

Total No. of Questions : 12]

SEAT No. :

P656

[4456]-6

[Total No. of Pages : 6

F.E. (Semester - I)
ENGINEERING GRAPHICS - I
(2008 Course)

Time : 4 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer 3 questions from Section - I and 3 questions from Section - II.*
- 2) Answers to the two sections should be written in separate books.*
- 3) Figures to the right indicate full marks.*
- 4) Neat diagrams must be drawn wherever necessary.*
- 5) Assume suitable data, if necessary.*

SECTION - I

Engineering Curves

- Q1)** a) A point 'P' is 25 mm and 35 mm respectively from two straight lines which are at right angles to each other. Draw a rectangular hyperbola from 'P' within 8 mm distance from each line. [7]
- 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 base in one revolution. Trace the path followed by point 'P'. The axial descent of the point is uniform with it's angular rotation. [8]

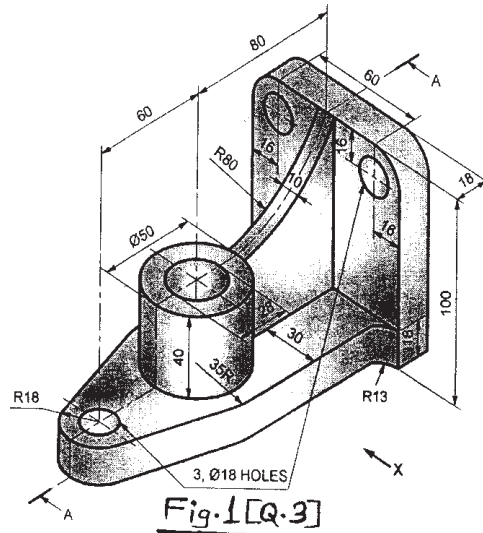
OR

- Q2)** a) A 120 mm long link 'OA' rotates about 'O' at uniform angular velocity. A point 'P', initially at A moves along AO at a uniform rate and reaches 'O' during one revolution of link. Draw the locus of point 'P' for one revolution. [7]
- b) An inelastic string of 131 mm length has it's one end attached to the circumference of a circular disc of 50 mm diameter. Draw the curve traced by other end of string when it is wound around the disc keeping the string tight. Draw tangent and normal to the curve at a point 80 mm from centre of disc. [8]

P.T.O.

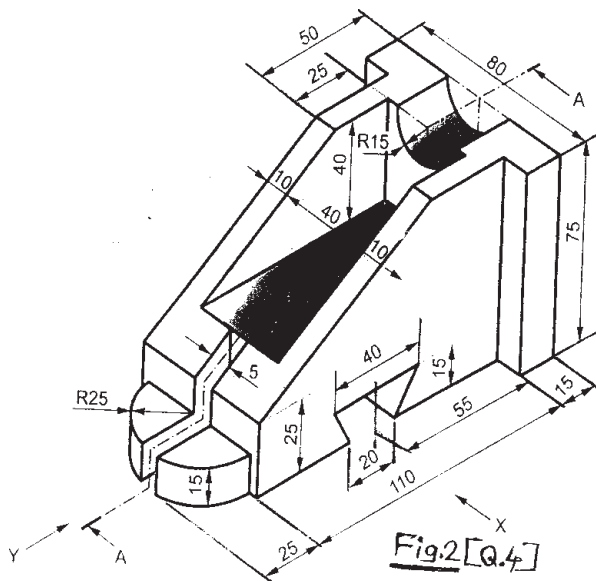
Orthographic Projections

- Q3)** A pictorial view of a machine component is shown in Fig. 1. By using first angle method of projection, draw
- a) Sectional elevation (section plane A-A), with observer from 'X' direction. [6]
 - b) Plan. [6]
 - c) Left hand side view [5]
 - d) Give all dimensions. [3]



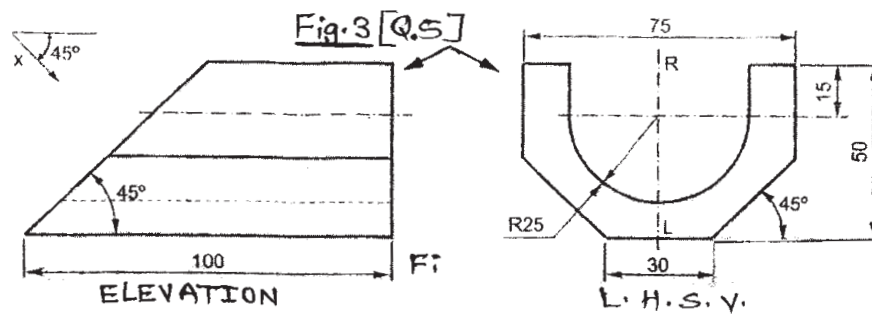
OR

- Q4)** Fig. 2 shows pictorial view of a component. By using first angle method of projection, draw
- a) Sectional elevation (section plane A-A), by observing from 'X' direction. [6]
 - b) Plan. [6]
 - c) Left hand side view. [5]
 - d) Give all dimensions. [3]



