Roll No. ..... Total Pages : 2

BT-2/M-22 **42038**

ENGINEERING GRAPHICS AND DESIGN

Paper–ES–109A

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit.

UNIT–I

1. (a) What is the significance of Engineering Drawing. 8

   (b) Discuss various types of scales used in Engg. Drawing. 7

2. Define following : 15

   (a) Cycloid. (b) Involute.

   (c) Hyperbola.

UNIT–II

3. Draw the projection of points on common reference line, considering distance between projectors as 30 mm. 15

   (a) Point A, 25 mm above HP, and 25 mm behind VP.

   (b) Point B, 20 mm Below HP, 25 mm behind VP.

   (c) Point C, Both in HP and VP.

   (d) Point D, in the HP, and 25 mm behind VP.

4. A straight line AB having length 50 mm is inclined 45° to HP and 30° to VP. Draw the projection of line AB if its one end A is 15 mm above HP and 10 mm in front of VP. 15

UNIT–III

5. A pentagonal pyramid of base side 25 mm and axis 55 mm is resting on its base in the H.P. with an edge of the base parallel to the V.P. A horizontal section plane cuts the pyramid bisecting the axis. Draw its front view and top sectional top view. 15

6. A cylinder 50 mm in diameter and 65 mm long is resting on its base with its axis perpendicular to HP. It is cut by a cutting plane perpendicular to VP, inclined 45° to HP and passing through a point on the axis, 25 mm from the top. Draw the front view, sectional top view and development of the lateral surface of the cylinder. 15

UNIT–IV

7. (a) Draw the construction of isometric scale. 15

   (b) Give the isometric views of plane by considering suitable examples.

8. Draw the orthographic view of the solid shown below : 15