Reg. No.: .....

Name: .....

University of Kerala

W6968

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Core Course

COMPUTER SCIENCE

UK3DSCCSC203/ UK3DSCCAP204 - Computer Graphics

Academic Level: 200-299

2024 Admission

Time: 1 Hour 30 Minutes(90 Mins.) **Max. Marks: 42**

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark Each.Answer all questions

Qn No.	Question	CL	CO
1	List any two application of computer Graphics	RE	1
2	Name any one advantage of Bresenham's line drawing algorithm.	RE	2
3	Define pixel.	UN	1
4	Clarify the terms world coordinates and device coordinates	UN	2
5	Define Reflection	UN	3
6	Cite any one Hidden Surface Removal Algorithm	UN	4

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Differentiate between Window and Viewport	UN	3
8	Differentiate between parallel projection and perspective projection	UN	4
9	Apply the concept of A-buffer algorithm to implement visible surface detection for a 3D object.	AP	4
10	Discuss the translation in 2D	AP	3

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A)	AP	1, 3

Qn No.	Question	CL	CO
	Explain about Resolution, Aspect Ratio, Frame Buffer, Video Adapter, Graphics Card. OR B) Explain the different types of 2D transformations in detail.		
12	A) Compare Cohen Sutherland line clipping algorithm and a midpoint subdivision algorithm OR B) Differentiate parallel projection and perspective projection	AN	3, 4
13	A) Explain the concept of visible surface detection in Scan Line Algorithm in detail OR B) Compare the flood fill and boundary fill algorithm	EV	4, 2
14	A) Create a line between the co ordinates (9,18)and (14,22) using Bresenham’s Line drawing algorithm. OR B) Discuss the the distinction between local reflection and global reflection models	CR	2, 3