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

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER B.TECH DEGREE EXAMINATION (Regular), JULY 2022

(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 straight-line AB 75mm long has one end 10mm above HP and 45mm in front of VP while the other end is 15mm above HP and 30mm in front of VP. Draw the plan and elevation of the line. Find the true inclination of the line with HP and VP. Also mark the traces of the line.   (20)

OR

2. A line CD 70mm long measures 60mm in top view and 50 mm in front view. The end C of the line is 10mm above HP and 20mm in front of VP. Draw the projections of the line and find its true inclinations with HP and VP. Also mark the traces of the line.   (20)

MODULE II

3. A square pyramid, base edge 40 mm and height 60 mm is resting on one of its corner points on HP. One of its slant edges is making an inclination of 45° with HP and its top view makes 30° with VP. Draw the projections of the pyramid; take the apex is nearer to VP.   (20)

OR

4. A pentagonal prism, base edge 20 mm and height 55 mm is resting on one of its base edges on HP. The axis of the prism makes an inclination of 40° with HP and the base edge resting on HP makes an inclination of 35° with VP. Draw the projections of the prism.   (20)

MODULE III

5. A cone of base diameter 50mm and axis 80 mm stands vertically with its base on HP. A section plane perpendicular to VP and inclined to at 40^0 to HP cuts the cone at a point 30mm from the apex. Draw the front view, sectional top view and true shape of section. Name the curve of the true shape of the section.   (20)

OR

6. A pentagonal pyramid, side of base 25 mm and height 70 mm, rests on its base on the ground with one of its base sides parallel to VP. A section plane perpendicular to VP and inclined at 30^0 to HP cuts the pyramid, bisecting its axis. Draw the development of the truncated pyramid.   (20)

MODULE IV

7. A cone of 40 mm base diameter and 60 mm long axis is centrally placed on the top of a cube of 60 mm edges. Draw isometric projection of the pair.   (20)
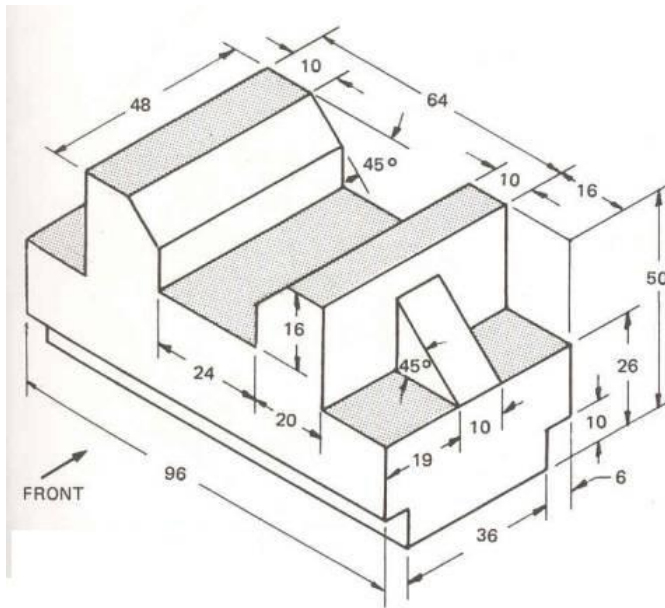
OR

8. A cylindrical slab of 60 mm base diameter and 50 mm thickness is resting on its base on HP. A sphere of diameter 40 mm is placed centrally on the top of the cylindrical slab. Draw the isometric view of the combination of solids.   (20)

MODULE V

9. A hexagonal pyramid of base 20 mm and height 60 mm rests on the ground with the nearest edge of base parallel to and 10 mm behind the picture plane. The station point is situated at a distance of 40 mm in front of the picture plane and 80 mm above the ground plane and 55 mm to the right of the apex. Draw the perspective view of the pyramid.   (20)

OR

10. Draw the orthographic views of the object shown in figure below, with dimensions. Assume missing data appropriately. Draw the (a) Front view (b) Right side view (c) Top view

(20)

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