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**[5056]-17**

**F.E. EXAMINATION, 2016**  
**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 point P of line PQ is 25 mm above H.P. and point Q is 20 mm in front of V.P. The plan and elevation makes  $36^\circ$  and  $40^\circ$  with XY respectively. Draw the projections if the projector distance between the end points is 60 mm. Also locate the traces and find the true length. [12]

*Or*

2. An equilateral triangular plate ABC is resting in V.P. on side AB, 60 mm. Then its surface is inclined to V.P. at  $40^\circ$ . Draw the projections if points B and C are 10 mm and 60 mm above H.P. respectively. Find inclination made by the plate with H.P. [12]

3. A cylinder of base diameter 60 mm and axis height 80 mm is resting on H.P. on one of the base circumferential point. Draw the projections if its axis is inclined at an angle of  $35^\circ$  and  $45^\circ$  with V.P. and H.P. respectively. [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 triangular prism of base side 40 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) Sect. Left hand side view along sectional plane B-B [4]
- (iii) Top view [4]
- (iv) Dimensions. [1]

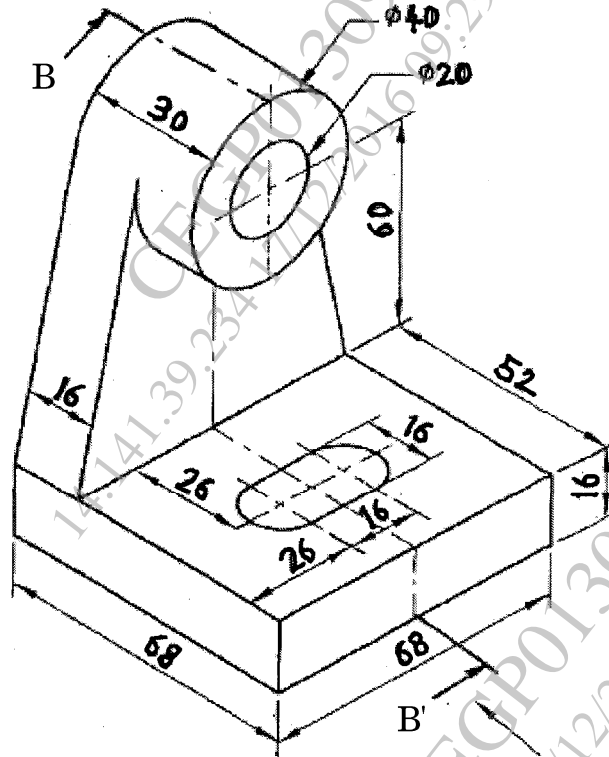


Fig.1

Or

6. Figure 2 shows a pictorial view of an object. By using first angle method of projections, draw :
- (i) Sectional front view, along line of symmetry [4]
  - (ii) Left hand side view [4]
  - (iii) Top view [4]
  - (iv) Dimensions. [1]

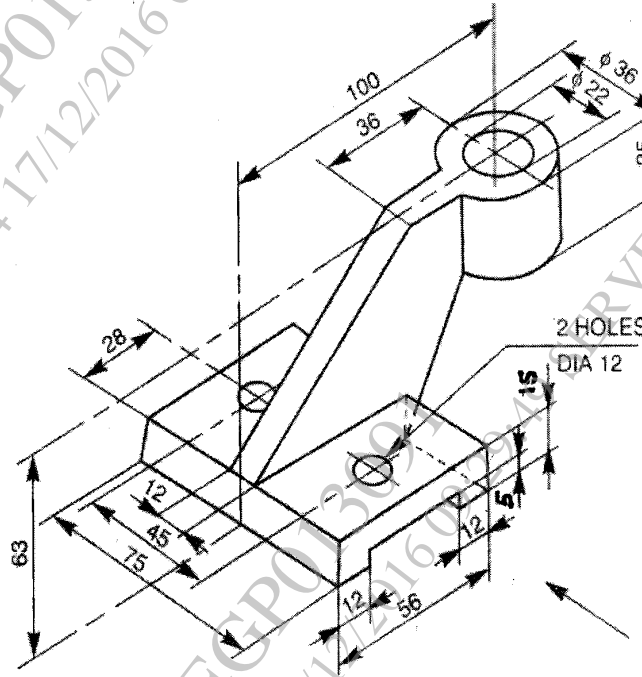


Fig. 2

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

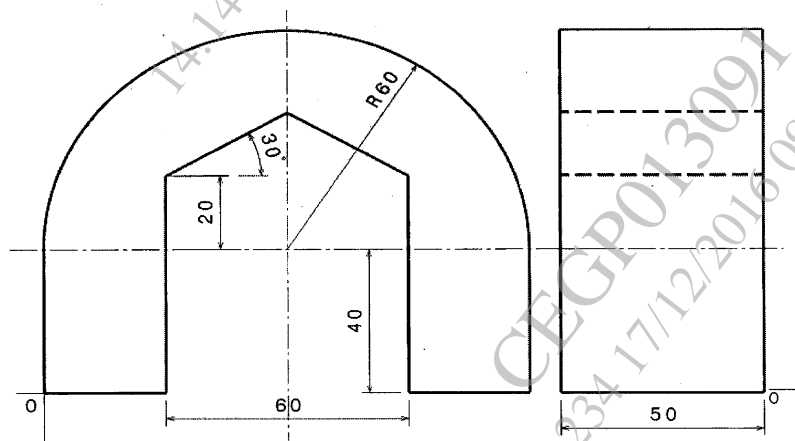


Fig. 3

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P.T.O.

Or

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

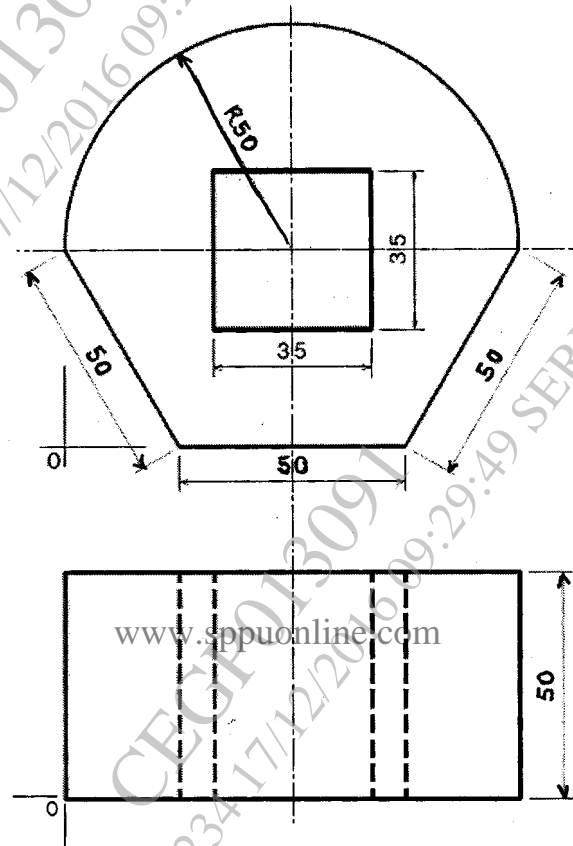


Fig. 4