

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

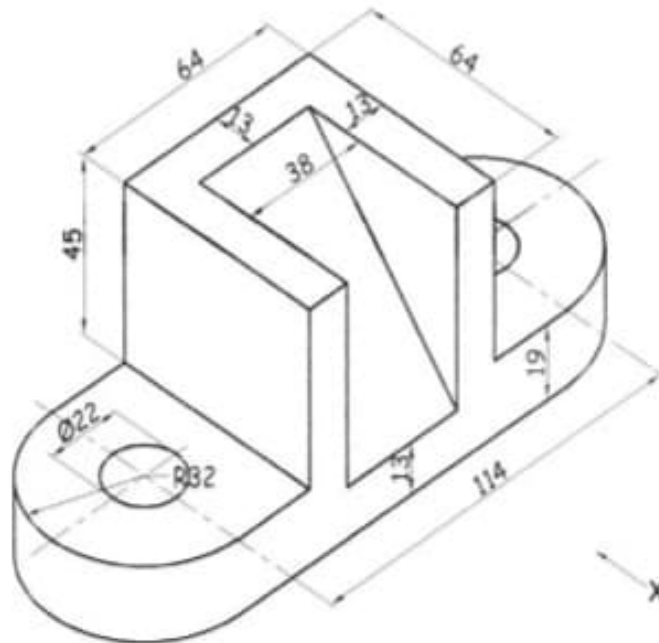
- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Assume suitable data, if necessary.
- 3) Retain all the construction lines.

Q1) Draw an ellipse by rectangular method if the major axis and minor axis are 160 mm and 100 mm respectively. [8]

OR

Q2) Draw a cycloid of a rolling circle of diameter 40 mm. Assume the point 'P' is away from the base. [8]

Q3) Figures shows a pictorial view of an object. By using first angle method of projection draw, Front View in the direction of X, Top View and Left-Hand Side View. Give dimensions in all views. [16]

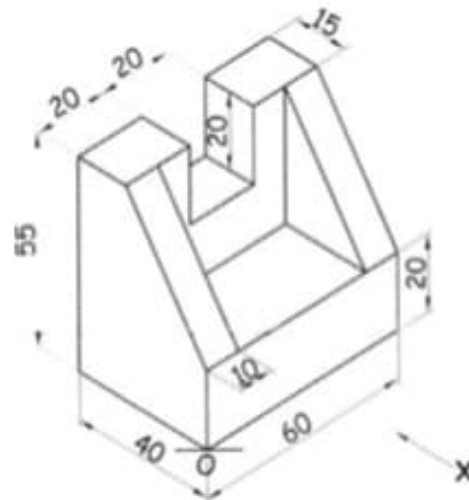


OR

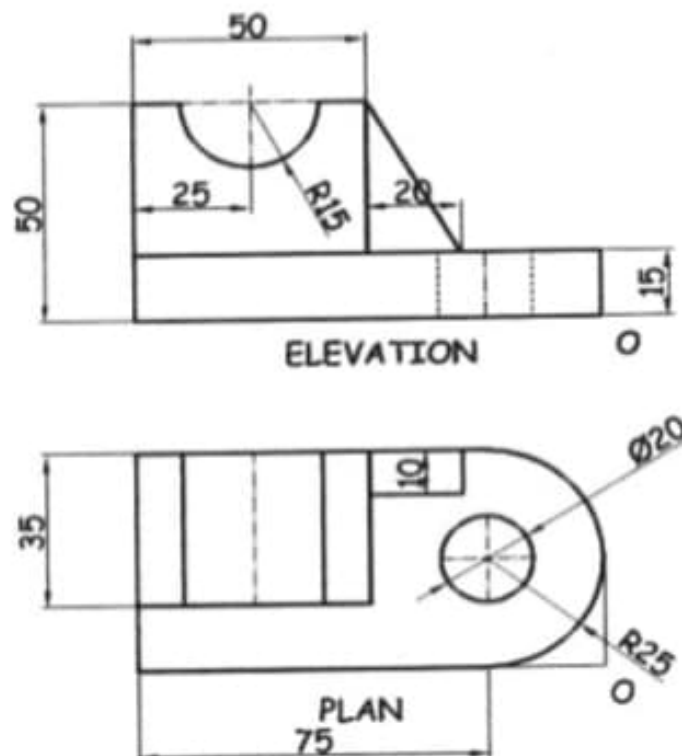
P.T.O.

