

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/ECE/ETE/IT/ME/EEE/Industry Integrated/**

ENGINEERING GRAPHICS & DESIGN

Subject Code : BTME-101-21

M.Code : 93799

Date of Examination : 10-01-2026

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

l. Answer the following :

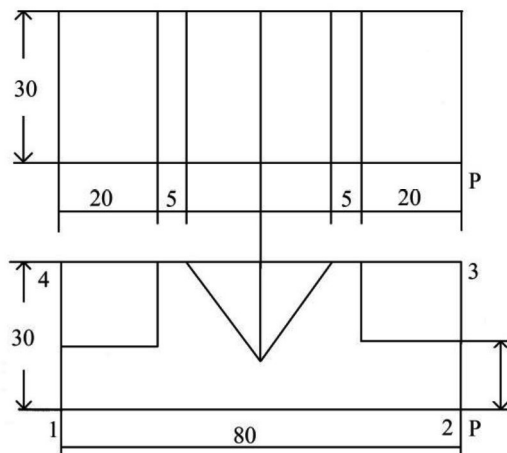
- Write the following statement using single stroke capital vertical letters of 12 mm size : **"MONEY AND SUCCESS DONT CHANGE PEOPLE; THEY MERELY AMPLIFY WHAT IS ALREADY THERE"**
- Draw projections of a line lying on a Profile Plane whose front view is larger than its top view. Which angle is bigger " θ " or " ϕ "? Show with the help of a suitable free hand drawing.
- Explain the difference between 1st Angle Projection and 3rd Angle Projection.
- Show conventional representation of Concrete and Wood on a Drawing sheet.
- Explain Frustum and Truncated Solids with a suitable drawing.
- Draw a regular pentagonal lamina of side 68 mm.
- What are isometric lines and non-isometric lines?
- Show by means of traces, a plane perpendicular to HP and inclined to VP.
- Explain with suitable example the various types of dimensions.
- Draw projections of a line inclined to HP and parallel to VP with a suitable freehand drawing. Also, show traces.

SECTION - B

2. Line "CD" 68 mm long; has its end "C" on HP and 22 mm from VP. The line is inclined at 42° to the "HP" and 35° to the "VP". Draw its projections when the line is lying in first quadrant.
3. The distance between Delhi and Agra is 200 km. In a railway map, it is represented by a line 5 cm long. Find its R.F. Draw a diagonal scale to show single km and long enough to measure up to 600km.
4. A point "K" is 42mm below HP and lying in 3rd quadrant. Its shortest distance from the reference line is 68 mm. Draw its projections and find out its distance from VP.
5. A line "AB" is contained by a profile plane. Its end "A" is 44mm behind VP and 12, below HP and end "B" is 8mm behind VP and 52mm below HP. Draw its projection and find TL, θ , ϕ , HT and VT.

SECTION - C

6. A regular hexagonal lamina of side 20 mm, perpendicular to HP and lying on HP on one of its sides. The plane is parallel to VP and 20 mm from VP. Draw its projections and show traces.
7. A cone of base diameter 46 mm and axis 62 mm long; is lying on HP on its generator with axis parallel to VP. Draw its projections assuming the cone lying in first quadrant.
8. A right regular triangular prism of base edge 38mm, axis 72mm long is resting on its rectangular face on HP, with axis perpendicular to VP. Draw its projections.
9. **Draw the isometric view of a V-Block; Front and Top views are shown as follows :**



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.