Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June` 2020 Month-February

Sem- IT 6th Subject-Computer Graphics & Animation Code- 33365(33)

Time Allowed: 2 hrs Max Marks: 40

Note: - In Section I & II, Question A is compulsory and attempt any two from B, C & D.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Section I			
A.	Differentiate DDA and Bresenham`s line drawing algorithm.	[4]	Analyze	CO2
B.	Differentiate between Raster scan system and Random scan system?	[8]	Understand	CO1
C.	Describe various applications of computer graphics.	[8]	Understand	CO1
D.	The endpoints of a given line are (20,10) and(30,18). Scan convert the straight line using Bresenhems line drawing algorithm.	[8]	Applying	CO2
	Section II			
A.	What are the types of filled area primitives? Explain Scan Line filling algorithm.	[4]	Understand	CO2
B.	Magnify the triangle with vertices A(0,0), B(1,1), and C(5,2) to twice its size while keeping C(5,2) fixed.	[8]	Applying	CO3
C.	Perform a 45degrees rotation of triangle A(0,0), B(1,1), C(5,2) (a) about the origin and (b) about (-1,-1) .	[8]	Applying	CO2
D.	Write midpoint circle drawing algorithm and scan convert a circle having radius 10 and centered at origin using algorithm.	[8]	Applying	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June, 2020 Month-February

Sem- IT 6th, Subject- Multimedia and Virtual Reality, Code- 333673(33)

Time Allowed: 2 hrs Max Marks: 40

Note: - In Unit I is compulsory, In Unit II attempt any two from A, B, C.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Unit I			
A.	What are the various application areas of Multimedia?	[8]	Understanding	CO1
B.	Define Multimedia and also its characteristics.	[8]	Understanding	CO1
C.	Can you differentiate between various types of multimedia contents?	[8]	Understanding	CO1
	Unit II			
A.	What are the varous operations that can be performed on image?	[8]	Understanding	CO2
B.	Elaborate digital video.	[8]	Understanding	CO2
C.	What is MIDI?	[8]	Understanding	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June, 2020 Month-February

Sem- IT 6th, Subject- Multimedia and Virtual Reality, Code- 333673(33)

Time Allowed: 2 hrs Max Marks: 40

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SSIPMT RAIPUR

SHRI SHANKARACHARYA INSTITUTE OF PROFESSIONAL MANAGEMENT AND TECHNOLOGY
CLASS TEST – I (Feb -2020)
Branch IT – Semester VI
SUBJECT-Information Theory and Coding

Duration: 2 Hours **Max. Marks: 40**

Note: Attempt any 5 question. All questions carry equal marks.

Q1. Construct a Huffman coding tree for the following message and also its calculate code efficiency.

Message	M1	M2	M3	M4	M5	M6	M7
Probability	0.4	0.2	0.12	0.08	0.08	0.08	0.04

Q2. Apply the Shannon-fano coding procedure for the following message ensemble and determine the average length and efficiency of the code system.

Message	M1	M2	M3	M4	M5	M6	M7	M8
Probability	1/4	1/8	1/16	1/16	1/16	1/4	1/16	1/18

Q3. A discrete source transmit messages X_1, X_2, X_3 with their probabilities $P(X_1)= 0.33$, $P(X_2)= 0.592$, $P(X_2)= 0.740$. The conditional Probabilities matrix is:

$$\Rightarrow P(Y/X) = \begin{bmatrix} 0 & 0.8 & 0.2 \\ 0.5 & 0.5 & 0 \\ 0.5 & 0.4 & 0.1 \end{bmatrix}$$

Determine H(X), H(Y/X), H(X,Y).

SSIPMT RAIPUR

SHRI SHANKARACHARYA INSTITUTE OF PROFESSIONAL MANAGEMENT AND TECHNOLOG
CLASS TEST – I (Feb -2020)
Branch IT – Semester VI
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Duration: 2 Hours **Max. Marks:**

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Determine H(X), H(Y/X), H(X,Y).

Q4. The channel matrix is given by

$$P(X,Y) = \begin{bmatrix} 2/3 & 1/3 \\ 1/10 & 9/10 \end{bmatrix}$$

Determine H(X), H(X/Y), H(Y/X) and mutual information I(X;Y).

Q5. A continuous signal is band limited to 5KHz. The signal is quantized into 8 levels of PCM system with the probabilities 0.25, 0.2, 0.2, 0.1, 0.1, 0.05, 0.05, and 0.05. Calculate the entropy and the rate of information.

Q6. . Consider a telegraph source having two symbols dot (.) and dash (-). The dot duration is 0.2 second and dash duration is three times of dot duration. The probability of occurrence of dots is twice that of dash and the time between symbols is 0.2 second. Calculate the information rate of telegraph source.

