

Register No: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER B.TECH DEGREE EXAMINATION (S), AUGUST 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. A line PQ (80mm long) is inclined 45° to HP and 30° to VP. The end P is 20mm away from both VP and HP. Draw its projections and find the values of the apparent inclinations. Also mark the Horizontal and Vertical traces. (20)

OR

2. The end projectors of line AB is 50 mm apart. The point A is 20 mm above HP and 30 mm in front of VP. The point B is 70 mm above HP and 60 mm in front of VP. Draw the projection and determine the angle of inclinations with HP and VP. Also locate traces. (20)

MODULE II

3. Draw the projections of a triangular prism with base 30mm and axis 60mm, resting with one of its base edges on HP, axis inclined 45° to HP. The resting edge appears 30° inclined to VP. Assume the solid at any distance in front of VP. (20)

OR

4. Draw the projections of a cone having base diameter 50mm and axis 70mm, resting with one of its generators on HP and the top view of the axis inclined 40° to VP. (20)

MODULE III

5. A square pyramid of base side 40mm and axis length 80 mm is resting with its base on HP and one base edge parallel to VP. It is cut by a section plane inclined towards left at 45° to HP and passing through the mid-point of the axis. Draw its front view, sectional plan and true shape of section. (20)

OR

6. A regular hexagonal prism of base side 25 mm and height 70 mm is resting on HP with its base. An insect starts from a base corner, moves around the lateral surface of the prism and reaches the corresponding top corner after completing one round along the shortest path. Draw the development and sketch the path of the insect in the front view. Find the shortest path distance travelled by the insect. (20)

MODULE IV

7. A cube 40mm side rests on the ground with one base edge parallel to VP. A square pyramid of base 20mm and height 40mm rests centrally on the top of the cube. Draw the isometric view. (20)

OR

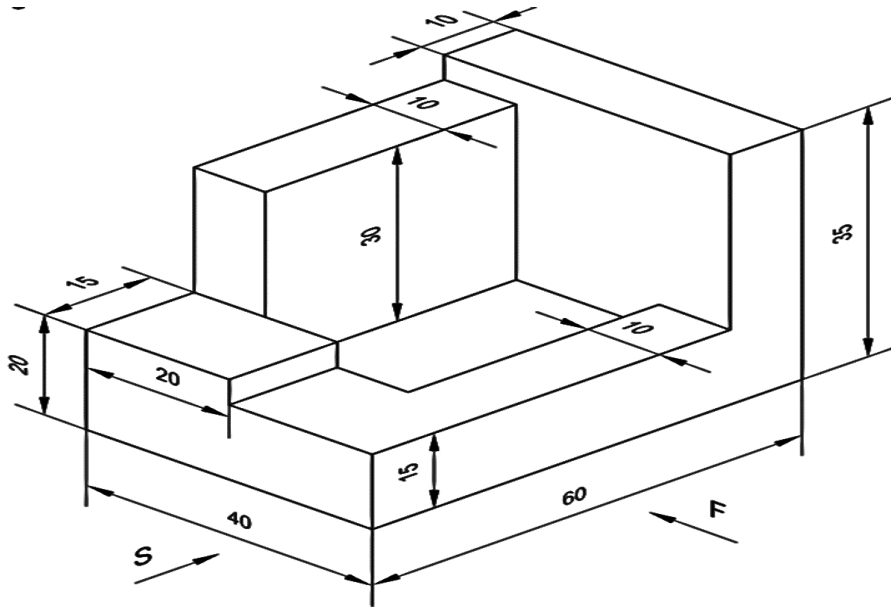
8. A sphere of radius 25mm is placed centrally over a square prism of base 40mm and height 60mm. Draw the isometric projection. (20)

MODULE V

9. A rectangular prism of base 30mm x 20mm and height 50mm long is resting with its base on ground plane, the longer edge of the base parallel to Picture Plane (PP) and 10mm behind the PP. The Central Plane is 40mm to the right of the solid and the station points are 45mm in front of Picture Plane and 60mm above Ground Plane. Draw the perspective view of the prism. (20)

OR

10. Draw the elevation, plan and side view of the figure given below. Follow first angle projection.



(20)
