

Roll No.

Total No. of Pages : 02

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**B. Tech. (AE/AI&ML/AI&DS/A&R/CE/CSE/DS/EE/EEE/
ECE/FT/IT/ME/Internet of Things and Cyber Security including Block
Chain Technology) (Sem.-1,2)**

ENGINEERING GRAPHICS & DESIGN

Subject Code : BTME-101-21

M.Code : 91335

Date of Examination : 12-01-2026

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

1. Answer briefly :

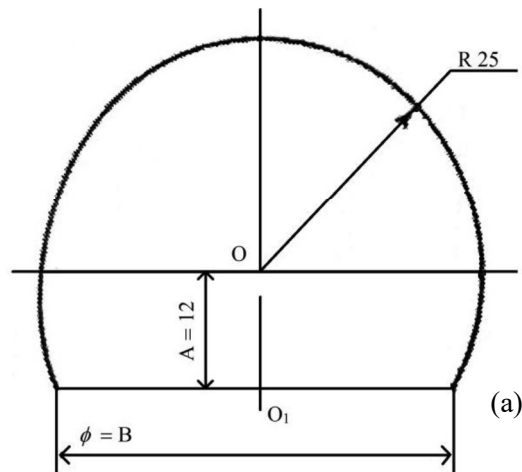
- Write the following statement using single stroke capital vertical letters of 10 mm size: **"A LITTLE PROGRESS EACH DAY ADDS UP TO BIG RESULTS"**.
- Draw projections of a line inclined to VP and parallel to HP with a suitable freehand drawing. Assume suitable dimensions.
- Show by means of traces, a plane perpendicular to HP and inclined to VP.
- Explain with the help of an example the unidirectional system of placement of dimensions.
- Draw a regular Pentagonal Lamina of side 62mm.
- How will you represent Wood and Glass on a drawing sheet?
- Differentiate right and oblique solids with a suitable drawing.
- Draw the projections of a point lying on HP and VP.
- What do you mean by Representative Fraction (RF)?
- Explain the following terms with a suitable freehand drawing : Apex, Slant Height, Base Rim and Generator.

SECTION - B

2. A map is to be drawn with RF 1:50. Construct a scale to read meters, decimeters and centimeters and long enough to measure up to 6 m. Show on it a distance of 5.82 m.
3. End "A" of line AB is 28mm above HP and 52mm in front of VP and end "B" 17mm behind the VP and 29mm below the HP. The end projectors are 45mm apart. Draw the projections and find TL, θ , ϕ , HT and VT.
4. A point "G" is 56mm behind VP and 62mm below HP. Draw its projections and find out its shortest distance from the reference line.
5. Line "KL" 68mm long; has its end "K" both in HP and VP. It is inclined at 42° to the "HP" and 33° to the "VP". Draw its projections when the line is lying in first quadrant.

SECTION - C

6. A right regular square pyramid of base edge 59mm and axis 72 mm long; rests on its base on HP with its base edges equally inclined to VP. Draw its projections assuming the pyramid in 1st quadrant.
7. A circular lamina of diameter 42mm is inclined to VP at 42° and perpendicular to HP and it is resting on VP on a point on its circumference. Draw its projections.
8. A cone of base rim diameter 48mm and axis 68 mm lying on HP on a point of its circumference such that the generator is perpendicular to HP. Draw its projections assuming the cone lying in first quadrant and axis parallel to VP.
9. **Draw isometric drawing of the following cut sphere :**



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.