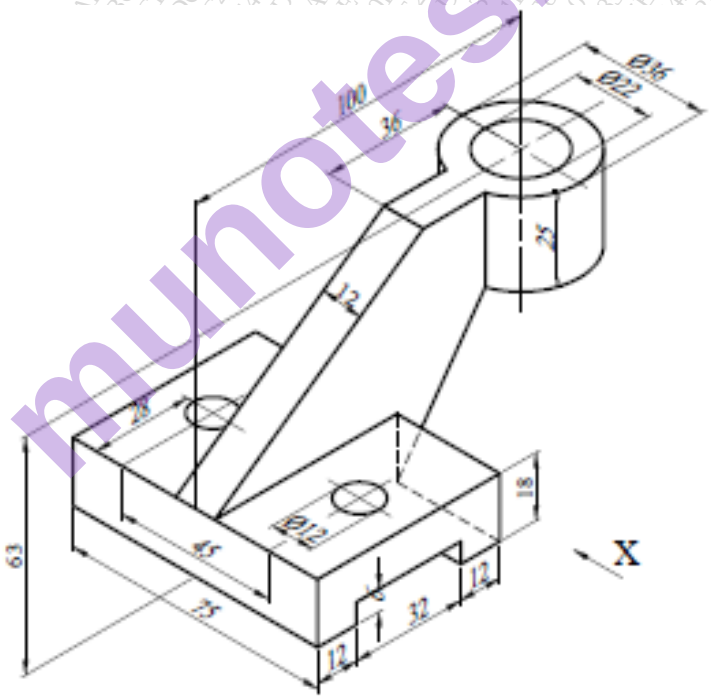
Q. P. Code : 50064

(**3** hours) [Total Marks: **60**]

N.B (1) Question **No. 1** is **compulsory**. Solve **any Three** out of remaining five questions.
(2) Use your **Judgment** 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.**

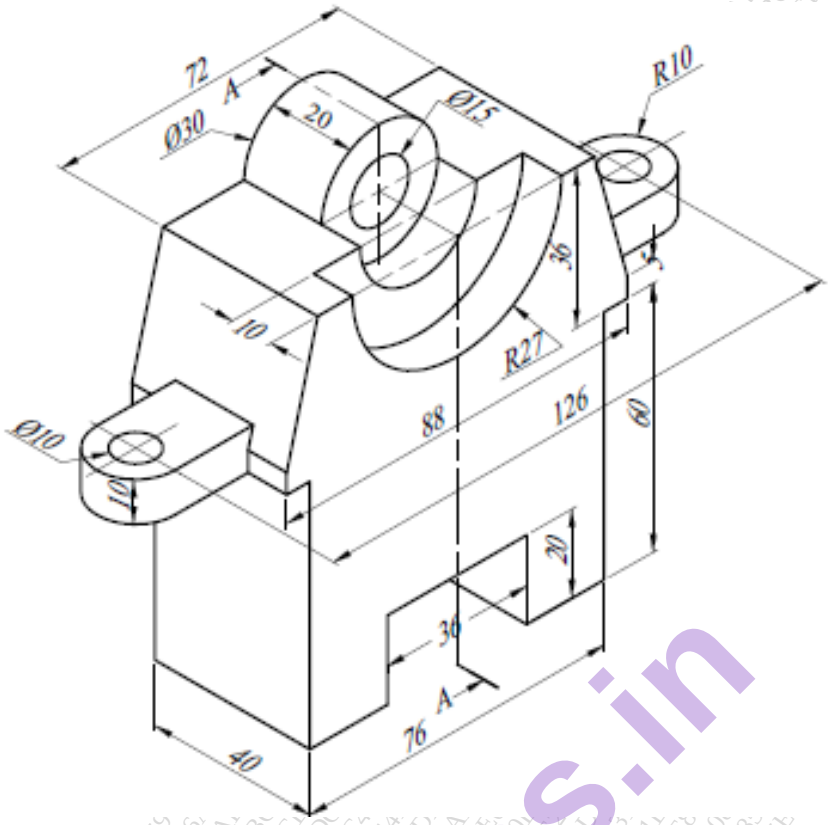
1. **(a)** A wheel of 50 mm diameter rolls on a straight horizontal line. Draw the locus of a point 'P' on the periphery of the wheel for one revolution of the wheel. Initial position of point 'P' on the wheel is in contact with the straight line. **6**

(b) Figure below shows a pictorial view of an object. Using first angle method of projection draw the following orthographic views:
a) Front View (along direction X) **4**
b) Left Hand Side View **4**
Insert 6 dimensions **1**



2. Figure below shows a pictorial view of an object. Using first angle method of projection draw the following orthographic views:
a) Elevation View **4**
b) Sectional Side View (Along A-A) **4**
c) Plan View **5**
Show at least 10 major dimensions **2**

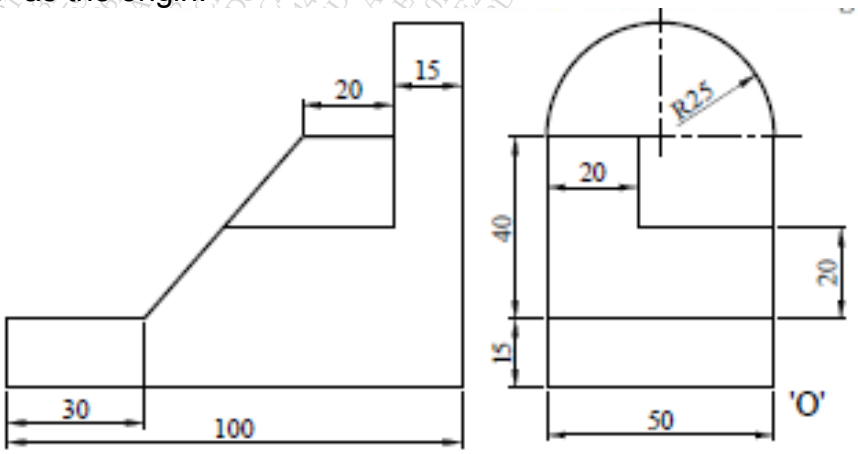
TURN OVER



3. A pentagonal pyramid, side of the base 35 mm and axis 70 mm long, is lying on its base corner on H.P. One of its triangular surface is parallel to H.P. and perpendicular to V.P. The base edge containing that triangular surface is parallel to both H.P. and V.P. Draw projections of the solid, when its apex is nearer to the observer. **15**

4. **(a)** A cylinder of base diameter 50 mm and height 70 mm has its axis inclined at 60° to VP and parallel to HP. Draw its projections when one of the point of base circular rim rests on VP. **6**

(b) Figure shows two views of an object. Draw the Isometric View taking 'O' as the origin. **9**



5. A right circular cone with base diameter 50mm and axis 65mm long, rests on its base on HP. It is cut by an AIP inclined at 45° to HP and bisects the axis of cone. Draw the FV, Sec. TV and TSS. Also draw development of remaining portion of the cone. **15**

6. **(a)** A line AB 70 mm long has its end A on HP ad 25 mm in front of VP. Its top view and front view measures 60 mm and 40 mm respectively. Draw the projections of the line, if the end point B lies in first quadrant. Also determine its inclinations with HP and VP. **9**

(b) Figure shows two views of an object. Draw its Isometric View taking 'O' as the origin. **6**