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

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIRST SEMESTER B.TECH DEGREE EXAMINATION (S), FEBRUARY 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 AB 70mm long is inclined at 45^0 to HP and 30^0 to VP. The point   (20)
    A is 25mm above HP and 20mm in front of VP. Draw its projections
    and mark its traces.

OR

2. A line PQ is 70mm long, has a top view length of 50mm. The apparent   (20)
    inclination of the line in its front view (α) is 60^0. The point P is in HP
    and 25mm in front of VP. Find the true inclinations of the line with
    HP and VP. Mark its traces.

MODULE II

3. A cone of 40mm diameter and 60mm long is resting on HP on one of   (20)
    its generators. The top view of its axis is inclined at 45^0 to VP. Draw
    its projections.

OR

4. A pentagonal prism of 25mm base side and 60mm long is resting on   (20)
    one of its corners in HP. The long edge of the prism containing the
    corner is inclined at 35^0 to HP and the top view of the axis is inclined
    at 40^0 to VP. Draw its projections.

MODULE III

5. A cylinder of diameter 50mm and length of the axis 65mm rests on its   (20)
    base with the axis perpendicular to the HP. It is cut by the section
    plane perpendicular to the VP, inclined at 45^0 to the HP and passing
    through a point on axis 25mm from the top. Draw the front view, the
    sectional top view and true shape of the section.

OR

6. A triangular pyramid of 30mm side of base and height 50mm rests with its base on HP with one of its edges of the base parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 45^0 to HP and bisecting the axis. Draw the development of the truncated pyramid. (20)

MODULE IV

7. A square prism with base side 40mm and height 60mm is resting with its base on HP. A sphere of diameter 40mm is placed centrally on top of it. Draw the isometric view of the combination. (20)
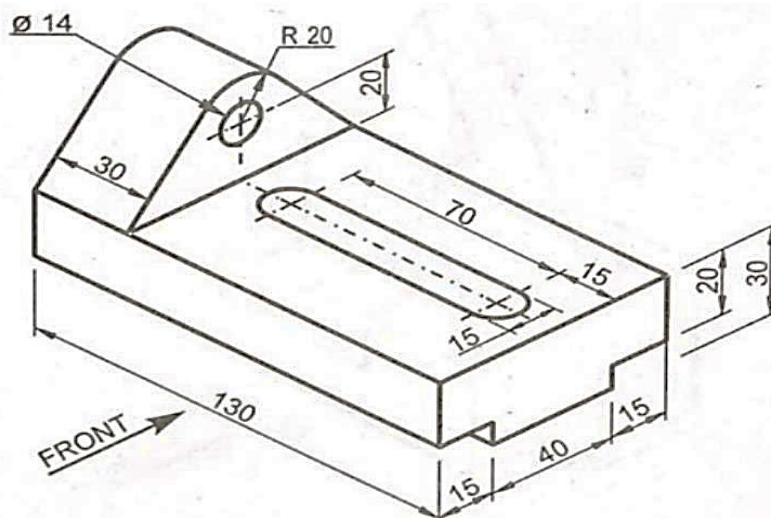
OR

8. A hexagonal prism (base edge 25mm and axis 70mm) is resting with its base on HP and two opposite base edges parallel to VP. Draw the isometric projection of the solid. (20)

MODULE V

9. A pentagonal pyramid of base 30mm and height 60mm rests on the ground with the nearest edge of base parallel to and 20mm behind the picture plane. The station point is situated at a distance of 50mm from the picture plane and 70mm above the ground plane and 50mm to the right of the apex. Draw the perspective view of the solid. (20)

OR

10. Draw the front view, top view and side view of the component shown in the figure. (20)

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