Q4) Figure shows the pictorial view of an object. By first angle method of projection draw: **[16]**

- Front View in the X direction
- Top View
- Sectional Left-Hand Side View along symmetry of the object.

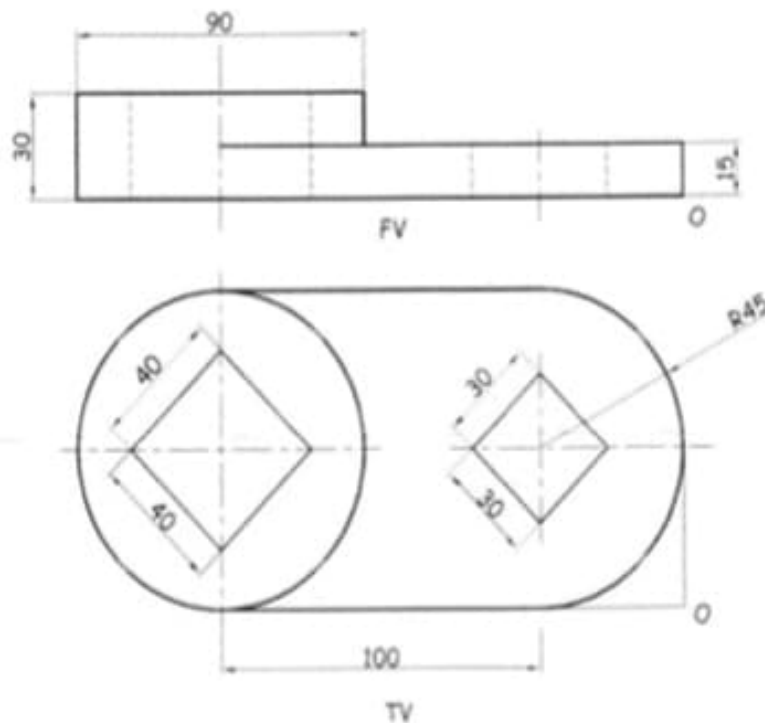


Q5) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. **[16]**



OR

- Q6)** Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. **[16]**



- Q7)** A hexagonal pyramid of base 30 mm and axis and axis height 75 mm is resting on H.P. with side of the base parallel to V.P. It is cut by a section plane, perpendicular to V.P. and inclined at 45° to H.P. and bisecting axis of the pyramid. Draw the development of lateral surfaces of the pyramid. **[10]**

OR

- Q8)** A pentagonal prism side of base 30 mm and axis 60 mm long is kept on HP in such a way that one of its base edges is parallel to the VP and near to the observer. A cutting plane bisects its axis at 45° . Draw the development of lateral surfaces the pentagonal prism. **[10]**



[5924]-2
F.E. (Theory)
ENGINEERING GRAPHICS
(2019 Pattern) (Semester - I/II) (102012)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

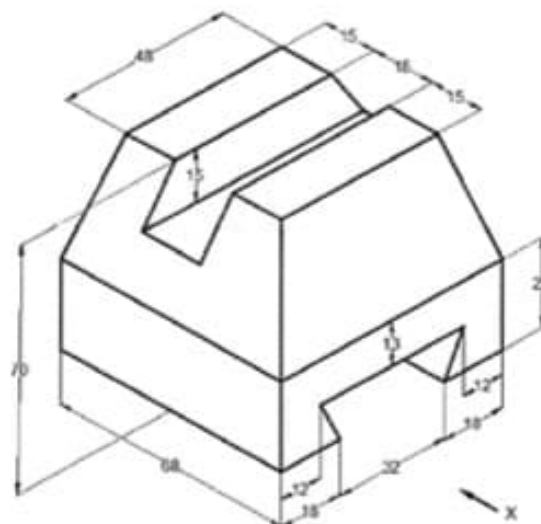
- 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Assume suitable data, if necessary.
- 3) Retail all the construction lines.

