

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI, PILANI CAMPUS

FIRST SEMESTER 2021– 2022

BITS F110 (ENGINEERING GRAPHICS)
COMPREHENSIVE EXAM (OFFLINE and CLOSED BOOK)

Set:A

Duration: 90 Minutes for Solving + 10 minutes for Uploading

Max Marks: 80

NOTE:

- **Save your work frequently** and follow the note given for every question and draw accordingly.
- **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
- Cutting Plane: Color- Orange, Line type- Center line type, Thickness- 0.35 mm
- Cut/discarded portion: Students should make a copy of the final figure after they have done all the operations and transfer of points, paste it towards the right and then delete/trim the part which has been removed by section plane.
- Cut and exposed section hatching: Hatching should be using thin lines. Color - white/black. The hatching pattern scale should be appropriate, which means it should look like hatching. Should not be too dense or expanded.
- CCW → Counterclockwise; CW → Clockwise
- It is mandatory to submit ‘.dwg’ file’ along with screenshot(s) of your solutions
- Please upload both ‘.dwg’ file and one screenshot file of all solutions on Google Classroom. Please make sure that all your solutions are clearly visible in the screenshot. If and only if all solutions are not clearly visible in a single screenshot, you may submit separate screenshots of solutions for the different questions.
- The ‘.dwg’ file name should be your **ID number_First name**. It is your responsibility to properly upload and turn in your ‘.dwg’ and screenshot files in your respective Google Classroom page.
- You will be allowed to permanently leave the examination room only after the end of submission time.

NAME:

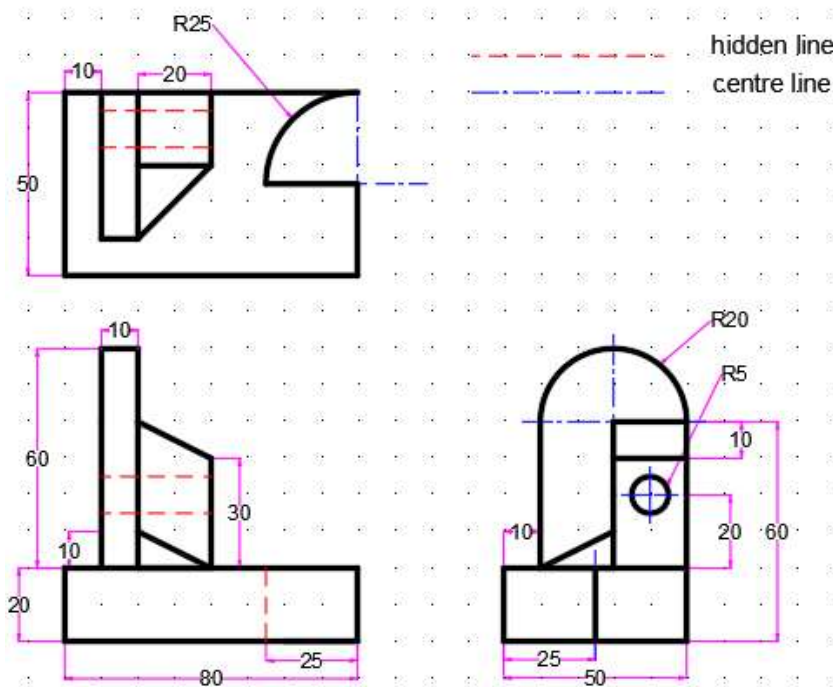
PRACTICAL SECTION:

BITS ID:

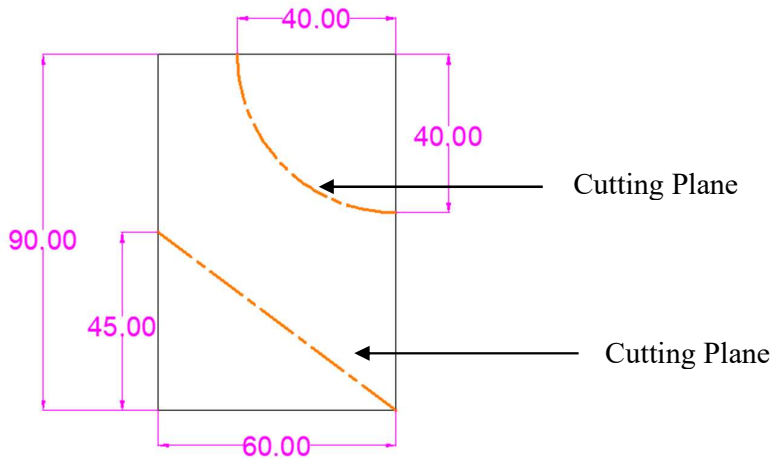
YOUR SIGNATURE:

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1. A pentagonal pyramid with base edge 125mm and height 275mm is lying on one of its triangular faces on ground, apex towards right and axis parallel to VP. It is cut by a sectional plane perpendicular to VP and inclined to HP 60deg CW. The plane is passing through a point 100mm from apex on the axis. Draw sectional top view of the pyramid. Trim edges which have lost their identity in both views. Solve in third angle. 1 square grid = 25mm. Hatch the sectional surface. **[30]**

2. Draw the isometric view for the figure given below (Take 1 square grid=10) [25]



3. A circular cylinder of diameter 60 mm and height 90 mm is resting on HP. The cylinder is cut as shown below. Draw the development of the lateral surfaces of the remaining cylinder from the left-most generator in the CCW direction. Solve in first angle. 1 square grid = 5mm. [25]



Thank you