Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SET B

SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2024

Semester : Semester III - 2022
Course Code : CSE2066
Course Name : Computer Graphics
Program : B.Tech.

Date : 08-JAN-2024
Time : 9:30AM - 12:30 PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS **5 X 2M = 10M**

1. DDA is a line drawing algorithm but why it is not an efficient line drawing algorithm?
(CO1) [Knowledge]
2. Draw the block diagram for 2D viewing pipeline.
(CO2) [Knowledge]
3. Describe the applications of Clipping in Computer Graphics.
(CO3) [Knowledge]
4. Classify types of Clipping
(CO3) [Knowledge]
5. Differentiate between 2D and 3D Transformation from World coordinates to Viewpoint coordinates.
(CO4) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **5 X 10M = 50M**

6. Extend the Cohen Sutherland line clipping algorithm to clip the line segment coordinate (30,60) and (60,25) against the clip window whose coordinates are (Xwmin,Ywmin)=(10,10) and (Xwmax,Ywmax)= (50,50).
(CO1) [Comprehension]
7. Differentiate between parallel projections from perspective projections with suitable diagrams.
(CO2) [Comprehension]

8. Answer the following questions:
A).With neat diagram explain Orthographic Projection.
B). List its advantages and disadvantages.
C). Distinguish orthographic projection with oblique projection

(CO3) [Comprehension]

9. Describe 3D Composite Transformation with a suitable example.

(CO4) [Comprehension]

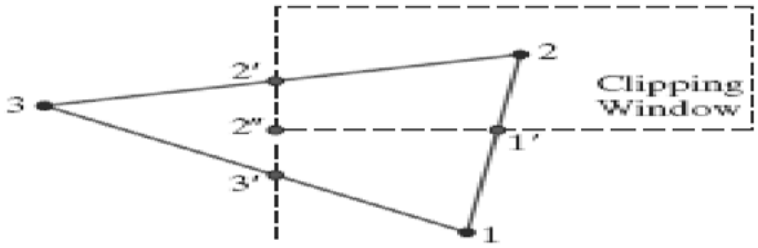
10. Describe Parametric and Non-parametric Curves with suitable examples.

(CO4) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS **2 X 20M = 40M**

11. A) Illustrate Sutherland-Hodgeman Polygon Clipping algorithm.
B) Extend Sutherland-Hodgeman polygon clipping algorithm to clip the following polygon.



(CO3) [Application]

12. A) Illustrate Cohen-Sutherland line clipping algorithm and explain the working in detail.
B) Apply Cohen-Sutherland algorithm to clip a line with end points P1(10,30) and P2(80,90), Let ABCD be the rectangular clip window with A(20,20), B(90,20),C(90,70) and D(20,70).Find the region code for the end points of the line.

(CO4) [Application]