

- NB : (1) Question No.1 is **compulsory**. Solve **any three** out of remaining **five** questions.
 (2) Use your **Judgement** for **any unspecified dimension**.
 (3) Use **First Angle** method of projection only.
 (4) Retain **all construction lines**.
 (5) **Figures** to the **right** indicate full **marks**.
 (6) All dimensions are in **mm**.

1. (a) A circle of 50mm diameter rolls along a straight line without slipping, draw the curve traced by a point 'P' on the circumference of the circle for one complete revolution. 6
- (b) The pictorial view of a machine part is given in Fig. Draw 4
- (a) Front View in the direction of 'X' 4
- (b) Top View 4
- (c) Insert at least 10 major dimensions 1

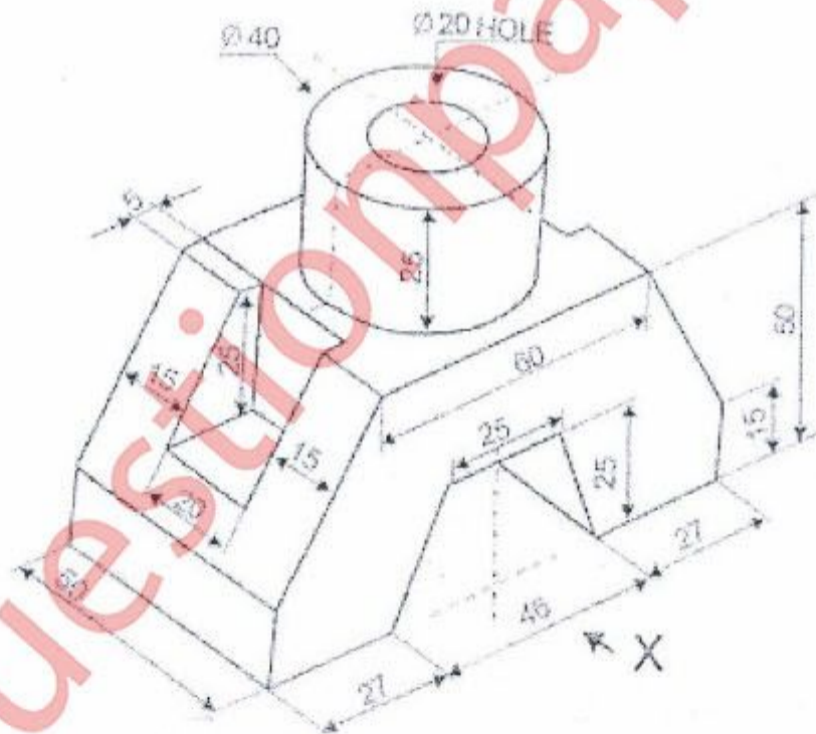


Fig.1b

2. Figure shows a pictorial view of a machine part, Draw: 5
- (a) Sectional Front View looking along 'X' (Section A-A) 4
- (b) Top View 4
- (c) LHSV 2
- (d) Insert at least 10 major dimensions. 2

