Total No. of Questions—8] [Total No. of Printed Pages—3

BE–I/11(A)

236209

(New Course)

ENGG. GRAPHICS—COURSE NO. ESC-102

Time Allowed—3 *Hours* *Maximum Marks*—100

Note :— There shall be total eight questions, four from each section. *Five* questions will have to be attempted selecting at least *two* questions from each section. Use of calculator is allowed.

Section A

1. Draw one convolution of the Archemedian Spiral represented by the polar equation R = 32 + 7θ, where R is in mm and θ in radians. Draw tangent and normal to curve at point 55 mm from the pole.

2. The front view *a'b'c'd'* of a rectangular lamina ABCD of 30×60 mm sides is a square of 30 mm side when its side AB is in the VP and the side AD is making an angle of 20° to the HP. Draw its projections fulfilling the given conditions.

3. A pentagonal pyramid side of base 30 mm and height 66 mm is held such that one of its base edges is on HP and the highest point of the base is 26 mm above the HP, while its axis is parallel to VP. Draw the front and top views of the pyramid in the given position. Also draw an auxiliary front view on an

[*Turn over*

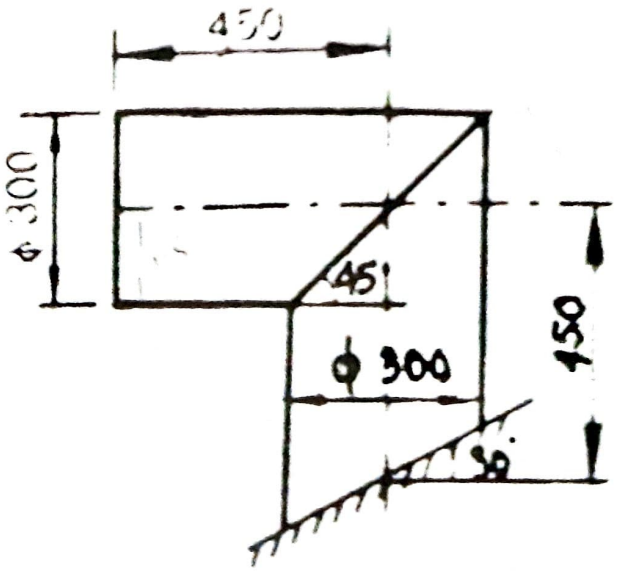
auxiliary plane perpendicular to the HP and inclined at 30° to the edge on which it is resting such that the base is visible.

4. A right regular square pyramid, edge of base 35 mm and height 50 mm, rests on its base on HP with its base edges equally inclined to VP. A section plane perpendicular to the VP and inclined to the HP at 32° cuts the pyramid bisecting its axis. Draw the fornt view and true shape of the truncated pyramid.

Section B

5. A connecting rod end of diameter 40 mm has a rectangular block, 50 mm wide and 20 mm thick forged at its end. The two portions are joined by fillet of R 20 mm. Draw the projections of the rod showing curves of intersection.

6. Develop the pattern for the given solid pipe fitting :



7. A cube of 30 mm edge is placcd centrally on top of a cylindrical block of diameter 52 mm and 20 mm height. Draw the isometric projection of solids.

8. Draw the Front view, Top view and Side view for the given figure.