Roll No……..….. **Total No. of Printed Pages: 2**
Total No. of Questions: [09]

B. Tech Civil (Semester – 2nd)
ENGINEERING DRAWING
Subject Code: BMEE0102
Paper ID: [110011]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:

a) Define Engineering Drawing.
b) Define orthographic projection.
c) Differentiate between isometric projection and isometric drawing.
d) What do you mean by Representative Factor (RF)?
e) Draw the Frustum of cone.
f) Differentiate between the right angle solid and oblique solid.
g) Explain horizontal trace of the line.
h) Explain the plain scale.
i) Show the aligned system of dimensioning.
j) Differentiate Plane and Lamina.

Section – B **(5 marks each)**

Q2. A point P is 50 mm above HP and is in first quadrant. Its shortest distance from the XY line is 70 mm. Draw its plan and elevation.

Q3. A straight line MN, 60 mm long makes an angle of 40^o to VP and parallel to HP. The end M is 20 mm in front of VP and 30 mm above HP. Draw its projections.

Q4. A right cylinder, 40 mm base diameter and 60 mm long axis is resting on HP on one point of base circle such that its axis makes 45° inclination with HP and 40° inclination with VP. Draw its projections.

Q5. A Hexagonal plate with a 30mm side and negligible thickness has its surface perpendicular to the HP and inclined at 45^0 to the VP. Draw the projection of plate when one of its sides is parallel to and 15 mm in front of the VP.

Q6. A hexagonal prism of base side 20mm and height 40mm has a square hole of side 16mm at the center. The axes of the square and hexagon coincide. One of the faces of the square is parallel to the face of the hexagon. Draw the isometric projection of the prism with hole to full scale.

Section – C **(10 marks each)**

Q7. A pentagonal prism of 30 mm base edges and 60 mm long is resting on its base with an edge of base inclined at 45° to VP. The prism is cut by a sectional plane inclined at 30° to HP and passes through a point 35 mm from the base along its axis. Draw the projection of truncated prism.

Q8. Draw the development of the lateral surface of the lower portion of a cone of base diameter 50mm and axis 70mm. The solid is cut by a sectional plane inclined at 40^0 to HP and perpendicular to VP and passing through the midpoint of the axis.

Q9. Draw the orthographic projection of the given figure in the first angle projection. All the given dimensions are in mm.