Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

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

ENGINEERING GRAPHICS & DESIGN

Subject Code : BTME101-21

M.Code : 91335

Date of Examination : 06-05-2025

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 a short notes on :

a) How will you represent Glass and Wood on a drawing sheet?

b) Show by the means of traces, a plane perpendicular to both HP and VP.

c) Explain with the help of an example the Aligned system of placement of dimensions.

d) Draw a regular Pentagonal Lamina of side 55mm.

e) Explain the types of methods of Dimensioning with a suitable drawing.

f) Draw the projections of a line inclined to VP and parallel to HP with a suitable freehand drawing. Assume suitable dimensions. Also, show traces.

g) Draw the projections of a line lying on a Profile Plane whose top view is larger than its front view. Which angle is bigger " θ" or "ϕ"? Show with the help of a suitable free hand drawing.

h) Explain Frustum and Truncated Solids with a suitable drawing.

i) Print the following statement with single stroke capital vertical letters of height 10mm :

IT'S SIMPLE TO BE HAPPY, IT'S VERY DIFFICULT TO BE SIMPLE

j) Explain the importance of a title block.

SECTION - B

2. Construct a Diagonal Scale of R. F= 1:5000 to read up to single meter and long enough to measure up to 600m. Assume suitably any missing data.

3. A point "M" is 65 mm in front of VP and 52 mm above HP. Draw its projections and find out its shortest distance from the reference line.

4. Plan and elevation of a line "AB" 60mm long, measure 54mm and 45 mm respectively. End A is 15mm from HP and 10mm from VP. Draw its projections and determine its inclinations to the reference planes when the line lies in First quadrant.

5. End "A" of line AB is 15 mm above HP and 48 mm in front of VP and end "B" 13 mm behind the VP and 28 mm below the HP. The end projectors are 52 mm apart. Draw the projections and find TL, θ, Φ, HT and VT.

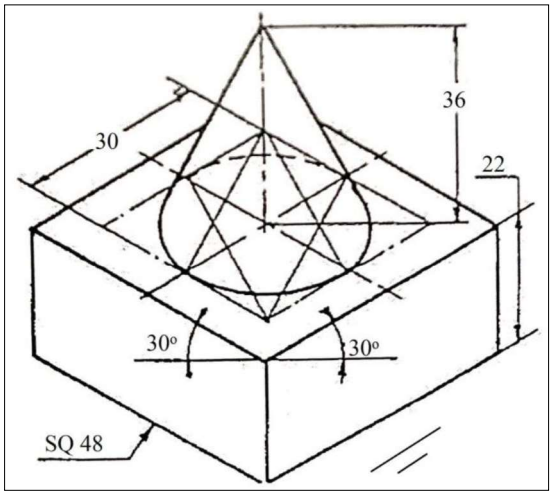
SECTION - C

6. A regular hexagonal lamina of side 45 mm having a central circular hole of diameter 45 mm is resting on one of its corners on VP such that one of its base edges is perpendicular to VP. Draw its projections when the said lamina is parallel to HP.

7. A right regular triangular prism of base edge 40mm, axis 65mm long is resting on its rectangular face on HP, with axis parallel to both HP and VP. Draw its projections.

8. A right regular square pyramid of base edge 45 mm and axis 52 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.

9. Draw isometric Projections of the following :



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.