

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(AI & DS/ AI&ML/ Block Chain / CE /
CSE/CS/CSD/EE/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 : 28-05-2024

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) Explain right and oblique solids with a free hand drawing.
- b) What are isometric lines and non-isometric lines?
- c) How will you represent Metal and Concrete on a drawing sheet?
- d) Write the following statement using single stroke capital vertical letters of 12 mm size: "YOU ONLY LIVE ONCE, BUT IF YOU DO IT RIGHT, ONCE IS ENOUGH".
- e) Define engineering drawing. Why it is called universal language of engineers?
- f) What is the difference between first angle and third angle projection? Which angle projection is recommended by B.I.S. now a days?
- g) Explain the methods of placement of Dimensions with a suitable freehand drawing.
- h) Show by means of traces, a plane perpendicular to HP and inclined to VP.
- i) Draw projections of a line lying on VP and inclined to HP with the help of a suitable free hand drawing. Also show traces.
- j) Explain Frustum and Truncated Solids with a suitable freehand drawing.

SECTION-B

2. A point "W" is 53mm in front of VP and 78mm above HP. Draw its projections and find out its shortest distance from the reference line.
3. A line "AB", 65mm long has its end "A" 20mm above HP and 25mm in front of VP. The end "B" is 40mm above HP and 65mm in front of VP. Draw the projections of "AB" and shows its inclination with the reference planes.
4. The end "P" of a straight-line "PQ" is 20 mm above the HP and 30 mm in front of VP. The end "Q" is 15 mm below the HP and 45mm behind the VP. If the end projectors are 50 mm apart. Draw the projection of "PQ" and determine the true length, traces and inclination with the reference planes.
5. Distance between two railway stations is 600km, which is represented on a railway map by a line 15cm long. Construct a Diagonal Scale to read up to single km and indicate a distance of 346km on the scale.

SECTION-C

6. A pentagonal Prism having a base with a 30 mm side and 60mm long axis, is resting on one of its rectangular faces on the HP with axis parallel to HP and VP. Draw its projections.
7. A Hexagonal plane with a 30mm side has its surface parallel to and 20mm in front of VP. Draw its Projections, when a side is inclined at 45° to HP.
8. A cube of 30 mm edge is place centrally on top of a cylindrical block of diameter 52 mm and 20 mm height. Draw its isometric projection.
9. Draw isometric view of the cone placed on hexagonal prism with the following orthographic projections:

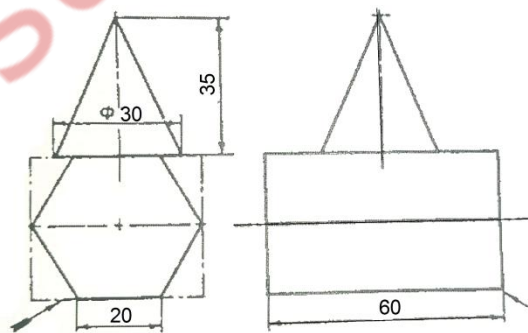


Fig.1

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.