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]

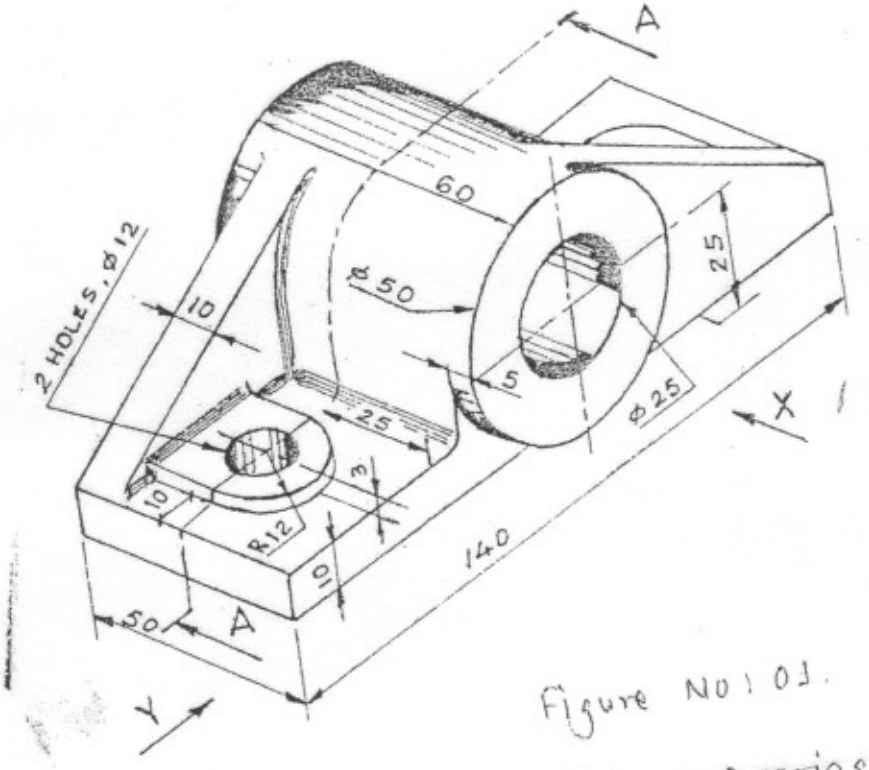


Figure NO: 01.

Ribbed Bearing.

