

(3 Hours)

Marks : 60

Instructions:

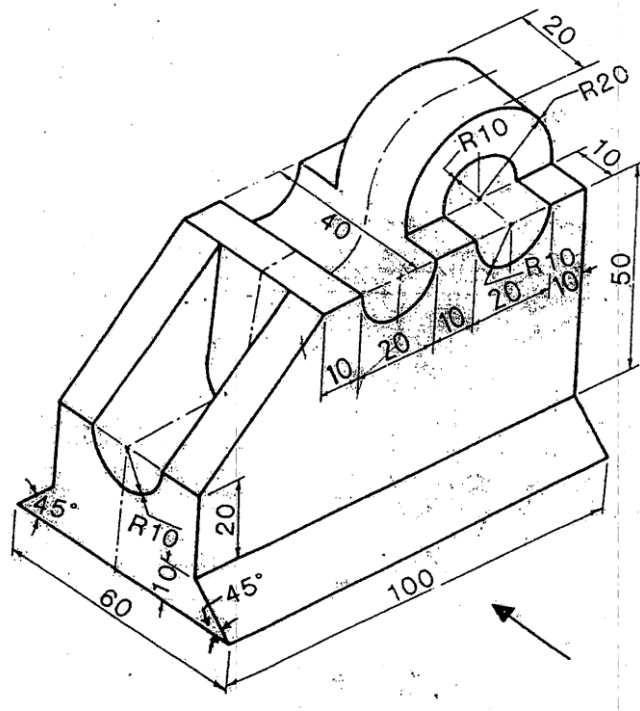
1. Question no 1 is compulsory.
2. Answer any three questions from the remaining five.
3. All dimensions are in millimeters.
4. Retain all construction lines.
5. Use scale 1:1 only.
6. Figures to the right indicate full marks.
7. Use first angle method of projection only.
8. Assume suitable additional data, if necessary and mention it clearly.

Q1 a) A circle of diameter 60 mm rolls without slipping on a vertical surface for half revolution and then on a horizontal surface for remaining half revolution. Draw the locus of a point “P” which is initially in contact with wall. Name the curve. **6**

b) Figure given below shows pictorial view of an object. Draw the following views-

Front view **5**

Top view **4**

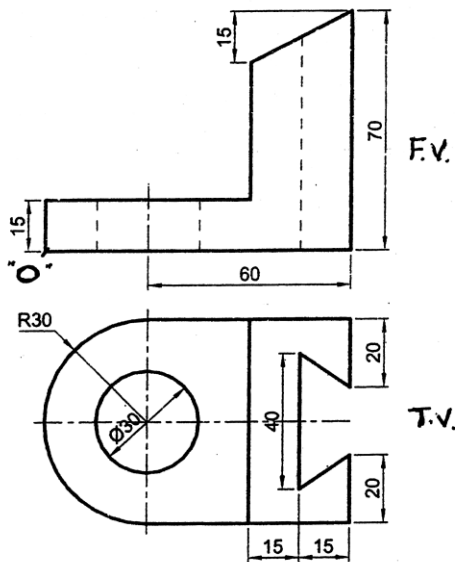


Q4 A pentagonal pyramid side of base 30 mm, axis 60mm is resting on its base on HP with one edge of base parallel to VP and nearer to VP. A vertical section plane inclined at 45° to VP cuts the pyramid at a distance of 9 mm from the axis. Draw

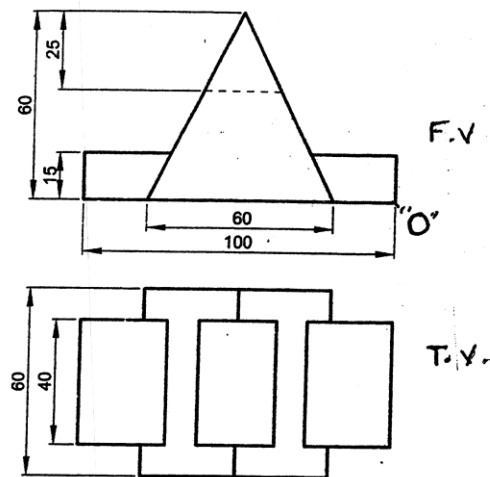
- Sectional front view 3
- Top view 3
- True shape of section 3
- and development of lateral surface of retained part of the pyramid. 6

Q5 a) draw the projections of a cylinder 60 mm diameter and 70 mm long, lying on HP on its curved surface with its axis inclined at 30° to VP. (and parallel to HP) (Stage 1: 2 marks, Stage 2: 4 marks)

b) The front view and top view of an object are shown in figure below. Draw its isometric view.



Q.5 (b)



Q.6 (b)

Q6 a) The top view of a 75 m long line AB measures 65 mm, while the length of its front view is 50 mm. It's one end A is in the HP and 12 mm in front of VP. Draw its projections and determine its inclinations with HP and VP. **8**

b) The front view and top view of an object are shown in figure above. Draw its isometric view. **7**

