

Total No of Questions: [12]

SEAT NO. :

[Total No. of Pages : 8]

F.E. 2008 (Engineering Graphics –I)

(Semester - I)

Time: 4 Hours

Max. Marks : 100

Instructions to the candidates:

- 1) Answers to the two sections should be written in separate answer books.***
- 2) Neat diagrams must be drawn. Retain all construction lines***
- 3) Figures to the right side indicate full marks.***
- 4) Assume Suitable data if necessary***

UNIT – I
ENGINEERINGS CURVES

Q.1]

A) A ball is thrown up in the air reaches a maximum height of 70mm and travels a horizontal distance of 50mm. Trace the path of ball assuming to be a parabolic. Draw tangent and normal at any point on the curve. [7]

B) A circle of 50mm 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

Q.2]

A) The major axis of an ellipse is 140mm and the distance between the foci is 90mm. Draw an ellipse by Oblong (Rectangle) method, state the length of minor axis. [7]

B) A rod AB 100mm long is rotating about point 'B'. During the time rod complete one revolution, point 'P' starts from A and moves along rod uniformly to B and reaches back to point A. Draw the path traced out by point 'P'. Give name to curve. [8]

UNIT – II
ORTHOGRAPHIC PROJECTION

Q.3] Figure 1 shows a pictorial view of a 'Ribbed bearing'. Draw the following views using first angle method of projection:

- a) Sectional elevation in the direction of X (Section along A-A) [7]
 - b) Plan. [5]
 - c) End view from left. [5]
- Give all dimensions. [3]

OR

Q.4] Figure 2 shows a pictorial view of a Slide Bracket'. Draw the following views using first angle method of projection:

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

UNIT – III
AUXILLIARY PROJECTION

Q.5] Figure 3 shows Front view, incomplete top view and partial auxiliary front view of machine part:

- a) Redraw the given views [5]
 - b) Complete the top view. [8]
- Give all dimensions. [2]

OR

Q.6] Figure 4 shows Front View, partial auxiliary view and incomplete top view:

- a) Redraw the given views [5]
 - b) Complete the top view. [8]
- Give all dimensions. [2]

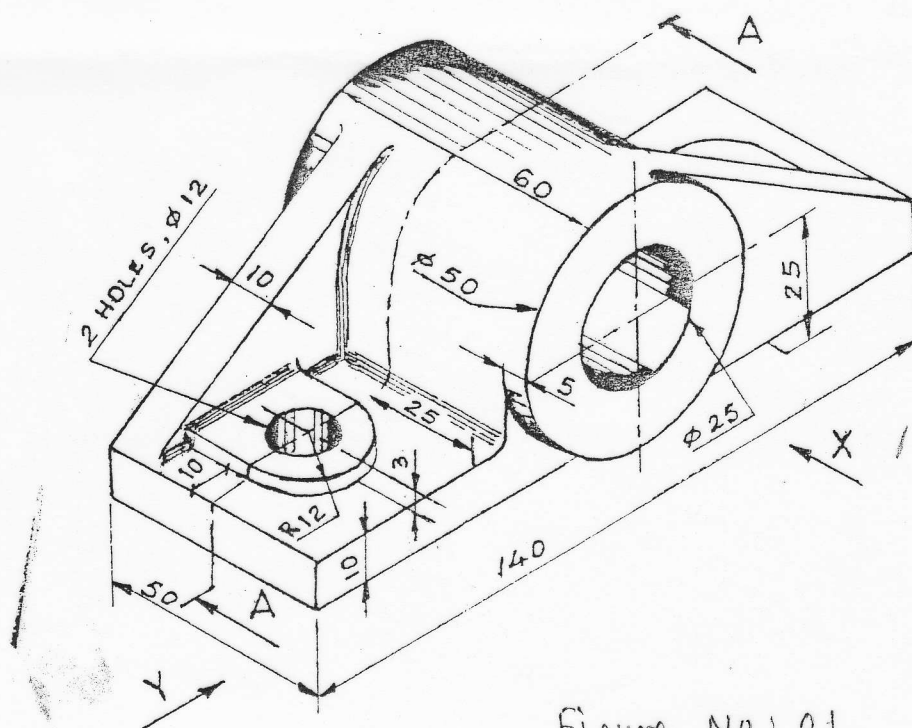


Figure No 101.

