Reg. No.															

Question Paper Code	12743

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Sixth Semester

Computer Science and Business Systems

20CBEL604 - COMPUTER GRAPHICS AND MULTIMEDIAWITH LABORATORY

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Distinguish between uniform scaling and differential scaling.	2	K2	CO1
2.	Is the Sutherland-Cohen line clipping algorithm applicable to any type of window? Justify.	2	K2	CO1
3.	List the classifications of visible surface detection algorithm.	2	K1	CO2
4.	Write the conversion matrix CMY to RGB representation.	2	K2	CO2
5.	Point out basic objects of multimedia systems.	2	K2	CO3
6.	Assess the challenges in multimedia databases.	2	K2	CO3
7.	Define lossy compression.	2	K1	CO4
8.	Conclude the role compression in multimedia.	2	K2	CO4
9.	Classify the components of a distributed multimedia application.	2	K2	CO5
10.	List the pros and cons of linking and embedding multimedia objects	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Use the midpoint method to derive decision parameters for generating points along a straight-line path with a slope in the range $0 < m < 1$. Compose that the midpoint decision parameters are the same as those in Bresenham's line drawing algorithm.	13	K2	CO1
		OR			
	b)	Illustrate with an example the available two-dimensional geometric transformations.	13	K2	CO1
12.	a) i)	Compare and contrast between the RGB and CMY color models.	7	K2	CO2
	ii)	Summarize the CIE color model. What are its advantages?	6	K2	CO2
		OR			
	b)	With suitable examples, describe 3D transformations: (i) Rotation. (ii) Translation.	13	K2	CO2

13.	a) i)	Show how to define objects for a multimedia system.	*7*	*K2*	*CO3*
	ii)	Write short notes on multimedia data interface standards.	*6*	*K2*	*CO3*
		OR			
	b)	Illustrate the evolving technologies for multimedia.	*13*	*K2*	*CO3*
14.	a) i)	Describe in detail about the full motion video authoring system.	*7*	*K2*	*CO4*
	ii)	Describe digital audio and voice in multimedia I/O Technologies.	*6*	*K2*	*CO4*
		OR			
	b)	Discuss the issues involved in multimedia storage and retrieval.	*13*	*K2*	*CO4*
15.	a) i)	Explain the various types of database replication techniques used in handling very large, distributed databases.	*7*	*K2*	*CO5*
	ii)	Explain in brief about the Hypermedia Message Components.	*6*	*K2*	*CO5*
		OR			
	b)	How does video conferencing relate to hypermedia messaging? What are the implications of building a system where the user starts with video conferencing and switches to integrated stored messaging?	*13*	*K2*	*CO5*

PART - C (1 × 15 = 15 Marks)

16.	a) i)	Explain in detail about TIFF implementation issues.	*8*	*K2*	*CO4*
	ii)	List the main attribute, benefits and drawbacks of 3 types of authoring systems.	*7*	*K2*	*CO5*
		OR			
	b) i)	List and explain important steps and considerations in recording and editing digital audio.	*8*	*K2*	*CO4*
	ii)	Distinguish between multimedia system and hypermedia system.	*7*	*K2*	*CO5*