Q1) The throw of a ball from a fielder on a cricket ground reaches the wicket-keeper's gloves, following a parabolic path. Assume the point of throw and the point of catch to be 1 meter above the ground. Maximum height achieved by the ball above the ground is 31 m. Draw the path of the ball if the radial distance between the fielder and the wicket-keeper is 75 m. Use suitable scale. [8]

OR

Q2) Draw a helix of one convolution around a cylinder when its diameter 60 mm, height 130 mm and pitch is 120 mm. [8]

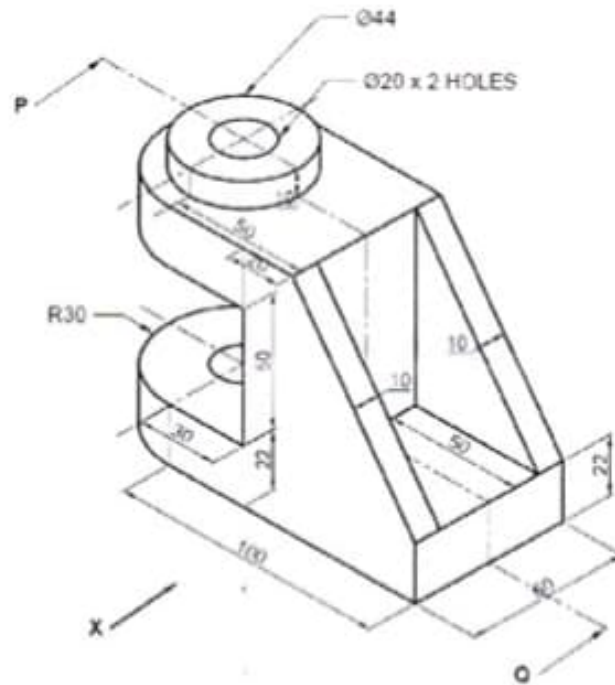
Q3) Figure shows a pictorial view of an object. By using first angle method of projection draw, Front View in the direction of X, Top View and LHSV. Give dimensions in all views. [16]



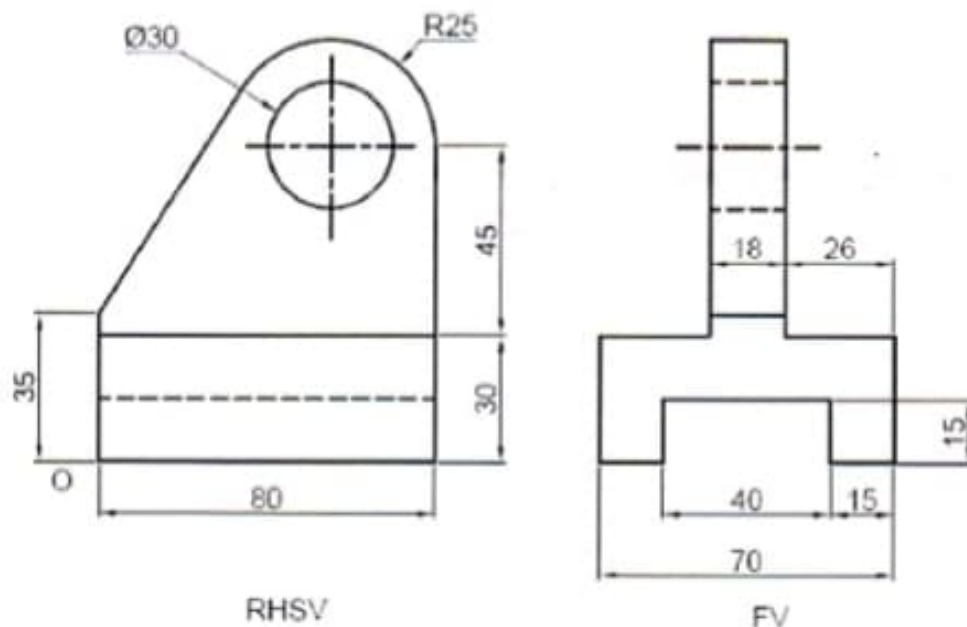
OR

P.T.O.

