

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech I Semester Supplementary Examinations, June/July – 2024

COMPUTER AIDED ENGINEERING GRAPHICS

(COMMON TO CSE & AIML)

Time: 3 Hours**Max. Marks: 60****Section – A (Short Answer type questions)****(10 Marks)****Answer All Questions**

| | Course Outcome | B.T Level | Marks |
|--|----------------|-----------|-------|
| 1. Why engineering graphics is used? | CO1 | L1 | 1M |
| 2. List any four conic sections? | CO1 | L1 | 1M |
| 3. What are the 3 planes of projection? | CO2 | L1 | 1M |
| 4. What is a hidden line? | CO2 | L1 | 1M |
| 5. Classify various solids. | CO3 | L2 | 1M |
| 6. Draw a cylinder with 10mm radius and 50 mm height. | CO3 | L2 | 1M |
| 7. What is the angle of a sector in development of a cone? | CO4 | L1 | 1M |
| 8. List the methods of development of surfaces? | CO4 | L1 | 1M |
| 9. What is the basic concept of isometric drawing? | CO5 | L1 | 1M |
| 10. Compare main scale and isometric scale? | CO5 | L2 | 1M |

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

| | | | |
|---|-----|----|-----|
| 11. A) Construct a scale of 1:40 to read metres and decimetres and long enough to measure 6 m. Mark on it a distance of 4.7 m. | CO1 | L3 | 10M |
| OR | | | |
| B) A circle of 50 mm diameter rolls along a straight line without slipping. Draw the curve traced out by a point P on the circumference, for one complete revolution of the circle. Name the curve. Draw a tangent to the curve at a point P on it. | CO1 | L3 | 10M |
| 12. A) An 80mm long line AB is inclined at 30° to V.P and is parallel to H.P. The end A is 20 mm above the H.P and 20 mm in front of the V.P, draw the projection of the line. | CO2 | L3 | 10M |
| OR | | | |
| B) An equilateral triangular lamina of 25 mm side lies with one of its edges on HP such that the surface of the lamina is inclined to HP at 60° . The edge on which it rests is inclined to VP at 60° . Draw the projections. | CO2 | L3 | 10M |
| 13. A) An Hexagonal Prism, having a base with a 30 mm side and 65 mm long axis, has an edge it's base in the VP Such that the axis is inclined at 30° to the VP and Parallel to the HP. Draw its Projections? | CO3 | L3 | 10M |
| OR | | | |
| B) A circular cone, 40 mm base diameter and 60 mm long axis is resting on HP, on one point of base circle such that it's axis makes 45° inclination with HP and 40° inclination with VP. Draw it's projections. | CO3 | L3 | 10M |

14. A) A cylinder of diameter 40 mm and height 50 mm is resting vertically on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a point 30 mm from the base. Draw the development of the lateral surfaces of the lower portion of the truncated cylinder
- OR
- B) A square pyramid of base side 25 mm and altitude 50 mm rests on its base on the HP with two sides of the base parallel to the VP. It is cut by a plane bisecting the axis and inclined at 30° to the base. Draw the development of the lateral surfaces of the lower part of the cut pyramid.
15. A) Draw an isometric view of a cylinder, with a 50mm base diameter and a 70mm long axis when i) The base is on the HP ii) when one of the generators is on the HP?
- OR
- B) Draw the i) Front view ii) Top View iii) Side view of the given figure (All dimensions are given in mm)

CO4 L3 10M

CO4 L3 10M

CO5 L3 10M

CO5 L3 10M

