Sub. Code 241AG | **Hall Ticket Number** | | | | | | | | | | | **VR24**

VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(An Autonomous Institution)

I-B.Tech.–I-Semester Regular Examinations, February-2025

COMPUTER AIDED ENGINEERING GRAPHICS

Common to (CSE & IT)

Time: 3 Hours **Max. Marks: 60**

(Answer All Questions)

Note: Question paper consists of Part-A & Part-B.

- **Part-A** for 10M, ii) **Part-B** for 50marks
- **Part A** is compulsory, consists of 10 sub questions from all units carrying equal marks.
- **Part-B** consists of **10 questions** (numbered from 2 to 11) carrying **10marks** each. From each unit there are 2 questions and the students should answer one of them. Hence the student should answer **5 questions** from **Part-B**.

PART-A **(10Marks)**

1	a.	What is diagonal scale?	1M
1	b.	Enlist various types of conic sections.	1M
1	c.	What is regular plane and irregular plane?	1M
1	d.	Define a Straight Line.	1M
1	e.	List out the different views in orthographic projections.	1M
1	f.	Write note on three stages of obtaining projections of an oblique plane.	1M
1	g.	Write about the development of lateral surface of prism.	1M
1	h.	What type of solids can be accurately developed?	1M
1	i.	Draw the isometric view of square with side 30mm in any one plane.	1M
1	j.	Distinguish between isometric view and isometric projection.	1M

PART-B **(50Marks)**

2	a	The distance between two towns is 250 km and is represented by a line of length 50mm on a map. Construct a scale to read 600 km and indicate a distance of 530 km on it.	**5M**
2	b	Construct a scale of 1:5 to show decimeters and centimeters and long enough to measure up to 1 m. Show a distance of 6.3 dm on it.	**5M**

OR

3		Draw an ellipse when the distance of its focus from its directrix is 50 mm and eccentricity is 2/3. Also, draw a tangent and a normal to the ellipse at a point 70 mm away from the directrix.	**10M**

4		Draw the projections of the following points on a common reference line keeping the distance between their projectors 30 mm apart. (A) Point A is 20 mm below the H.P. and 50 mm in front of the V.P. (B) Point B is in the H.P. and 40 mm behind the V.P. (C) Point C is 30 mm in front of the V.P. and in the H.P. (D) Point D is 50 mm above the H.P. and 30 mm behind the V.P. (E) Point E is 20 mm below the H.P. and 50 mm behind the V.P.	**10M**

OR

5 An 80 mm long line PQ has its end P 10 mm above the H.P. and 25 mm in front of the V.P. The line is inclined at 30° to the H.P. and 60° to the V.P. Draw its projections. **10M**

6 A regular hexagon of 30mm side has a corner in the H.P. its surface is inclined at 45° to the H.P and the top view of the diagonal through the corner which is in the H.P makes an angle of 60° with the V.P. Draw its projections. **10M**

OR

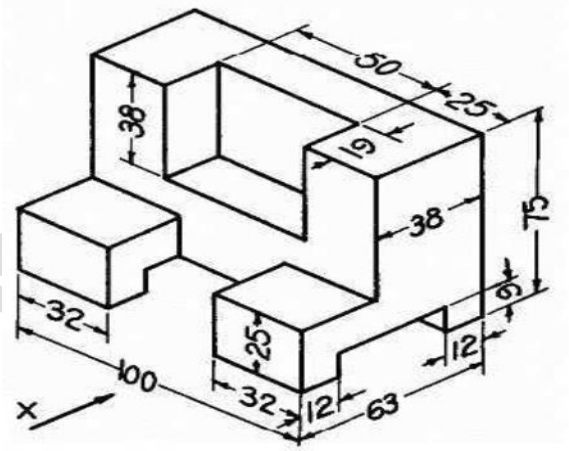
7 A pentagonal prism of base edge 30 mm and axis 60 mm rests on an edge of its base in the H.P. Its axis is parallel to V.P. and inclined at 45° to the H.P. Draw its projections. **10M**

8 Draw the projections of a cone, base 75 mm diameter and axis 100 mm long, lying on the ground on one of its generators with the axis parallel to the VP. **10M**

OR

9 A square prism of base side 30 mm and axis 60 mm is resting on its base on the H.P. with a rectangular face parallel to the V.P. Draw the development of the prism. **10M**

10 Draw the front, top and side view of the following machine part. **10M**



OR

11 A cylinder of base diameter 50 mm and axis 70 mm long rests on its base in H.P. Its axis is parallel to V.P. Draw the isometric projection of the solid. **10M**