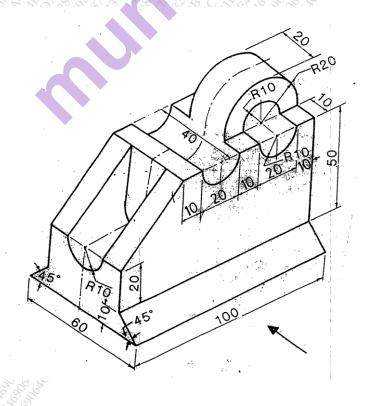
(3 Hours) Marks : 60

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

Front view 5

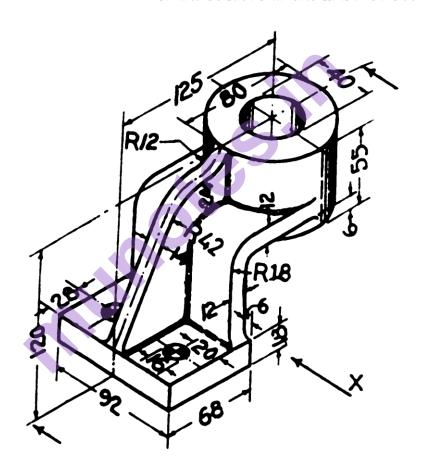
Top view 4



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Q2 Figure below shows pictorial view of an object. Draw the following views-

Sectional Front view	
Top view	
Side view from left	
Give 10 major dimensions	



Q3 A hexagonal pyramid, base 25 mm side and axis 55mm long, has one of its slant edges on the H P. A vertical plane containing that edge and axis is inclined at 45° to VP. Draw its projections when the apex is nearer the VP.

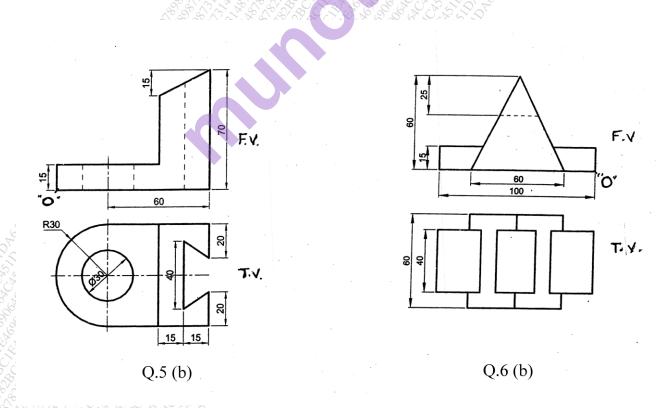
(Stage 1: 3 marks, stage 2: 5 marks, stage 3: 7 marks)

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**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		
Top view		
True shape of section		
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.



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



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