BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI, PILANI
SECOND SEMESTER 2022– 2023
BITS F110 (ENGINEERING GRAPHICS)
MIDSEMESTER EXAM (OFFLINE and CLOSED BOOK)

A

Duration: 1 hour   **Max Marks**: 70

Name: ID: Signature:

- Save your work frequently, read question carefully and draw accordingly. Use blank spaces for rough work.

- COLOR CODE: Visible lines → White/black Continuous, Hidden lines → Red Hidden2, Center lines → Blue Center, Construction lines → Cyan Continuous, Locus lines → Yellow Continuous, Dimension and extension lines → Magenta Continuous, Dimension text → Black/White, CCW → Counterclockwise; CW → Clockwise

- Save the .dwg file as 'ID number_First name' and ensure that your file is transferred to the pen drive.
- Remember to mark attendance.

Q1. Draw the orthographic projections of front view, top view, and side view of the given isometric drawing in third angle projection **[25]**
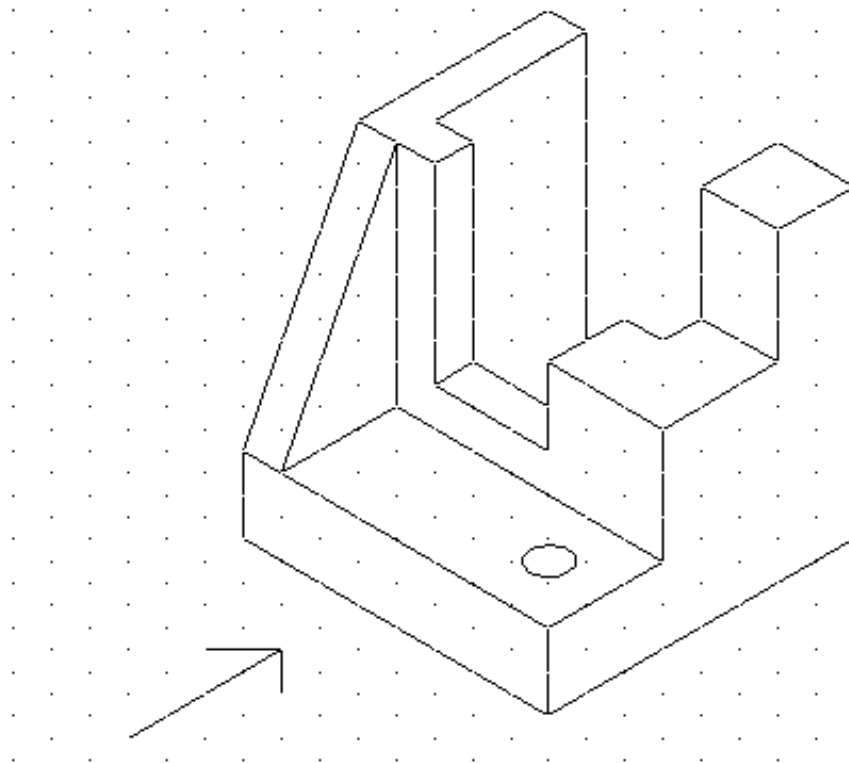
Q2. Line AB has point A 25 mm behind VP and 20 mm below HP. The point B is to the left of A. The TV of line AB makes an angle 45° CCW with the VP and point B is 10 mm above HP. The end projector distance is 36 mm. Draw its projections, find the true length and true inclinations w.r.t. HP and VP (Take 1 grid spacing as 5 mm) **[25]**

Q3. A hexagonal plate, with a negligible thickness, and each side 30 mm, has an edge in the VP. A circular hole of 32 mm diameter has been punched at the centre of the plate. The surface of the plate is inclined at 50 deg CW to the VP, and the edge on which it rests is inclined at 30 deg CW to the HP. Draw the front and top views of the plate. Find the apparent length of the largest diagonal parallel to the resting edge in the top view [Take 1 grid spacing as 5 mm, solve in first quadrant]. **[20]**

------------------------------------- **Best Wishes** ---