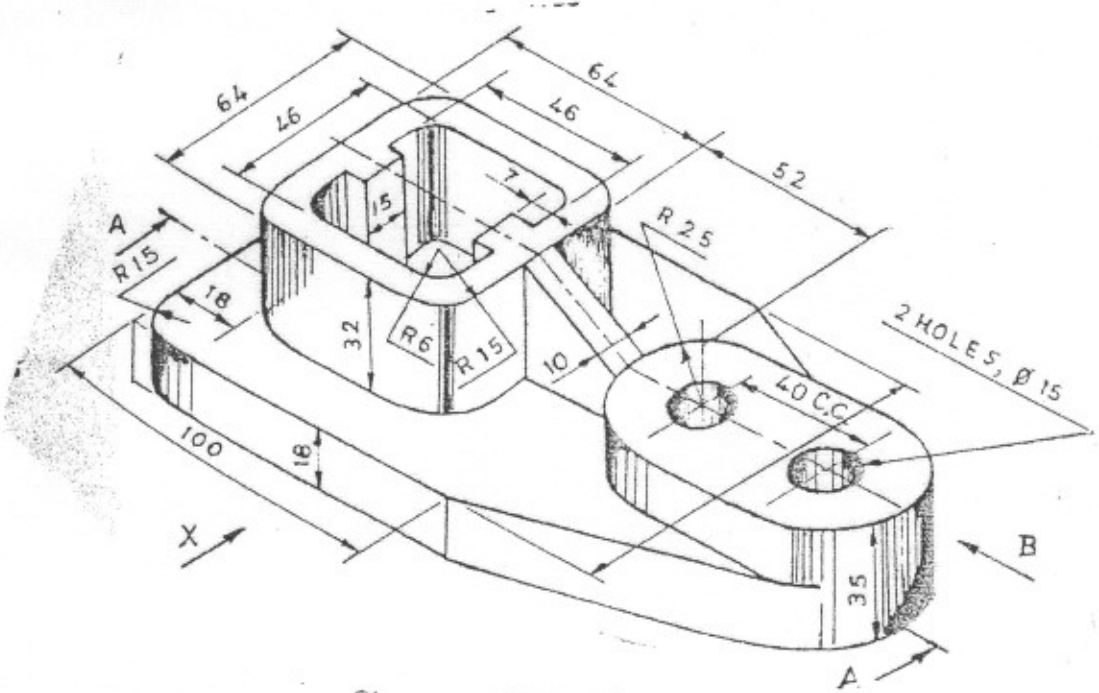


Figure NO: 02

Slide Braket

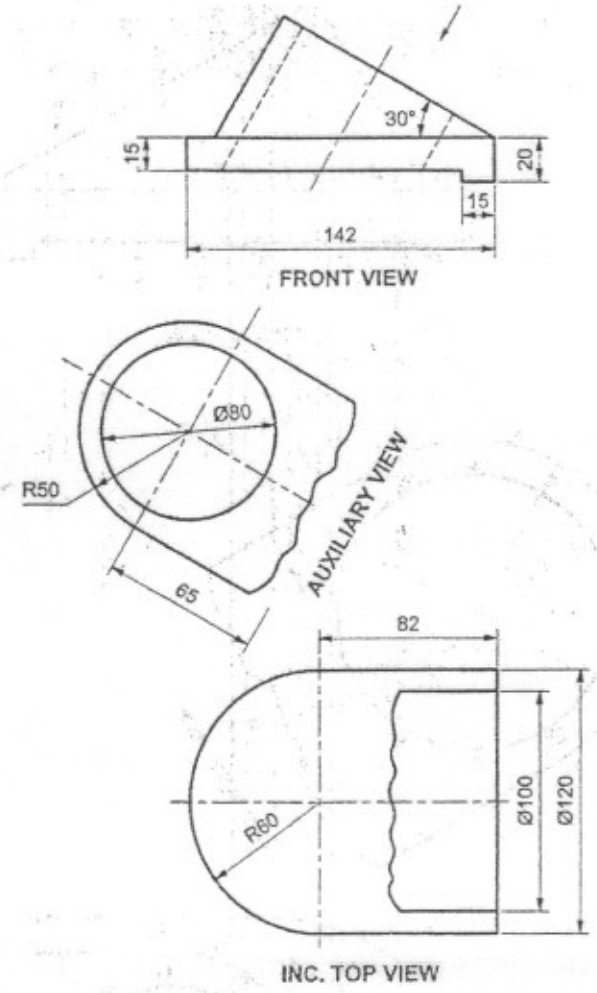
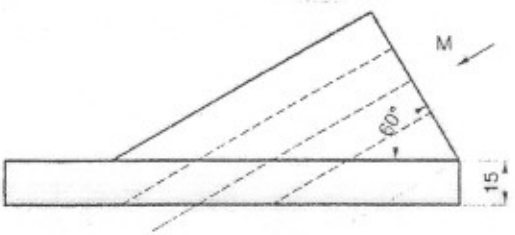
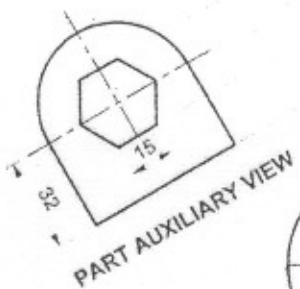

30°
15
20
15
142
FRONT VIEW
Ø80
R50
65
AUXILIARY VIEW
82
R60
Ø100
Ø120
INC. TOP VIEW

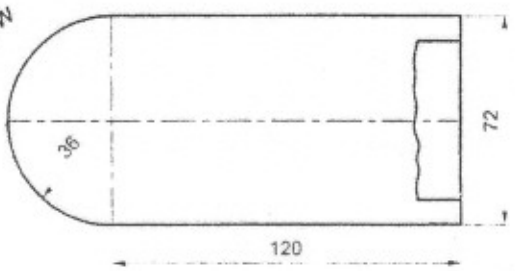
Figure No: 03.



FRONT VIEW



PART AUXILIARY VIEW



PART TOP VIEW

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**

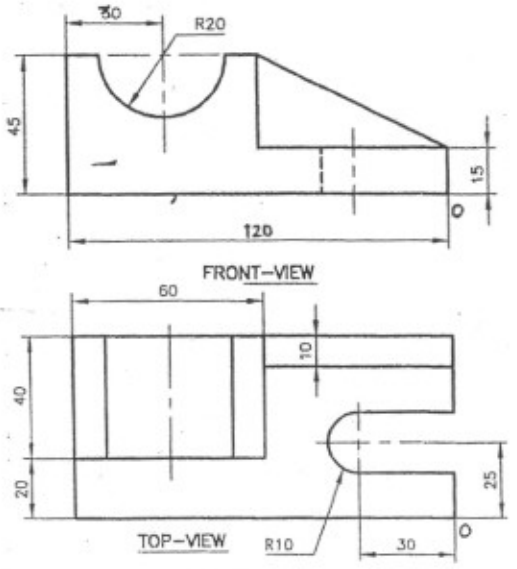


Figure 5

OR

Q.8 The figure 6 shows FV and ~~T~~ plan of a machine part. Draw its isometric projections by using isometric scale. **20**