Q4) Figure shows a pictorial view of an object. By using first angle method of projection draw, Sectional Front View along section P-Q looking in the direction of X, Top View and RHSV. Give dimensions in all views. [16]

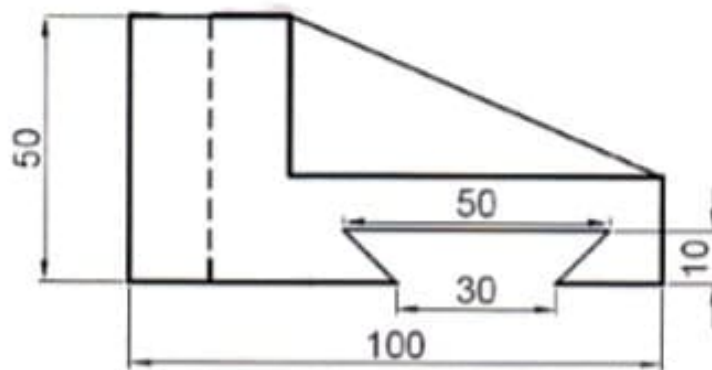
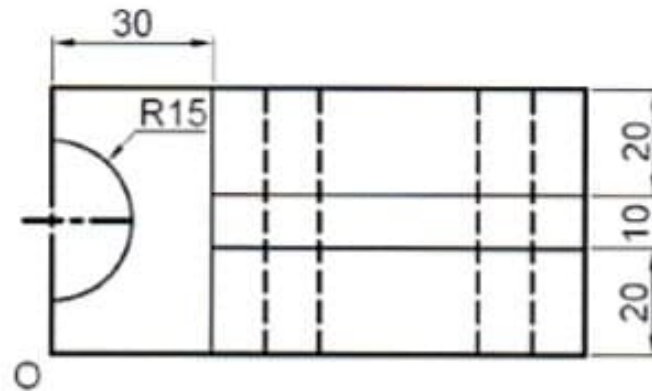


Q5) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. [16]



OR

- Q6)** Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. [16]



- Q7)** A right circular cone having diameter of base 40 mm and axis length 60 mm is resting on its base in HP. It is cut by an AIP inclined at 45° to HP and bisecting the axis. Draw the development of the lateral surface of the cone. [10]

OR

- Q8)** A pentagonal prism of base side 30 mm and axis length 70 mm, resting in HP such way that one of the base sides is parallel to VP and near to observer. Draw the development of lateral surface when section plane is inclined at 45° and bisects the axis of solid. [10]



[5868]-116

F.Y. Engineering (Semester - I & II)
ENGINEERING GRAPHICS
(2019 Pattern) (102012)

Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

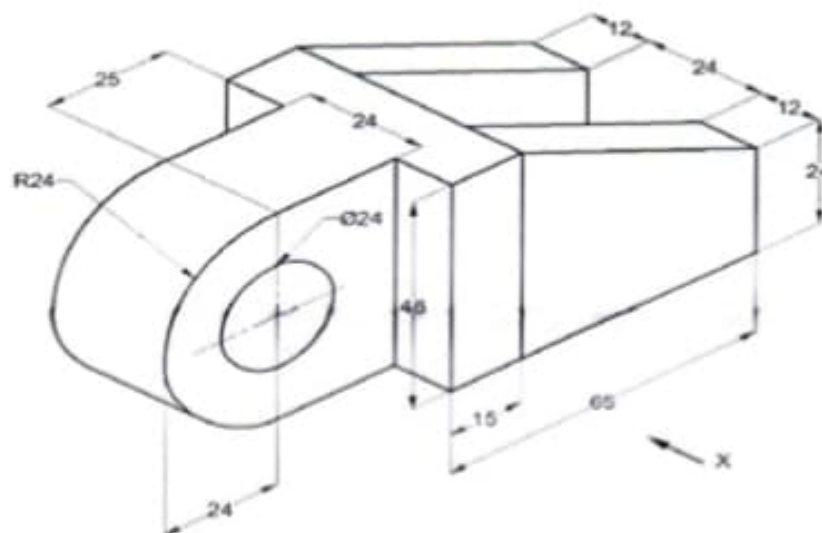
- 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6 and Q7 or Q8.
- 2) Assume suitable data, if necessary.
- 3) Retail all the construction lines.

