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**[5151]-103**

**F.E. EXAMINATION, 2017**  
**ENGINEERING GRAPHICS—I**  
**(2015 PATTERN)**

**Time : Two Hours****Maximum Marks : 50****N.B. :—** (i) Use only half imperial size drawing sheet as answer-book.

(ii) Retain all construction lines.

(iii) Assume suitable data, if necessary.

1. A line PQ 90 mm long, is inclined to H.P and V.P. at  $34^\circ$  and  $30^\circ$  respectively. Draw the projections if point P is 25 mm above H.P. and point Q is 20 mm in front of V.P. Also locate the traces. [12]

*Or*

2. A circular plate of diameter 60 mm is resting on H.P. It is then inclined to H.P. so that the point opposite to resting points is 40 mm above H.P. Draw the projections if the plan of diameter line passing through resting point makes  $35^\circ$  with XY. Find inclinations made by the plate with reference planes. [12]

3. A cone of base diameter 60 mm and axis height 80 mm is resting on H.P. on its base circumferential point. Draw the projections if its axis is inclined at an angle of  $35^\circ$  and  $30^\circ$  with V.P. and H.P. respectively, with apex nearer to observer. [13]

P.T.O.

Or

4. (a) Draw a helix of one revolution to a cylinder of base diameter 60 mm and axis height 120 mm. [7]
- (b) Draw the development of lateral surface of pentagonal prism of base side 30 mm and axis height 60 mm. [6]
5. Figure 1 shows a pictorial view of an object. By using first angle method of projections, draw :
- (i) Front view [4]
- (ii) Sec. right hand side view along the line of symmetry [4]
- (iii) Top view [4]
- (iv) Dimensions. [1]

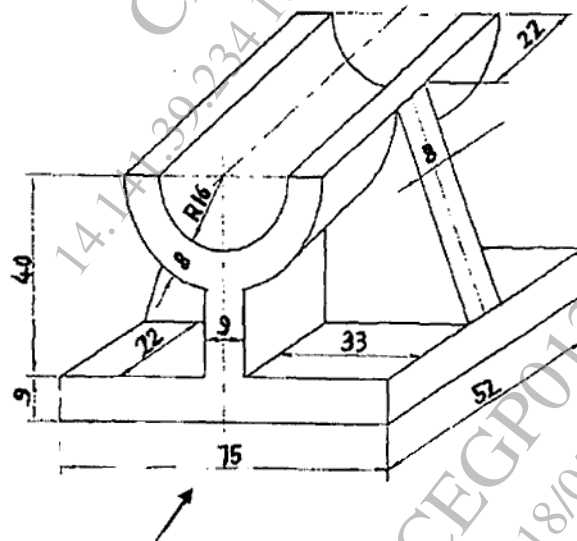


Figure 1

Or

6. Figure 2 shows a pictorial view of an object. By using first angle method of projections, draw :

- (i) Sectional front view, along sectional plane [4]  
(ii) Left hand side view [4]  
(iii) Top view [4]  
(iv) Dimensions. [1]

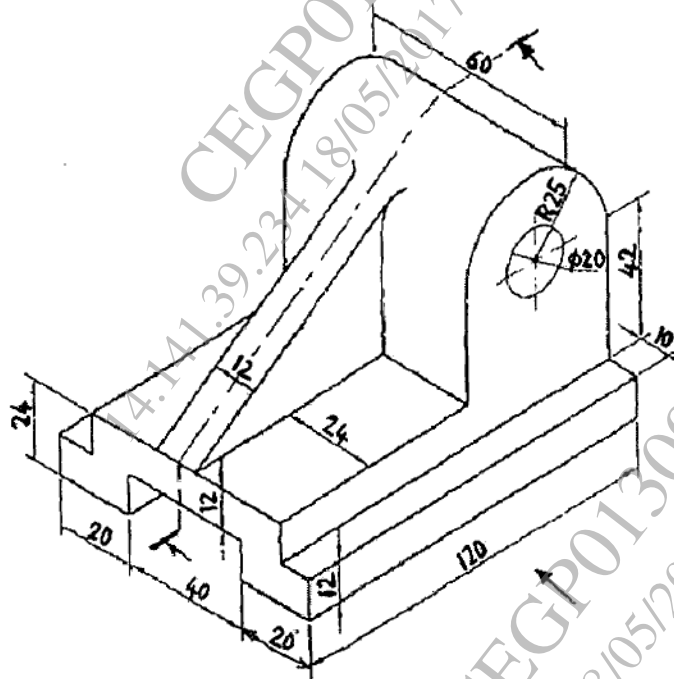


Figure 2

7. Figure 3 shows front view and end view of a bracket. Draw isometric view and show overall dimensions. [12]

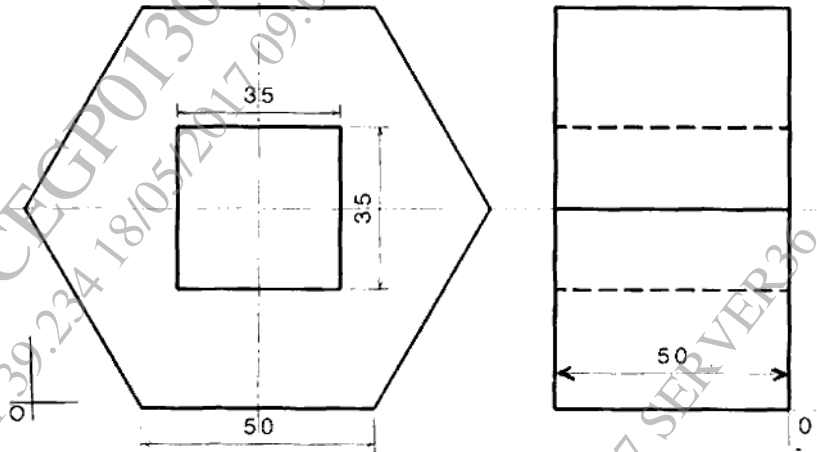


Figure 3

Or

8. Figure 4 shows front view and end view of an object. Draw isometric view and show overall dimensions. [12]

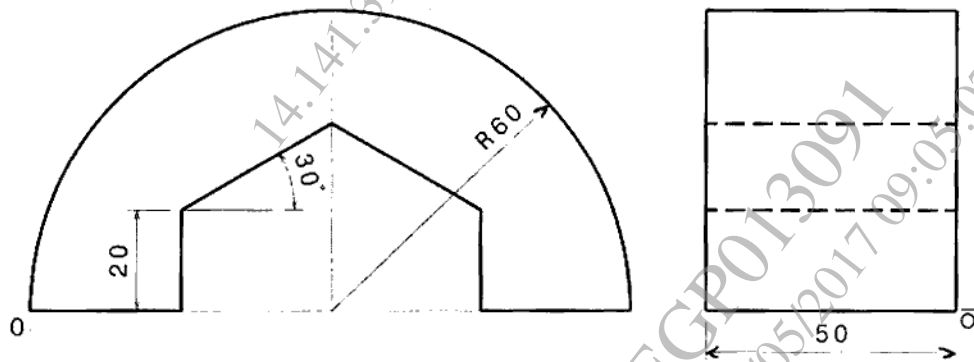


Figure 4