

[6351]-110

F.E.

## ENGINEERING GRAPHICS

(2019 Pattern) (Semester - I/II) (102012)

Time : 2½ Hours]

[Max. Marks : 50]

Instructions to the candidates :

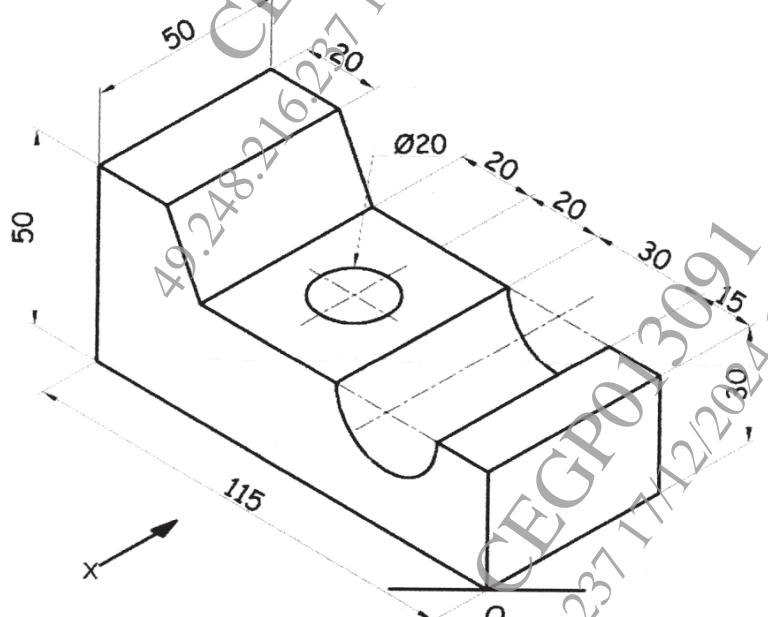
- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Assume suitable data, if necessary.
- 3) Retain all the construction lines.

**Q1)** Draw a helix on the cone of diameter 60 mm and height 100 mm when point 'P' starts from an apex and while rolling over the periphery reaches on the cone base in front of the observer in one turn. [8]

OR

**Q2)** Draw an involute of circle of diameter 40 mm. [8]

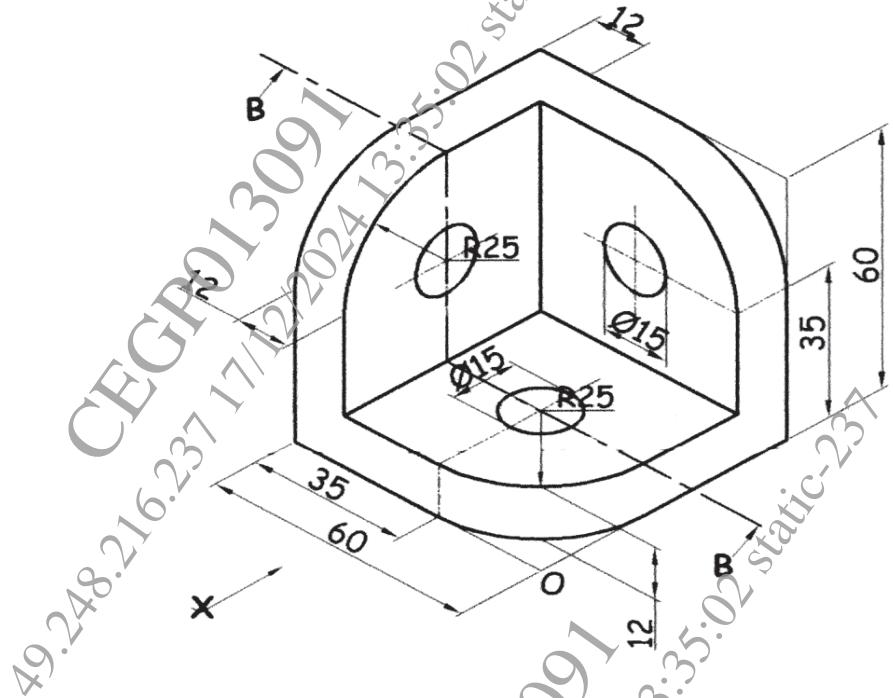
**Q3)** Figure shows a pictorial view of an object. By using first angle method of projection draw, Front View in the direction of X, Top View and Right-Hand Side View. Give dimensions in all views. [16]



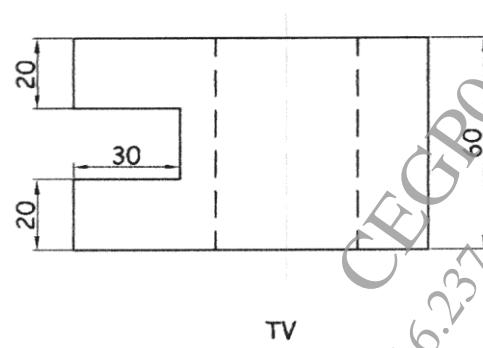
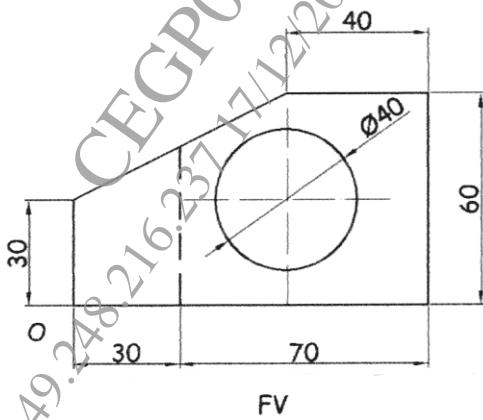
OR

P.T.O.

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

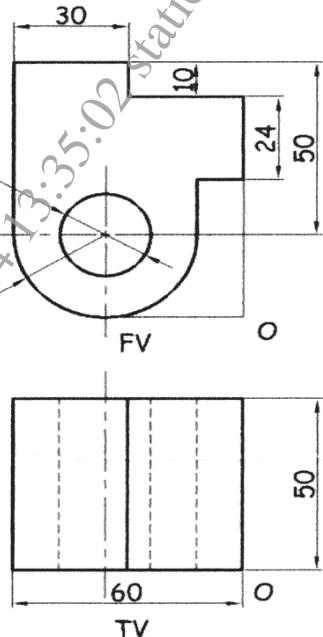


**Q5)** Figure shows orthographic views of an object by first angle method of projection. Draw its isometric view and give all the dimensions. [16]



OR

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



**Q7)** A Pentagonal pyramid side of base 25 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 away from the observer. A cutting plane bisects its axis at  $45^\circ$ . Draw the development of the pentagonal pyramid. [10]

OR

**Q8)** Figure shows the FV and TV of a cylinder. Draw the development of lateral surface(s) for bottom part of cylinder [10]

