Register No.: ………………………………   Name: …………………………………………………………

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)
(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)
FIRST SEMESTER B.TECH DEGREE EXAMINATION (R,S), DECEMBER 2023
(2020 SCHEME)

Course Code :   **20EST110**
Course Name: **Engineering Graphics**
Max. Marks :   **100**   **Duration: 3 Hours**

Retain Construction lines. Show necessary dimensions.
(Answer any ONE question from each module, each question carries 20 marks)

MODULE I

1. The front view of the line AB is 65 mm long. The point A is 15 mm above HP and 20 mm in front of VP. The point B is 40 mm above HP. Draw the projections of the line if the true length of AB is 80 mm. Mark the traces and measure the true inclinations of the line with respect to the reference planes.   (20)

OR

2. The end projectors of line PQ is 50 mm apart. The point P is 20 mm above HP and 30 mm infront of VP. The point Q is 70 mm above HP and 60 mm infront of VP. Draw the projection and determine the angle of inclinations with HP and VP. Also locate traces.   (20)

MODULE II

3. A square prism of 25 mm base and height 50mm is resting with one of its base edges on HP, the axis inclined 30^0 to HP. The top view of the axis is inclined 45^0 to VP also. Draw the projections of the solid.   (20)

OR

4. A hexagonal pyramid with base 20mm and height 50mm rests on an edge of its base such that the slant face containing the resting edge is inclined 40^0 to HP. The resting edge is inclined 30^0 to VP also. Draw the projections.   (20)

MODULE III

5. A pentagonal pyramid of base side 30 mm and axis length 80 mm is resting on HP with its base, one base edge parallel and nearer to VP. It is cut by a section plane inclined at 45^0 to HP and passing through the mid-point of the axis. Draw the top view, sectional front view and true shape of the section   (20)

OR

6. An ant starts moving from the leftmost point on the circumference of the base circle of a cylindrical jar, base diameter 50 mm and height 80 mm. The ant moves one full round along the lateral surface and reaches a point on the top circle vertically above the starting point through a shortest path. Show the path of ant in FV of the cylinder. Find the shortest path travelled by the ant.   (20)

MODULE IV

7. A cone (diameter 30mm and height 50), is centrally placed on the top of a square slab of base 50mm and thickness 20mm. Draw isometric projection of the pair.   (20)

OR

8. A sphere of radius 25 mm is placed over the top of a hexagonal prism of base edge 25mm and height 70mm. Draw the isometric view of the combination.   (20)

MODULE V

9. A pentagonal pyramid of base edge 30 mm and axis 50 mm long is resting on its base with one base edge parallel and 10 mm behind PP. The station point is 20 mm infront of PP, 50 mm to the left of axis and 60 mm above GP. Draw the perspective view of the pyramid.   (20)

OR

10. Draw the top view, front view and side view of the object shown below. Any missing dimension may be suitably assumed.

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