

Roll No.

Total No. of Pages : 03

Total No. of Questions : 09

B. Tech. (AE/AI & ML/ AI & DS/EEE/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 : 19-06-2024

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 atleast TWO questions from SECTION - B & C.

SECTION-A

I. Write short notes on :

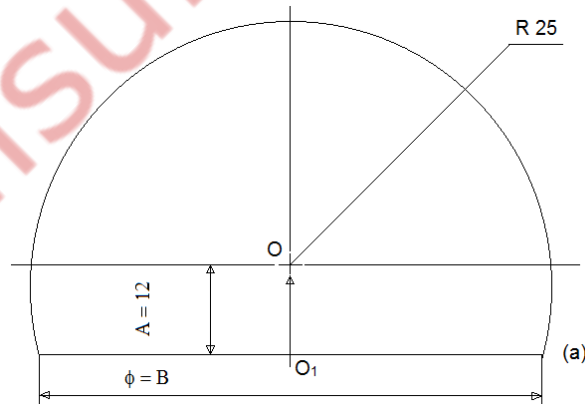
- a) Draw projections of a line inclined to VP and lying on HP with a suitable freehand drawing. Also, show traces.
- b) What are isometric lines and non-isometric lines?
- c) How will you represent Liquid and Glass on a drawing sheet?
- d) Write the following statement using single stroke capital vertical letters of 12 mm size: "CLEANLINESS IS A SIGN OF OUR TRUE BEAUTY, NOT JUST A DUTY"
- e) What do you mean by representative fraction (RF)?
- f) Draw a regular Pentagonal Lamina of side 52mm.
- g) Explain the methods of placement of Dimensions with a suitable freehand drawing.
- h) Show by means of traces, a plane perpendicular to VP and HP.
- i) 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.
- j) Explain Frustum and Truncated Solids with a suitable freehand drawing.

SECTION-B

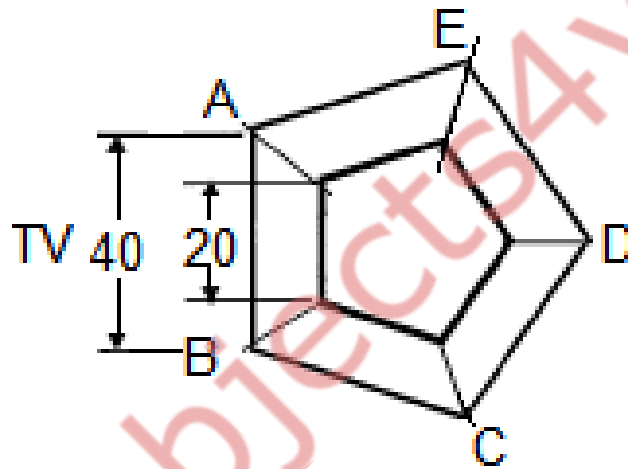
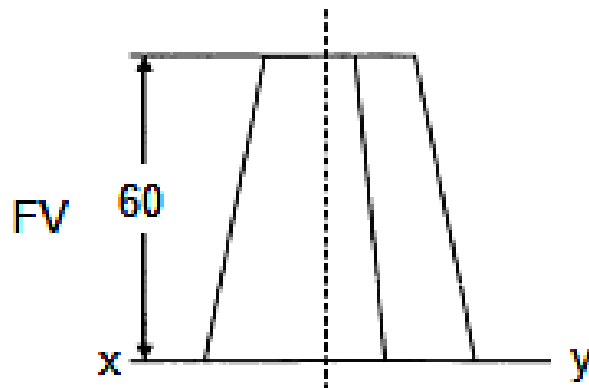
2. A point "R" is 49mm behind VP and 65mm below HP. Draw its projections and find out its shortest distance from the reference line.
3. End "P" of line 'PK' is 15 mm above HP and 44 mm in front of VP and end "K" 10 mm behind VP and 29 mm below HP. The end projectors are 58 mm apart. Draw the projections and find TL, θ , ϕ , HT and VT.
4. Line "MK" 68 mm long has its end "M" both in HP and VP. It is inclined at 42° to the "HP" and 37° to the "VP". Draw its projections when the line is lying in first quadrant.
5. 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 maximum 600 km.

SECTION-C

6. A cone of base diameter 48 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.
7. A circular lamina of diameter 54mm, having a central square hole of side 25mm, is resting on HP on a point on its circumference. The sides of the square hole are equally inclined to HP. Draw its projections when the said lamina is perpendicular to HP and parallel to and 20 mm from VP.
8. Draw isometric drawing of the following cut sphere:



9. Draw isometric view of the Frustum of a Pentagonal Pyramid whose orthographic projections are given 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.