

**RVK/KW/13/6553**

**Faculty of Engineering & Technology**  
**First Semester B.E. (C.B.S.) Examination**

**ENGINEERING GRAPHICS—I**

**Paper—VI**

Time : Three Hours]

[Maximum Marks : 40

**INSTRUCTIONS TO CANDIDATES**

- (1) All questions carry marks as indicated.
- (2) Solve **FOUR** questions as follows :
  - (i) Q. No. 1 OR Q. No. 2
  - (ii) Q. No. 3 OR Q. No. 4
  - (iii) Q. No. 5 OR Q. No. 6
  - (iv) Q. No. 7 OR Q. No. 8
- (3) Due credit will be given to neatness and adequate dimensions.
- (4) Retain the construction lines.
- (5) Use of Drawing instruments is permitted.
- (6) Assume suitable data wherever necessary.

1. (a) A coin of 30 mm diameter rolls along a straight line on a flat surface. Draw the curve traced out by a point 'P' on its circumference for one complete revolution. 5
- (b) The front view and top view of a line measures 45 mm and 55 mm resp. Their end projections are 40 mm apart and an end of the line is 10 mm above HP and in the VP. Draw projections and determine the true length and true inclination of the line. 5

OR

2. (a) A ball thrown up in the air reaches a maximum height of 150 m and travels a horizontal distance of 100 m. Draw an appropriate curve tracing the path of the ball. 5
- (b) A line AB equally inclined to both the planes is in the profile plane. End A of the line is 50 mm above HP while end B is 10 mm above HP and 40 mm is front of VP. Draw projections of line AB and determine its true length. 5
3. (a) A composite plane consisting of equilateral triangle of 50 mm and a semi-circle on one of its side, with surface inclined at  $45^\circ$  to HP. While the diameter of the semicircle is parallel to HP and inclined at  $60^\circ$  to VP. Draw projections. 5

- (b) A hexagon of 25 mm side has a corner in the VP and its surface makes an angle of  $30^\circ$  with the VP. The front view of the diagonal through that corner is inclined at  $45^\circ$  to XY. Draw the projections. 5

OR

4. A tetrahedron of 30 mm side is freely suspended from a corner of a face. Draw the projection when the axis as a vertical plane makes an angle of  $50^\circ$  to VP. 10
5. (a) Fig 1. shows the pictorial view of an object. Draw its : 5
  - (i) top view
  - (ii) front view from X.

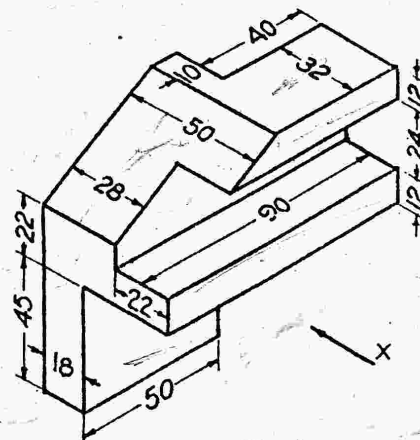


Fig. 1  
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(b) Fig. 2 represents the pictorial view of a component part. Draw its two views. 5

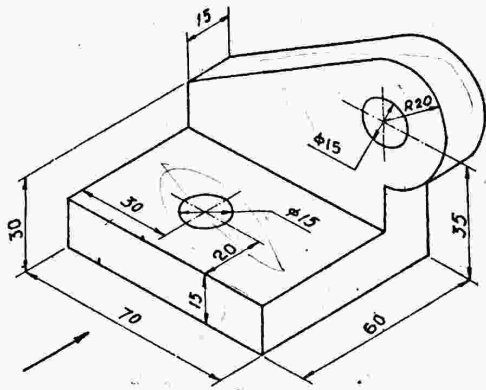


Fig. 2  
OR

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(Contd.)

6. Fig. 3 shows the pictorial view of a machine part. Draw the following views :

- (i) Front view
- (ii) Top view
- (iii) Side view.

Give dimensions, scale used and also draw the symbol of method of projection. 10

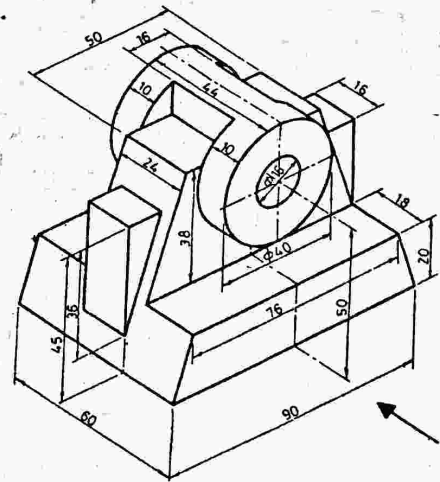


Fig. 3

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(Contd.)

7. The front and side view of an object is shown in Fig. 4. Draw isometric view and indicate the direction of viewing. 10

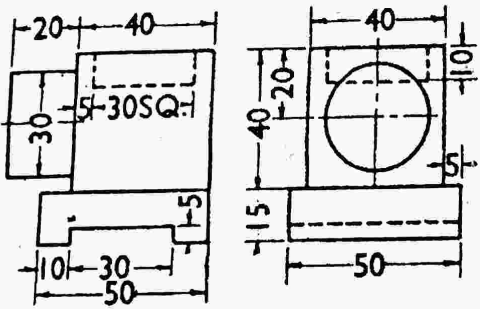
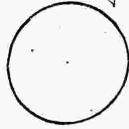


Fig. 4



OR

8. (a) Construct an iso metric scale. 2  
 (b) A sphere of 30 mm is resting centrally on top of a hexagonal prism of side 30 mm and axis 50 mm long, keeping an edge of base perpendicular to VP. 8