Ribbed Bearing.

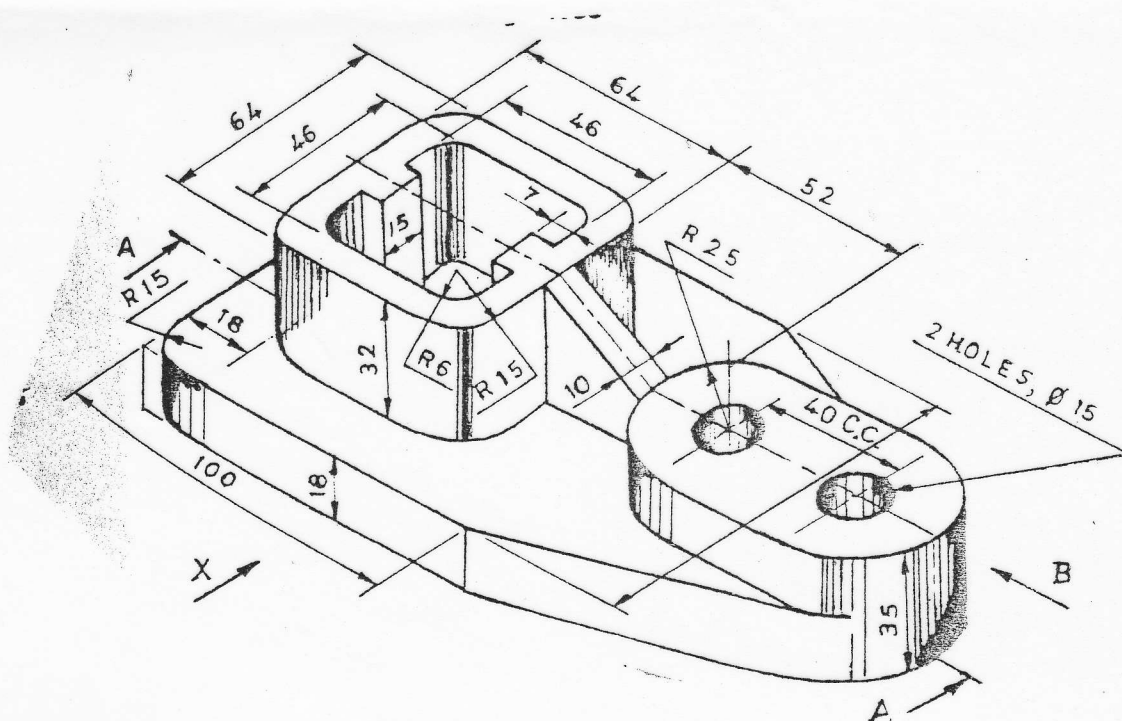


Figure No: 02

Slide Bracket

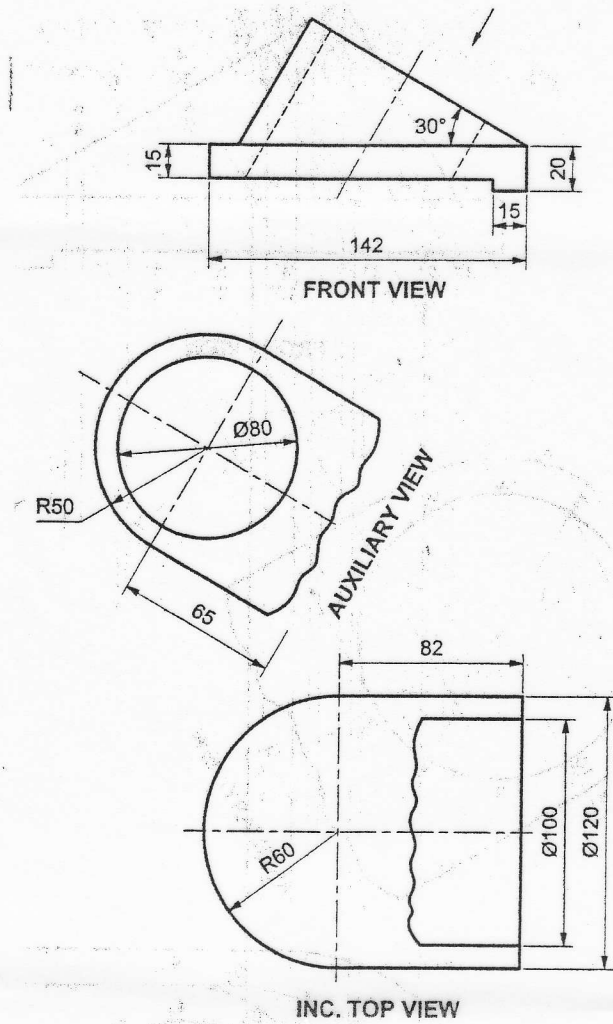


figure No: 03.

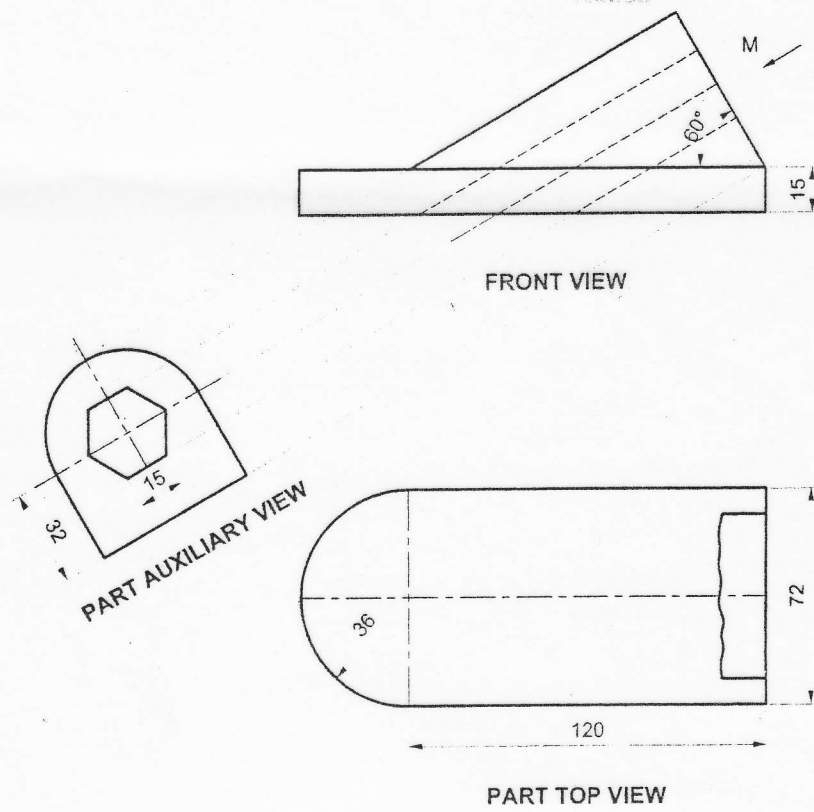


Figure NO: 04,

SECTION - II

UNIT - V : ISOMETRIC

Q.7

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

20

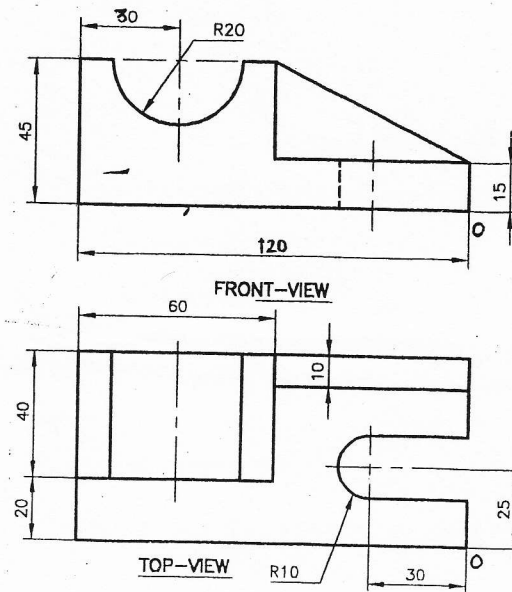


Figure 5

OR

Q.8

The figure 6 shows FV and ^{plan}TV of a machine part. Draw its isometric projections by using isometric scale.

