Shri Shankaracharya Institute of Professional Management & Technology

Department of Computer Science & Engineering

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

Sem- CSE 6th | Subject- Compiler Design | Code- 322652(22)

Time Allowed: 2 hrs | Max Marks: 40

Note: - All Questions are compulsory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Section - I			
1.	Design Finite automata to check whether given decimal number is divisible by 3.	[5]	U	CO1
2.	Draw the transition diagram to recognize the tokens below: 1) White Space 2) Unsigned Number 3) Relational Operator	[5]	Apply	CO1
3.	Explain the various phases of compiler with the help of block diagram. Use these phases to translate **total = count * c + 20.5** into the target code in assembly language.	[5]	U	CO1
4.	Construct a LMD and RMD for the following sentences: a) (a,(a, a)) b) (a, ((a, a), (a, a)))	[5]	Apply	CO2
	Section - II			
5.	Consider the following grammar and eliminate left recursion- A → Ba / Aa / c B → Bb / Ab / d	[6]	Apply	CO2
6.	Describe Ambiguity? Is the following grammar ambiguous? If yes the remove the ambiguity and rewrite the grammar: a) E-> I / E+E / E*E / (E); b) I-> a / b / 1a / 1b / I0 / I1	[4]	Apply	CO2
7.	Use Left factoring and /or elimination of Left Recursion to convert the following grammar into LL grammar? 1) E-> E+ T	T ; T-> int	(E) 2) L-> int	int, L	(L)	[4]	Apply	CO2
8.	Find **FIRST** and **FOLLOW** functions for the following grammar by Removing Left Recursion if exists. 1) E-> E * T	T; T-> T ^ F	F; F-> (E)	id 2) S-> ACB	Cbb	Ba ; A-> da	BC ; B-> g	ε; C-> h	ε.	[6]	Apply	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Computer Science & Engineering

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

Sem- CSE 6th [A/B] Subject- Management Information System Code – 322675(22)

Time Allowed: 2 hrs

Max Marks: 40

Note: - All Question are compulsory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	PART I			
A.	What are the human factors involved in MIS ?	[3]	Understanding	CO1
B.	What are different managerial levels in any organization.	[3]	Remembering	CO1
C.	Explain Report writing software and types.	[7]	Applying	CO1
D.	Define MIS and problem solving Technique.	[7]	Understanding	CO1
	PART II			
	Write short notes on:			
A.	a) Super & Sub systems b) Physical & Conceptual systems	[3]	Understanding	CO2
B.	Explain the model of CBIS in detail.	[3]	Remembering	CO2
C.	Case 1: Why has Amazon.com succeeded online when so many other companies have failed? Case 2: Will the kindle revolutionize the book industry?	[7]	Analyze	CO2
D.	Explain the life cycle of CBIS. Also explain the importance of information specialists.	[7]	Understanding	CO2

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

Sem- CSE 6th [A & B] Subject-Enterprise Resource Planning Code- 322653(22)

Time Allowed: 2 hrs

Max Marks: 40

Note: - *In Unit I,III, All Questions Are Compulsory . Each question carries equal marks.*

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Differentiate between :			
	(a)MRP I & MRP II.	[6]	Understanding	CO1
	(b)Data mart & Data warehouse.	[2]		
2.	Point out and describe different Phases of BPR along with It's type and definition.	[8]	Understanding	CO1
3.	Analyze briefly about :			
	A.Human Resource module	[4]	Understanding	CO3
	B.Sales and distribution module	[4]		
4.	Analyze briefly about the Finance module & manufacturing module of an organization.	[8]	Understanding	CO3
5.	Using the cocept of PLM explain how it is efficient to eliminate waste and improve efficiency.	[8]	Applying	CO1

Shri Shankaracharya Institute of Professional Management & Technology
Department of Computer Science & Engineering
Class Test – I Session- Jan – June, 2020 Month-February
Sem- CSE 6th [A & B] Subject- Computer Networks Code- 322651(22)

Time Allowed: 2 hrs   Max Marks: 40

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

Q.N.	Questions	Marks	Levels of Bloom's Taxonomy	COs
	Unit I			
A(i).	What are the propagation time and the transmission time for a 2.5-kbyte message if the bandwidth of the network is 1 Gbps? Assume that the distance between the sender and the receiver is 12,000 km and that light travels at 2.4×108 m/s.?	[2]	Applying	CO1
A(ii).	What are the propagation time and the transmission time for a 2.5-kbyte message if the bandwidth of the network is 1 Gbps? Assume that the distance between the sender and the receiver is 12,000 km and that light travels at 2.4×108 m/s.	[2]	Applying	CO1
B.	A channel has bandwidth of 5kHz and signal to power ratio is 62. Determine the bandwidth needed if the S/N ratio is reduced to 31, What will be signal power required if the channel bandwidth is reduced to 3Hz	[8]	Applying	CO1
C.	Write differences between OSI & TCP/IP model.	[8]	Understanding	CO1
D.	(i) A telephone normally has a bandwidth of 3000 Hz (300 to 3300 Hz) assigned for data communications. The signal-to-noise is usually 4095. What is the theoritical highest bit rate of the regular telephone line? (ii) Determine the possible Bit-rate and the number of Levels over a channel for these cases? (a) BW = 2.4 kHz, noiseless channel with L=16 (b) BW = 2.4 kHz, SNR = 20 dB (c) BW = 3.0 kHz, SNR = 40 dB	[4+4]	Applying	CO1
	Unit II			
A.	(i) A bit string, 01110101110111110, needs to be transmitted at the data link layer. What is the string actually transmitted after bit stuffing? (ii) What is the remainder obtained by dividing x7 + x5 + 1 by the generator polynomial x3 + 1?	[2+2]	Applying	CO2
B.	A bit stream 10011101 is transmitted using the standard CRC method described in the text. The generator polynomial is x3 + 1. Show the actual bit string transmitted. Suppose the third bit from the left is inverted during transmission. Show that this error is detected at the receiver's end.	[8]	Applying	CO2
C.	Explain different network topologies, which one best topology and why?	[8]	Understanding	CO1
D.	Write different framing mechanism in data link layer.	[8]	Applying	CO2

Shri Shankaracharya Institute of Professional Management & Technology

Department of Computer Science & Engineering

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

Sem- CSE 6th [A & B] Subject-Computer Graphics Code- 322655(22)

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]	Apply	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]	Apply	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]	Apply	CO2
D.	Write midpoint circle drawing algorithm and scan convert a circle having radius 10 and centered at origin using algorithm.	[8]	Apply	CO2

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

Sem- CSE 6th [A & B] Subject-Computer Graphics Code- 322655(22)

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.	Scan convert the straight line using Bresenhems line drawing algorithm.	[8]	Apply	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]	Apply	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]	Apply	CO2
D.	Write midpoint circle drawing algorithm and scan convert a circle having radius 10 and centered at origin using algorithm.	[8]	Apply	CO2

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

Sem- CSE 6ᵗʰ [A & B] Subject- Software Engineering & Project Management Code- 322654(22)

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