Q1) Draw a curve traced out by a moving point in such a way that its distance from focus is 21 mm and eccentricity is $\frac{3}{5}$. [8]

OR

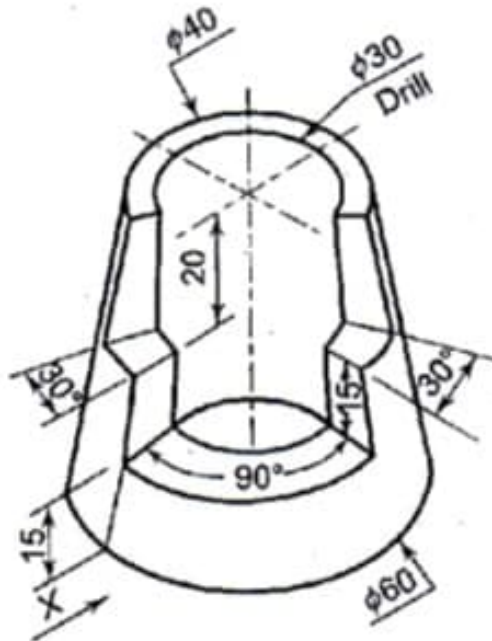
Q2) A straight rod AB of 60 mm length revolves one complete revolution with a uniform motion in a clockwise direction when hinged about A. During this period a point P moves along the rod from B to A and reaches back to B with a uniform linear motion. Draw the locus of point P. Name the Curve. [8]

Q3) Figure shows a pictorial view of an object. By using first angle method of projection draw, Sectional Front View along symmetry looking in the direction of X. Top View and LHSV. Give dimensions in all views. [16]

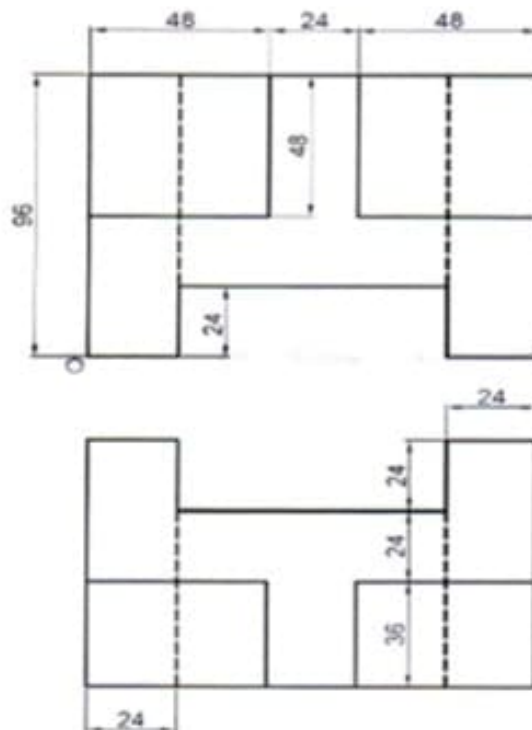


OR

- Q4)** Figure shows a pictorial view of an object. By using first angle method of projection draw, Front View in the direction of X, Top View and RHSV. Give dimensions in all views. **[16]**

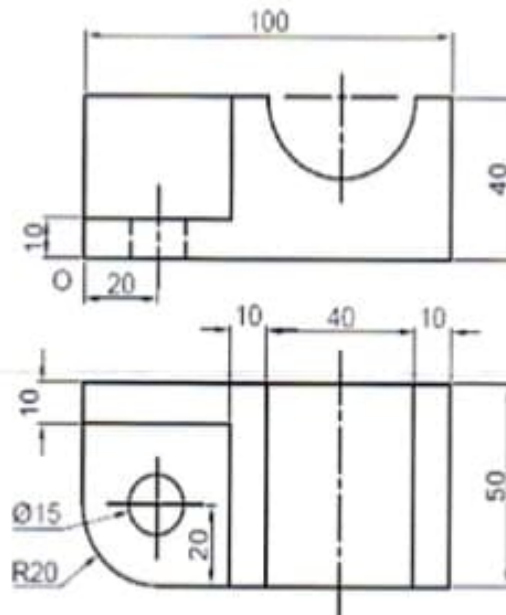


- Q5)** Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. **[16]**



OR

- Q6)** Figure show orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. [16]



- Q7)** A square pyramid edge of the base 40 mm axis length 70 mm stands with its base on HP with two sides of the base parallel to VP. It is cut by an AIP inclined at 60° to the HP and passing through a point on the axis 40 mm from base. Draw the development of surfaces of pyramid. [10]

OR

- Q8)** Figure shows the FV of a square prism, base side 30 mm and axis 60 mm long, resting on its base on HP such that each of its base edges are equally inclined to VP. The prism is cut by two cutting planes C_1-P_1 and C_2-P_2 as shown in figure. Draw the development of remaining surface of square Prism. [10]

