

**Roll No.**

**Total No. of Pages : 03**

**Total No. of Questions : 09**

**B.Tech.(AI & DS/ AI&ML/ Block Chain/  
CE/CSE/CS/IOT/DS/CSD/EE/EEE/ECE/ETE/FT/IT/ME/Robotics & Artificial  
Intelligence/Internet of Things and Cyber Security including Block Chain  
Technology) (Sem.-1,2)**

# ENGINEERING GRAPHICS & DESIGN

**Subject Code : BTME101-21**

**M.Code : 93799**

**Date of Examination : 31-05-2025**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION - B & C** have **FOUR** questions each.
3. Attempt any **FIVE** questions from **SECTION B & C** carrying **EIGHT** marks each.
4. Select at least **TWO** questions from **SECTION - B & C**.

## SECTION - A

**1. Write short notes on :**

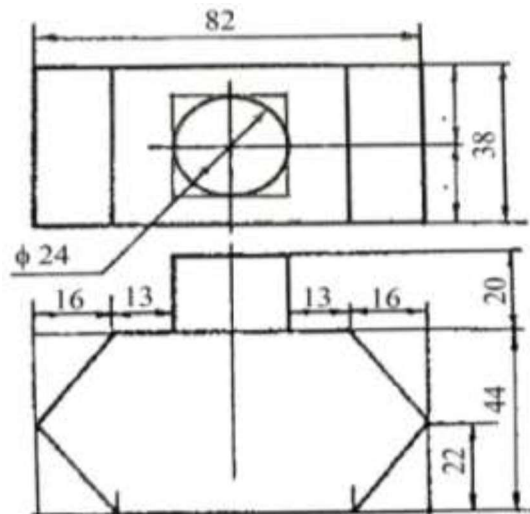
- Explain the terms isometric drawing and isometric projection.
- Show by means of traces, a plane inclined to HP and perpendicular to VP.
- Draw projections of a line lying on HP and inclined to VP with the help of a suitable free hand drawing. Also, show traces.
- How will you represent Liquid and Wood on a drawing sheet?
- Name the methods to determine the true length and true inclinations of a straight line.
- What is the difference between plain scale and diagonal scale?
- What are the standard sizes of drawing sheets?
- Explain with the help of a simple sketch (i) size dimensions (ii) location dimensions.
- Write the following statement using single stroke capital vertical letters of 12 mm size :**  
  
"BE THE CHANGE THAT YOU WISH TO SEE IN THE WORLD".
- Explain the following terms with a suitable freehand drawing: Apex, Slant Height, Base Rim and Generator.

### SECTION - B

2. On a plan, a line 22cm long represents a distance of 440m. Draw a Diagonal Scale to read up to single meter. Mark 287m on the scale.
3. A point "N" is 68 mm behind VP and 79 mm below HP. Draw its projections and find out its shortest distance from the reference line.
4. Plan and elevation of a line "AB" 75mm long, measure 65mm and 50 mm respectively. End A is in HP and 12mm from VP. Draw its projections and determine its inclinations to the reference planes when the line lies in first quadrant.
5. A line "EF" is lying on profile plan. Its end "E" is 45mm in front of VP and 10mm above HP and end "F" is 10mm in front of VP and 50mm above HP. Draw its projections and determine the true length, traces and inclination with the reference planes.

### SECTION - C

6. A Pentagonal plane with a 30mm side has an edge on HP, the surface of the Plane is inclined at  $45^\circ$  to the HP and perpendicular to VP. Draw its Projections assuming the plane in first quadrant.
7. A right regular Hexagonal Prism having a base with a 30 mm side and 75 mm long axis has an edge of its base on HP. Its axis is parallel to VP and inclined at  $45^\circ$  to HP. Draw its projections assuming the prism lying in first quadrant.
8. A right regular pentagonal prism, edge of base 20mm and height 50 mm has a central circular hole of diameter 20 mm drilled centrally through it, along with its axis. Draw its isometric projection.
9. **Draw the isometric drawing with the following orthographic projections :**



**NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.**