## S. 3 <br> TECHNICAL DRAWING <br> TIME: 2 HOURS

## INSTRUCTIONS

- This paper consists of two sections. Attempt any four questions at least one from each section
- All questions should be done on the paper provided
- Neatness is MUST


## SECTION A

1. The figure below shows a view of a right circular cylinder which rolls along the surface ABC without slipping. Plot the locus of point P on the circumference of the cylinder when the cylinder makes one revolution.

2. Without the use of a protractor, construct the plane figure shown below and transform it into a square of equal area.

3. Details of a spannerfor a hexagonal nut are shown in the figure below. Draw this out line to full size showing clearly all constructions and points of contact.


## SECTION B

4. The front and plan views of a bracket are given in the figure below. Draw full size, the isometric projection of the bracket having corner $\mathbf{M}$ as the lowest point.


PLAN
5. The figure below shows an elevation of a hexagonal pyramid cut as shown.

Draw the:
(a) Elevation.
(b) Complete plan.
(c) True shape of section $\mathrm{X}-\mathrm{X}$.