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Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June, 2020 Month- February

Sem- IT 6th Subject- Software Engineering & Project Management Code- 333653(33)

Time Allowed: 2 hrs Max Marks: 40

Note: - Attempt any two from option (b),(c)& (d) questions and ,option(a) is mandatory from section I & II and attempt any two questions from section-III.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Section-I			
1(a).	Justify the sense "Software is developed or engineered, it is not manufactured in the classical sense"	[2]	Understanding	CO1
(b).	Explain the problems that might be faced by an organization if it does not follow any software life cycle model.	[7]	Understanding	CO1
(c).	Explain a layered technology for a process framework in details	[7]	Understanding	CO1
(d).	Sketch a neat diagram of spiral model of software life cycle.	[7]	Understanding	CO2
	Section-II			
2(a).	What is the purpose of feasibility study?	[2]	Understanding	CO2
(b).	Discuss the significance and use of requirement engineering. Explain Functional & Non functional requirement in brief.	[7]	Understanding	CO2
(c).	What are crucial process steps of requirement engineering? Discuss with the help of a diagram.	[7]	Understanding	CO2
(d).	What is software requirements specification (SRS) ? List out the advantages of SRS standards.	[7]	Apply	CO2
	Section-III			
3(a).	What is unified process? Explain various phases along with the outcome of each phase.	[4]	Understanding	CO1
(b).	Explain Increment model in brief.	[4]	Remember	CO2
(c).	What are components of a use case diagram? Explain their usage with the help of an example.	[4]	Understanding, Apply	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June, 2020 Month- February

Sem- IT 6th Subject- Software Engineering & Project Management Code- 333653(33)

Time Allowed: 2 hrs Max Marks: 40

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Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June` 2020 Month-February

Sem- IT 6th Subject-Computer Graphics & Animation Code- 33365(33)

Time Allowed: 2 hrs Max Marks: 40

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Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Section I			
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C.	Describe various applications of computer graphics.	[8]	Understand	CO1
D.	The endpoints of a given line are (20,10) and(30,18). Scan convert the straight line using Bresenhems line drawing algorithm.	[8]	Applying	CO2
	Section II			
A.	What are the types of filled area primitives? Explain Scan Line filling algorithm.	[4]	Understand	CO2
B.	Magnify the triangle with vertices A(0,0), B(1,1), and C(5,2) to twice its size while keeping C(5,2) fixed.	[8]	Applying	CO3
C.	Perform a 45degrees rotation of triangle A(0,0), B(1,1), C(5,2) (a) about the origin and (b) about (-1,-1) .	[8]	Applying	CO2
D.	Write midpoint circle drawing algorithm and scan convert a circle having radius 10 and centered at origin using algorithm.	[8]	Applying	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – I Session- Jan – June, 2020 Month-Feb

Sem- IT 6th

Subject- Web Application Development

Code-333651(33)

Time Allowed: 2 hrs | Max Marks: 40

Note: - All questions are compulsory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	PART I			
A.	What does 3+4+"7" evaluate to in java script? Justify your answer.	[6]	Analyze	CO1
B.	Explain different event handlers in javascript	[7]	Understanding	CO1
C.	Explain AJAX and justify difference between synchronous and Asynchrounous modes.	[7]	Understanding	CO1
	PART II			
A.	What are Web Services?	[6]	Understanding	CO2
B.	Write a program for XMLHttpRequest also explain get and post methods.	[7]	Create	CO1
C.	Why use JSP when we can do the same thing with servlets? Also compare the jsp and servlet technology.	[7]	Understanding	CO1

All the best

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test –I Session- Jan – June, 2020 Month- Feb

Sem- IT 6th Subject- UNIX & Shell Programming Code- 322654(33)

Time Allowed: 2 hrs Max Marks: 40

Note: Question 1 to 5 is compulsory, Carry 2 marks each.

Attempt any 5 from question 6 to 11. All carry 6 marks.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Unit I			
1	**List different versions of UNIX & LINUX operating System .**	[2]	Understanding	CO4
2.	**Q.2 Write name of modes in vi editor with neat & clean diagram.**	[2]	Understanding	CO4
3.	**Q3 What are different options available with " ls" command? How to use it?**	[2]	Understanding	CO1
4.	**Q4 Differentiate between open source & free ware operating system with example .**	[2]	Understanding	CO3
5.	**Q5 Is UNIX is a structured operating system?**	[2]		
6.	Give vi command for the following- (i) To append text to the end of line to the current cursor position? (ii) Opens a new line above current line & move cursor down. (iii) Delete the current line. (iv) Delete 10 characters from current position. (v) Move Forward one full screen. (vi) To search the line containing "UNIX".	[6]	Applying	CO4
7.	Give commands for the following- (i) To list all files & directories starting with 'K'. (ii) To rename a file. (iii) To copy the content of source file to destination file.	[6]	Applying	CO4

	(iv) To delete the directories recursively. (v) List all files whose name has 'M' in third position & File name must be of 4 characters. (vi) To give read, write & execute permission to group members only, read permission to other users & all permission for owner.			
8.	Explain about following commands with example & output. (i) Cat command (ii) Man command (iii) Mkdir command (iv) Cd command & cd .. command (v) Pwd & ls –l (vi) Echo & printf command	[6]	Understanding	CO3
9.	Why Unix is more secure than windows operating system?	[6]	Applying	CO5
10	Explain UNIX is layered operating system?	[6]	Understanding	CO1
11	What are the applications of UNIX operating system?	[6]	Understanding	CO1