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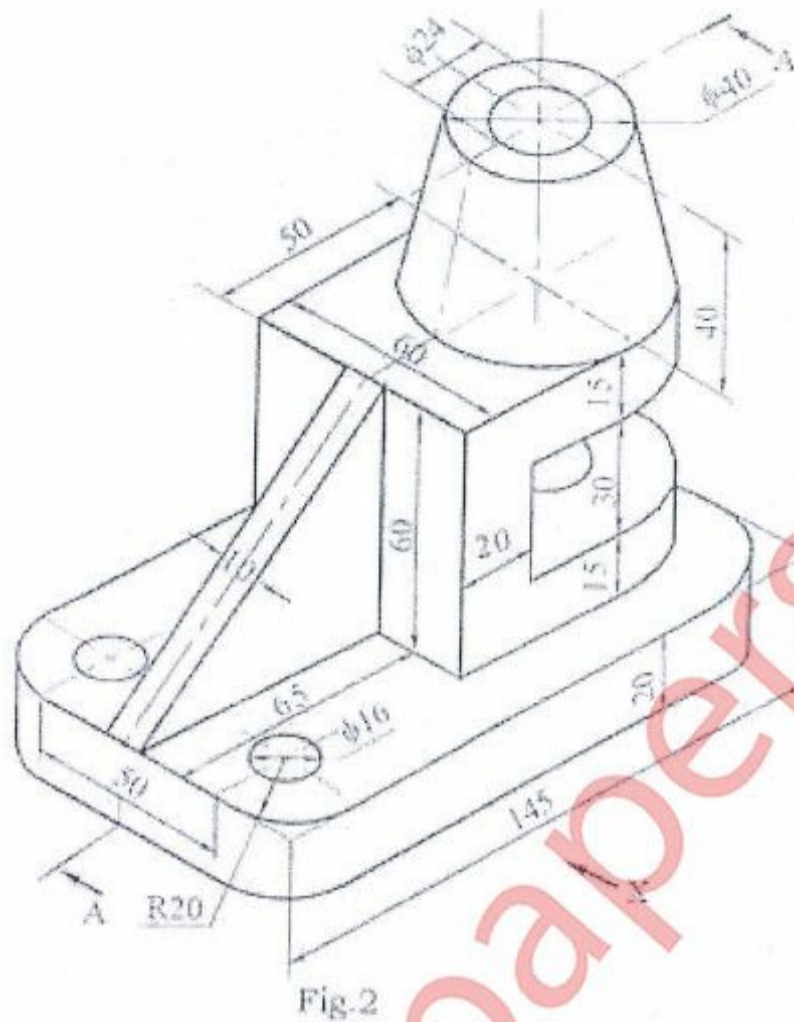


Fig.2

3. A pentagonal pyramid of 30mm edge of base and 65mm length of axis has a 30mm edge on the HP. The axis is inclined at 30° to HP, and 45° to VP. Draw the projections. 15
4. (a) A cylinder of base diameter 50 mm and height 70 mm is resting on one of the base point on H.P. with axis inclined at 45° to H.P. parallel to V.P. Draw its projections. 6
- (b) Draw an isometric view of the following object using natural scale. 9

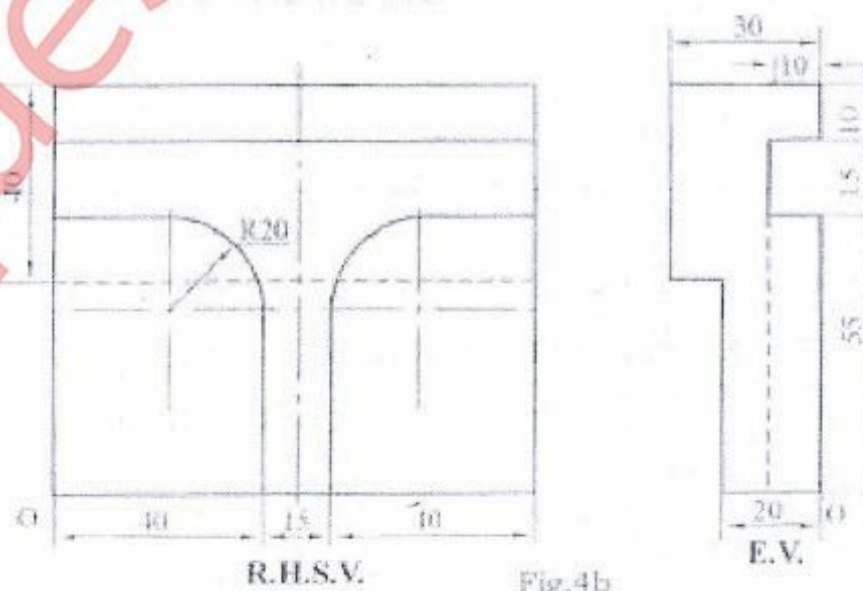


Fig.4b

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5. A right circular cone of diameter 60 mm and length of axis 65 mm is resting on HP on its base. It is cut by a cutting plane perpendicular to VP and inclined to HP such that the true shape is a parabola of height 50mm. Draw FV, sectional TV and the true shape of section. 15
6. (a) A line AB 90mm long is inclined at an angle of 30° to HP and 45° to VP. Its end point 'A' is 15mm above HP and 20mm in front of VP. Draw the projections when point 'B' is in the third quadrant. 9
- (b) Draw an isometric view of the following object using natural scale. 6

