

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Computer Graphics (CG)

Subject Code: 5CS04MCG1

Branch: MCA

Semester: 4

Date: 05/05/2018

Time: 10:30 To 01:30

Marks:70

Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION – I

- Q-1 Attempt the Following questions (07)**
- a. What is Resolution? 1
 - b. What is Computer Graphics? 1
 - c. What is Aspect Ratio? 1
 - d. What is a dot size? 1
 - e. List out the merits and demerits of Penetration techniques. 1
 - f. What is seed fill? 1
 - g. What is Transformation? 1
- Q-2 Attempt all questions (14)**
- a Write difference between CRT and LCD. 5
 - b Explain in detail about graphics input devices with suitable figures. 5
 - c Discuss scalar & Cross Product with examples 4
- OR**
- Q-2 Attempt all questions (14)**
- a What is Projection? Explain types of Projection. 5
 - b Explain about Bresenham's Line drawing with an algorithm. 5
 - c Write a program to draw lines of attributes using DDA Line Algorithm 4
- Q-3 Attempt all questions (14)**
- a Write about Cohen-Sutherland's line clipping algorithm 7
 - b Explain Translation, Rotation and Scaling with Matrix Representation Form. 7
- OR**
- Q-3 a What is viewing transformation? Describe the window port and view port 7**
- b Write a program to draw a Circle using Mid Point Circle Algorithm 7**

SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. What is the use of clipping? 1



	b.	What is Polygon mesh?	1
	c.	Define Projection.	1
	d.	What are the steps involved in 3D transformation?	1
	e.	Define YIQ color model	1
	f.	What are the two common sources of textures?	1
	g.	What is Color Look up table?	1
Q-5		Attempt all questions	(14)
	a	Explain in detail about raster and random scan systems.	5
	b	Write a graphics program to scale a polygon in which values of polygon edges and translation points will be given by user	5
	c	Write a short note on parallel and perspective projections.	4
		OR	
Q-5	a	Describe any Five applications of computer graphics	5
	b	Write a graphics program which translates a point from window-to-view port coordinate transformation	5
	c	Explain two methods of circular drawing	4
Q-6		Attempt all questions	(14)
	a	Explain about shading and graphics pipeline.	7
	b	Explain in detail about the conversion between HSV and RGB color models.	7
		OR	
Q-6		Attempt all Questions	
	a	Explain Scan Line Seed Fill Algorithms?	7
	b	Describe basic illumination model with its types.	7