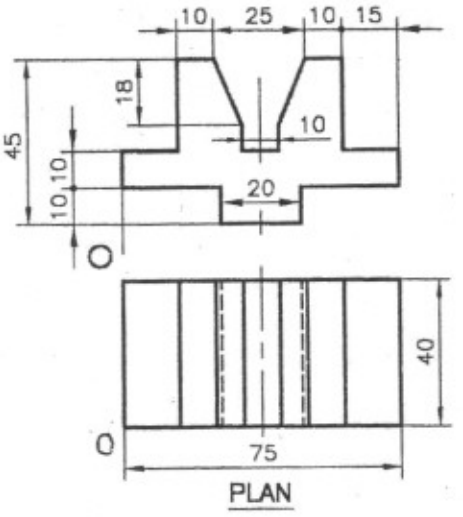


Figure 6

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**

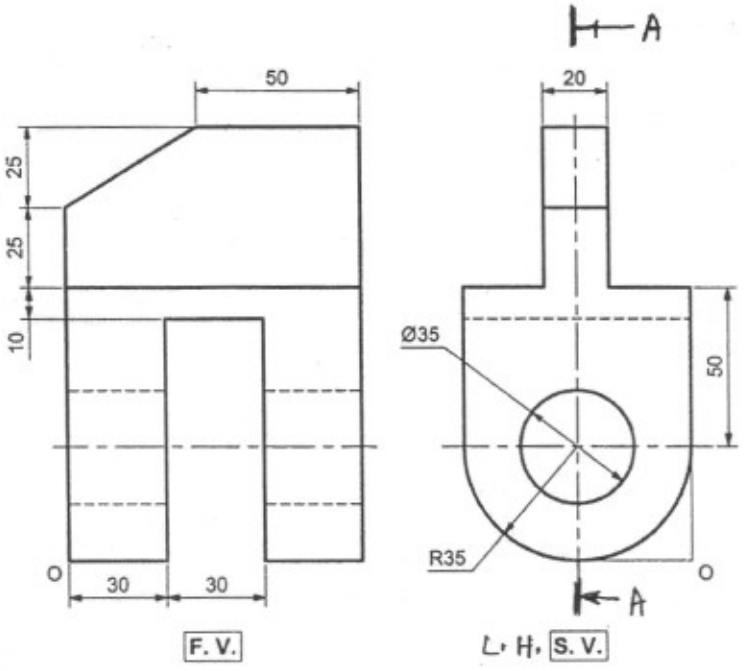


Figure 7

OR

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

(A)	Sectional Front View, along section A-A	**7**
(B)	Top View	**3**
(C)	Right Side View	**7**
(D)	Dimensioning	**3**

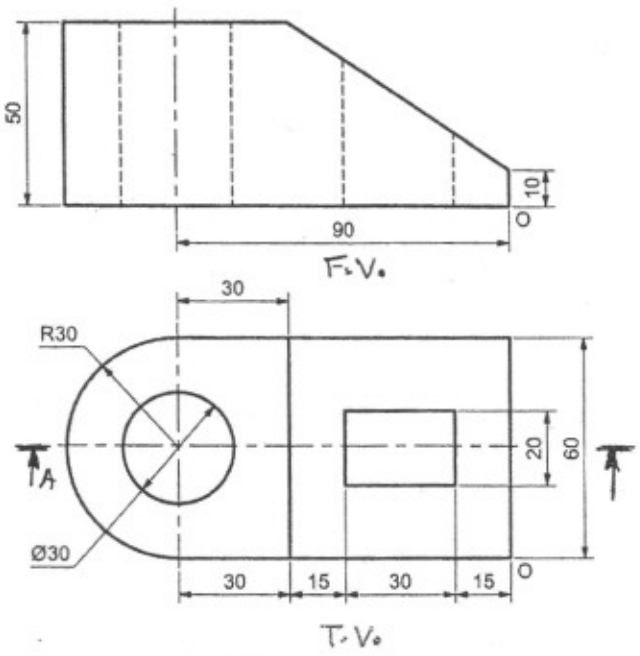


Figure 8

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**