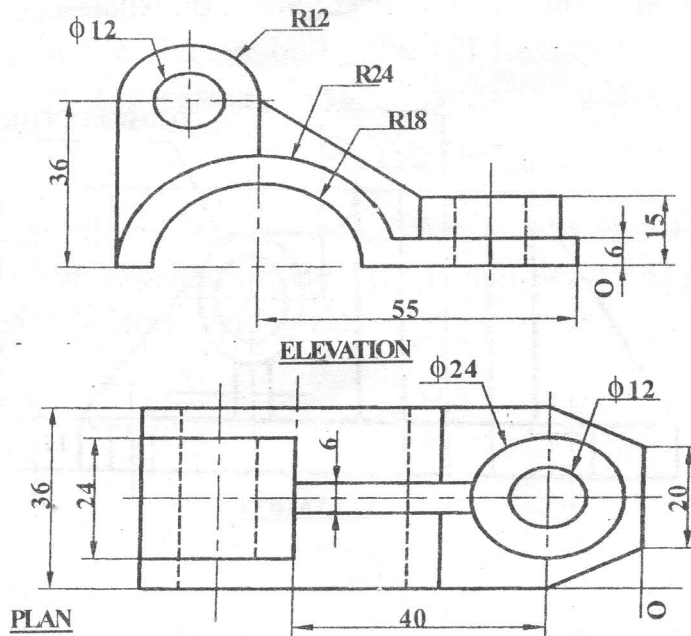


Fig. 6

UNIT - V

- Q.9)** Elevation and Plan of a Bracket are shown in **fig. 7** : Draw to full scale the following view : (1) Sectional Elevation Section along A-A (2) Given Plan and (3) End View (4) Give all dimension.

[6+4+7+3=20]

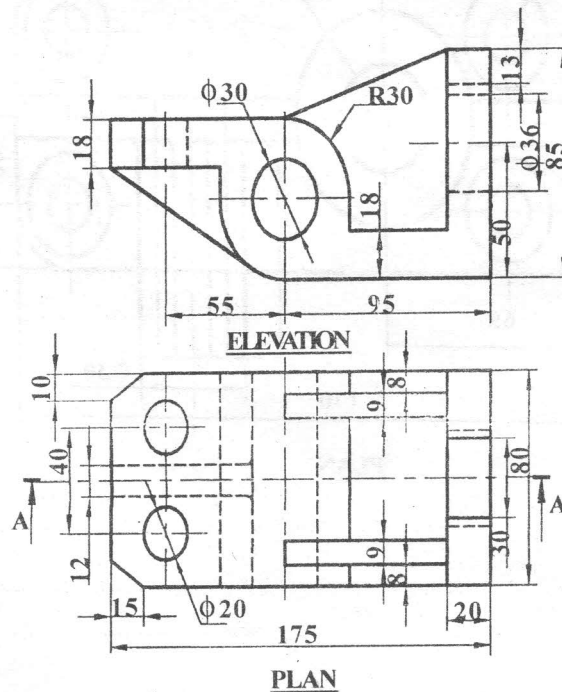


Fig. 7

PLAN
OR

Orthographic projection of a mechanical part showing the front elevation. The part has a total width of 55 and a total height of 65. The base is 12 units thick. On the left, there is a sloped section. In the center, there is a vertical section with a circular hole of diameter 20. The hole is 10 units from the bottom and 25 units from the right edge of the vertical section. The top of the vertical section is 50 units from the left edge. The right side of the part is sloped. Hidden lines are shown for the internal structure.

ELEVATION



UNIT - VI

Q.11) Draw proportional free hand sketches of **any two** following machine parts (1) Single riveted butt joint (2) Lifting Eye Bolt (3) Buttress Threads (4) Taper sunk keys. **[5+5=10]**

OR

Q.12) Draw proportional free hand sketches of **any two** following machine parts (1) Eye Foundation Bolt (2) Cotter Joint (3) Flanged Coupling (4) Double V-Butt weld joint. **[5+5=10]**