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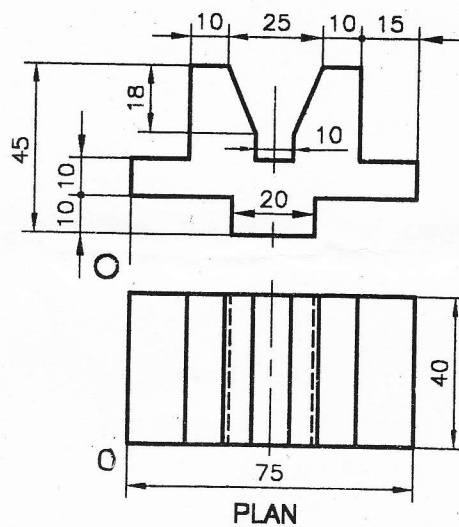


Figure 6

UNIT – VI : MISSING VIEWS

Q.9

The figure 7 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 |

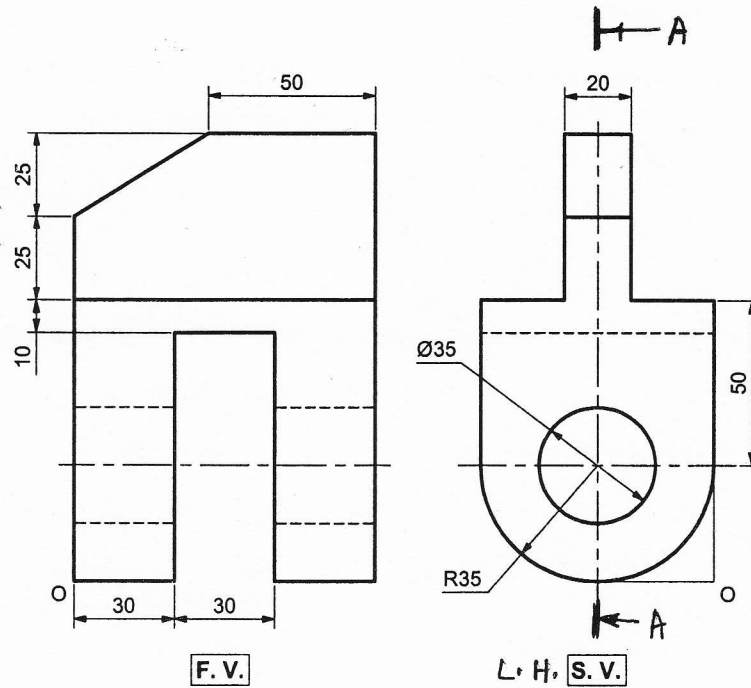


Figure 7

Q.10

The figure 8 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

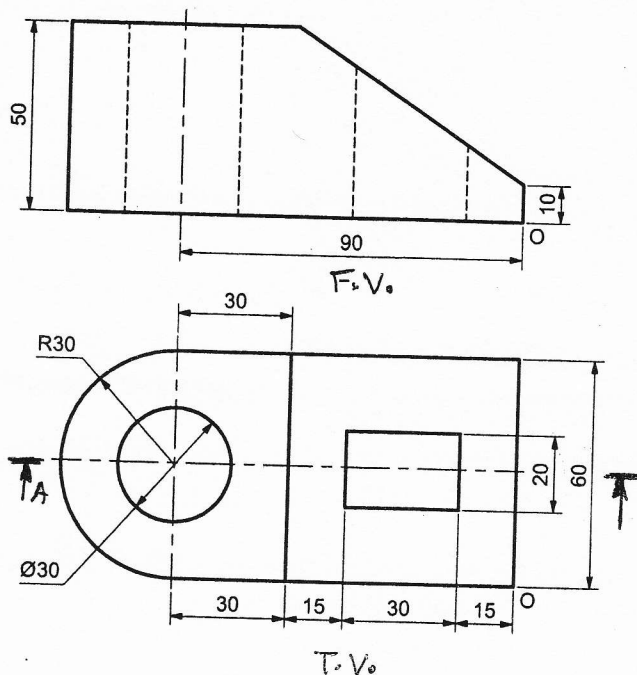


Figure 8

UNIT – VII : FREE HAND SKETCHES

Q.11

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

10

OR

Q.12

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

10