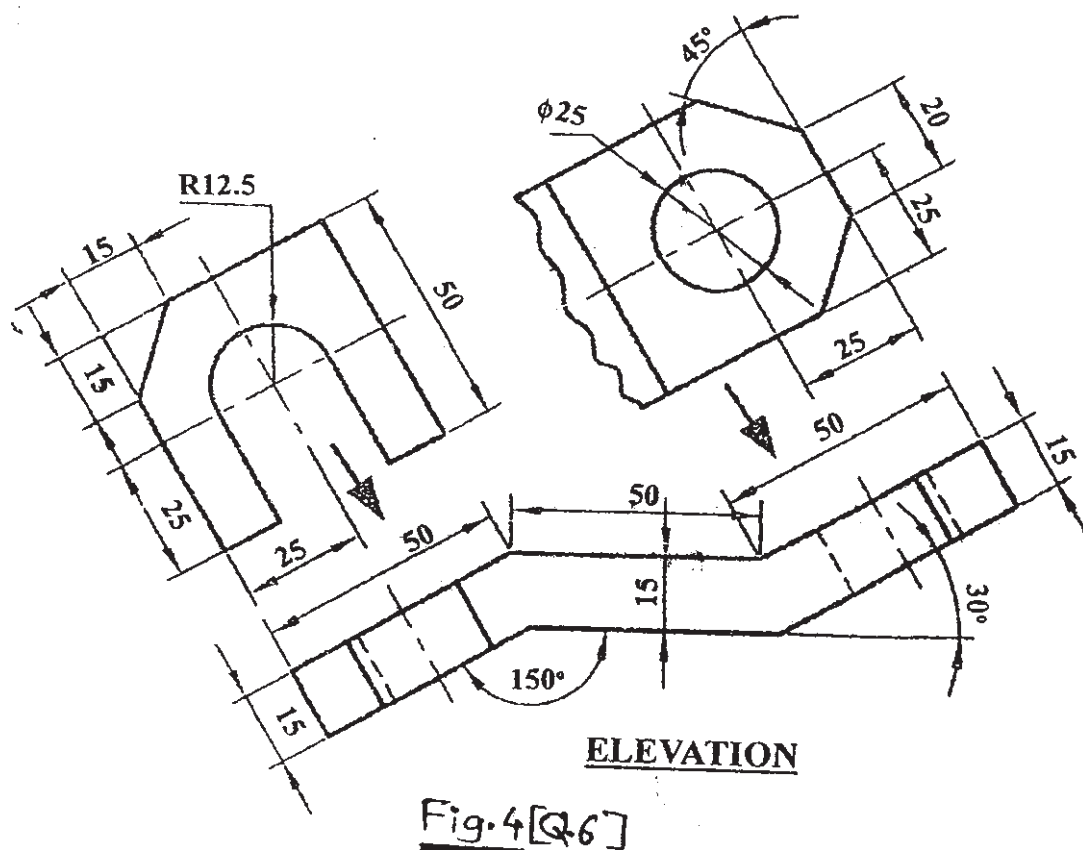
Auxillary Projections

- Q5)** Fig. 3 shows elevation and left hand side view of an object. Redraw the given views and draw auxillary view in direction 'X' as shown. Show all dimenstions. [5 + 8 + 2 = 15]



OR

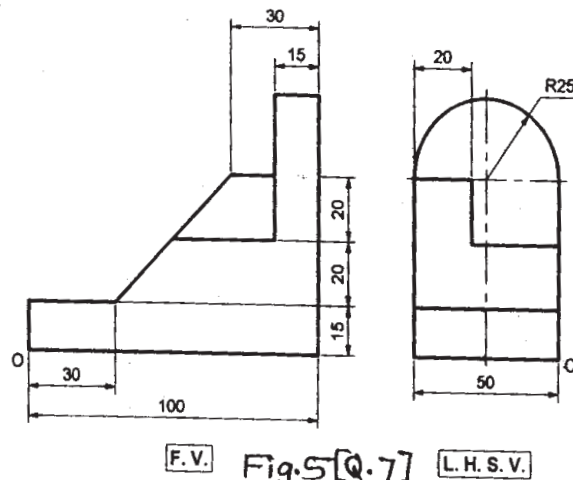
- Q6)** Fig.4 shows elevation and auxillary views of an object. Redraw the given views and draw plan of the object. Give all dimensions. [5 + 8 + 2 = 15]



