

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**SECOND SEMESTER B.TECH DEGREE EXAMINATION (Regular), MAY 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. An 80 mm long line PQ has its end P in the HP and 15 mm in front of the VP. The line is inclined at 30° to the HP and its top view is inclined at 60° to the reference line. Draw the projections of the line PQ, mark its traces and determine true angle inclination with the VP. (20)

OR

2. A line CD 80mm long is inclined at 40° to HP and 50° to VP. The point C is 35mm above HP and 30mm in front of VP. Draw its projections and mark its traces. (20)

MODULE II

3. A square prism of base side 30 mm and length 50 mm has a base edge on HP, axis inclined at 35° to HP and the resting base edge is inclined at 45° to VP. 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° to HP. The top view of the axis is inclined 30° to VP. Draw the projections. (20)

MODULE III

5. A cone of diameter 40 mm and length of the axis 65 mm rests on its base with the axis perpendicular to the HP. It is cut by the cutting plane perpendicular to the VP, inclined at 45° to the HP and passing through a point on axis 25 mm from the top. Draw the front view, the sectional top view and the true shape of the section. (20)

OR

6. A regular pentagonal prism of base side 30 mm and height 70 mm resting upon HP on its base. An insect starts from a point on the base edge at the bottom, moves around the lateral surface of the prism and reaches the top after completing one revolution along the shortest path. Draw the development and sketch the path of the insect in the front view. (20)

MODULE IV

7. A sphere with 40mm diameter is surmounted centrally on the top of a cube with 60mm side. Draw the isometric projection of the combination of solids. (20)

OR

8. Draw an isometric view of a cone 40mm diameter and 50mm high placed centrally above a square block of 50mm side and 30mm thick such that the solids have a common axis. (20)

MODULE V

9. A rectangular pyramid base 35 mm x 45 mm and axis 50 mm long is resting on its base on the ground plane such that one of its longer edges of base is touching on the picture plane. Draw the perspective view of the pyramid, if the station point is 60 mm in front of picture plane 35 mm above ground plane and in the central plane which is 50 mm to the left of the axis of the pyramid. (20)

OR

10. Draw the elevation, plan and side view of the figure given below. Follow first angle projection. Front view is marked as F. (20)


