Roll No. | | | | | | | | | | | |

Total No. of Questions: 09 **Total No. of Pages: 02**

B. Tech. (Sem. 1,2)
ENGINEERING DRAWING
Subject Code: BTME-102
Paper ID: A1110

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 contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **Section C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

1.

a) What do you mean by Orthographic projection?
b) Name different type of scales.
c) Define trace.
d) Draw symbols of first and third angle projection system.
e) Differentiate between right and oblique solids.
f) What is Axonometric projection?
g) Differentiate between plane and lamina.
h) Define sectioning.
i) What is purpose of development?
j) Classify solids.

SECTION B

2. For the left side view and right side view draw the projections of the following points whose positions are given by their coordinates (X,Y,Z) in mm
a) A (+35,+15,+25)
b) B (-35, 15, -25)
c) C (-35 +15, 25)
d) D (-35, +15, +25)

3. A line EF is contained by a profile plane. Its end E is 45 mm behind the VP and 10 mm below HP and end F is 10mm behind VP and 50 mm below the HP. Draw the projections and determine its true length, θ, Φ, HT and VT.

4. Draw the projections of a circle of 70 mm diameter having the end A on a diameter AB in HP, the end Bin the VP and the plane of the circle inclined at 30° to the HP and at 60° to the VP.

5. A frustum of a cone, diameter of base 60 mm, diameter of top surface 30 mm and axis 45 mm long is lying on HP on one of its generators. The plane containing the axis and the generator makes an angle of 45° to VP. Draw its front and top views.

SECTION C

6. A right circular cylinder, diameter of base 50 mm and height 80 mm rests on its base rim such that its axis is inclined at 45° to the HP and is parallel to the VP. A section plane parallel to the HP cuts the axis at a distance of 50 mm from its base. Draw its front view and sectional top view.

7. A cone of 50 mm diameter and 70 mm long resting on its base on HP is completely penetrated by a cylinder of 25 mm diameter. The axis of the cylinder is parallel to HP and VP and intersects the axis of the cone at a distance of 25 mm from the base. Draw the projections of the solids, showing the curves of intersection.

8. A right circular cone of base diameter 40 mm and height 50 mm rests on its base on HP. A section plane perpendicular to VP and inclined to HP at 45° cuts the cone bisecting its axis. Draw the projections of the truncated cone and develop its lateral surface.

9. Draw isometric drawing of a cylindrical block of 70 mm diameter of 30 mm thickness having a cube of 40 mm resting centrally on top of it and a cone of base diameter 30 mm and height 35 mm is resting centrally on cube.