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

Total No. of Questions : 09

B.Tech. (CE/CSE/EEE/EE/ECE/IT/ME/BT) (Sem–1,2)

ENGINEERING DRAWING

Subject Code : BTME-102

M.Code : 54102

Date of Examination : 17-06-2023

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 EACH from SECTION - B & C.**

SECTION–A

1. Answer briefly :

a) Draw 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"?

b) Draw a requlars Hexaqonal Lamina of side 45mm.

c) Explain section or hatching lines used in section of solids.

d) Draw traces of an Auxiliary Vertical Plane (AVP).

e) Give examples of solids of revolution.

f) What is difference between plane scale and diagonal scale?

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

h) What is a sectional view? Why they are important in engineering drawing?

i) Explain the importance of studying intersection of surfaces/solids in engineering applications.

j) Explain with suitable example the various types of dimensions.

SECTION–B

2. The distance between two stations "A" and "B" is 100 kilometers and its equivalent distance on railway map measures 2.5 centimeters. What is the RF? Draw a diagonal scale showing single kilometer and show 455 kilometers on the scale.

3 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.

4. A "regular hexagonal lamina of side 45mm having a central circular hole of diameter 45mm resting on one of its corners on HP such that one of its base edges perpendicular to HP. Draw its projections when the plane is vertical and inclined to VP at 30°.

5. A cone of base diameter 50mm and axis 65mm long; is lying on HP on a point of its circumference such that its generator is perpendicular to HP. Draw its projections assuming the object lying in first quadrant.

SECTION–C

6. A right regular pentagonal prism, edge of base 30mm and height 75mm, resting on its base on HP, is being cut by a section plane (AIP) inclined to HP at 45° and meeting the axis at a distance 18mm from its top end. Develop the lateral surface of the cut prism.

7. A right regular hexagonal pyramid side of base 35mm and height 65 mm rests on its base on the HP such that one of its base edges is perpendicular to VP. A section plane parallel to VP cuts the pyramid at a distance 8mm from the axis. Draw its top view and sectional front view.

8. A vertical square prism of base edge 42mm and axis 85mm long, is completely penetrated by a horizontal square prism of base edge 31mm and axis 92mm such that their axis bisecting each other at right angles. The vertical prism is resting on HP on its base such that the base edges are equally inclined to VP. The axis of horizontal prism is parallel to VP such that its base edges are equally inclined to VP. Draw the projections showing lines of intersection.

9. A right regular hexagonal prism, edge of base 20 mm and height 50 mm. has a central circular hole of diameter 20 mm drilled centrally through it, along its axis. Draw its isometric drawing.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.