SECTION - II

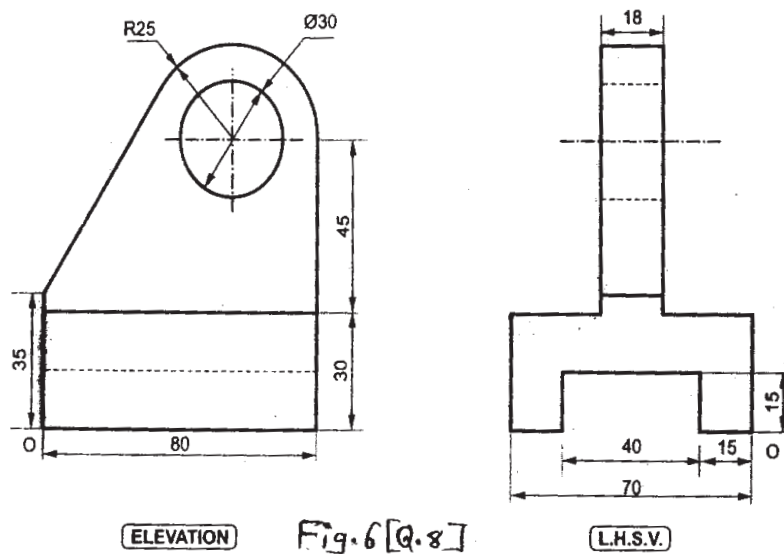
Isometric Projections

- Q7)** Fig. 5 shows elevation and left hand side view of an object. Draw it's isometric view. Give major dimensions [17 + 3 = 20]



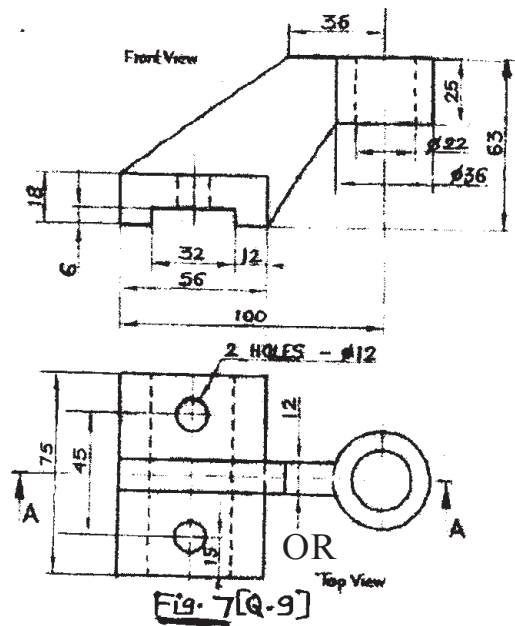
OR

- Q8)** Fig. 6 shows elevation and end view of an object. Draw it's isometric view. Give major dimensions. [17 + 3 = 20]



Missing Views

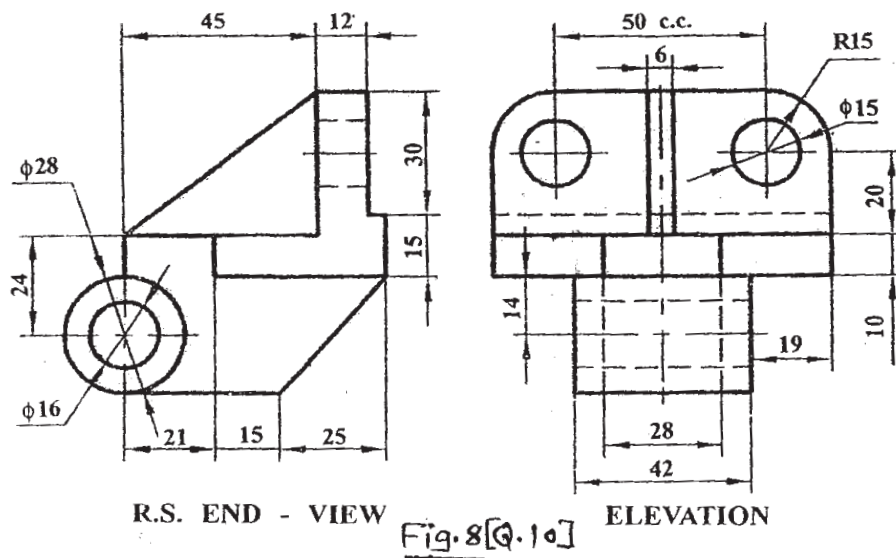
- Q9)** Fig. 7 shows elevation and plan of an object. Using first angle method of projection, draw
- Sectional elevation (Plane A-A). [6]
 - Plan. [3]
 - Left hand side view. [9]
 - Give all dimensions. [2]



OR

Q10) Fig. 8 shows elevation and end view of an object. By using first angle method of projection, draw

- Elevation. [4]
- Plan. [10]
- Right Hand side view. [4]
- Give all dimensions. [2]



Freehand Sketching

Q11) Draw freehand, proportionate sketches of following :

- a) Hexagonal Headed bolt. [4]
- b) Splined shaft. [3]
- c) Metric thread profile. [3]

OR

Q12) Draw proportionate freehand sketches of following :

- a) Universal Coupling. [4]
- b) Semi - elliptical leaf spring. [3]
- c) Eye Bolt. [3]

