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	13- 1	11-1	Guru N	larak Dev Engi	ineering	College, Lud	hiana		19	
	The F	5	Depart	ment of Compa	iter Scio	ence & Engin	ering	44	K - F	
rogra	The same of the sa	ř		B.Tech.(CSE)		Semester	4	4	1 4	4
	pict Code PCCS-103 Subject Title Discrete Ma									
Mid So	emester Test (MST	Γ) No.		2		Course Coordi	nator(s)	Prof. Manpreet Kaur Mand Prof. Jasdeep Kaur		
lax. N	Marks		5-16	24	- 1 19	Time Duration	¥ 1	1 hour 30	minutes	
	f MST		1	30 <sup>th</sup> May, 2022		Roll Number	1	19	7. 1	The same
	Attempt all question	ns	3 CM 4	41,110	1			marks gar		Tal 10
). So.				Question		( V.	y t	- States T	CGs, RBT level	Marks
21	Illustrate an exa	ample of a	skew fiel	d and field, whi	ch is not	an integral do	mair.		CO3,L2	2
2	not cheap" and	second w	ith sign b	to each other, o oard as "Cheap as same or differ	liems a	sign board as " re not good".	Good it Examin	ems are e	CO6,L4	2
)3	Find the distinct left COSETS of $\{0,3,6,9\}$ in the group $(Z_{12},+)$ .  ii) Identify the DNF of the following: $(P \rightarrow Q) \land (\neg P \rightarrow Q)$								CO2, CO6, L1,L3	4
)4/	Consider G = { 1,5,7,11,13,17} under multiplication modulo 18.  a) Build the multiplication table of G. b) Find 5 <sup>-1</sup> and 17 <sup>-1</sup> . c) Find the order and group generated by: (i) 5, (ii) 13. d) Identify whether G is cyclic?								CO2, L1,L3	4
Ę/	Simplify the fo (a) E1= w w'xy'z	llowing Si xyz´+ wx + w´x´yz´	um-of-Pro y'z' + wx + w x'y'z	oduct expression				cy'z' +	CO1,CO5,	A
1-	(b) $E2 = y't$					d 4: 4:	r	)''l '		
1	(i ) Choose the algorithm for for		raph:	between source	e a and	destination 2	using 1	Jijkstra's		
96/	a 10 c l	0 1	; 4 i	2 g 2 5 h 8 2,					CO2,CO3, L5, L4	6,2
	, 3	8.	- 10	3 5 ich two groups	oould be	icomorphic				
,	(ii) List the c	onditions	under wn	ich two groups (	could be	isomorpine.			1	

Control of the Published States and States a		The state of the s					
	Gu	u Nanak Dev Er					
Program	Program  B.Tech.(CSE)  Subject Code  Guru Nanak Dev Engineering College, Ludhiana  Department of Computer Science & Engineering						
Subject Coo	R Tech (Compared Science & Engineering						
Mid Som T	I C	PCCS 106	Schlester	4 <sup>th</sup>			
Tid Sem Te	est (MST) No.	2	Subject Title	Data Struc	tures		
Charles and the Control of the Contr			Course Coordinator(s)	Pf. Shailja			
Max. Mark		24		Pf. Supree	t Kaur		
Date of MS		2/6/2022	Time Duration	1 hour 30 r	minutes		
Note: Attem	pt all questions	2/0/2022	Roll Number	2004558			
Q. No.	1			0.00	3/		
		Questic	on The second se	COs,	Marks		
Q1 WE	at are the			RBT level	I I I I I I		
/ ma	nagement?	plications of lin	ked list in dynamic storage	CO3, L1	2		
Q2/ Co	neidon 41		Storage				
	onsider the fol	lowing AVL	(60)	CO5, L6	2		
1	v. widdiiv an	d chan at		CO3, E0	2		
A	VL tree after ins	sertion of 70.					
		(2	9) (109)				
O3 WH	at are the week		(80				
alg	orithm for insert	to insert a node ir	I :-1/- 11' (0 D	CO2, CO3,	4		
				L1,			
	Positifici Itav	ersal of a himomi	1 0 0 6 7 1 7 7	CO6, L6	4		
hin					-		
THE RESIDENCE OF THE PARTY OF T	J Co. Willett 1	a the height of the	ninary tree'/		4		
16	9 15 4 Alas a	ap, represented by	the array: 20, 10, 20, 40, 17,	CO6, L6	4		
The second secon	o, 15, 4, Also di	scuss the insertion	operation.				
	nsider the follow	ing graph.	00 100	CO5, L5	8		
	$-\begin{vmatrix} 2 & 3 & 4 \\ 1 & 5 & \end{vmatrix}$		80 700				
1							
3			(10) /60	· -			
4					-7,00		
5	4 0	,	80				
6	4 8	5					
Sho	w the pictorial	representation of t	he above graph. Explain the				
Dep	oin iirsi iraversa	algorithm to trav	verse any graph. Also apply				
the	Depin first trav	ersai aigorithm or	the given and traverse the				
gra	on when hode 1 i	s the starting node					
Course Outcome	os (CO)		6				
i Course Quicome	31001				- 1		

(XC)							
Guru Nanak Dev Engineering College, Ludhiana							
Program	epartment of Com	puter Science & Enginee	ering				
Subject Code	B.Tech.(CSE)	Semester	4"				
Mid Somester T	MCCS-101	Subject Title		nental Scien	ce		
Mid Semester Test (MST) No.	II	Course Coordinator(s)	Dr. Vivek Thapar Dr.Inderjit Singh Dr. Hardeep Singh Kang				
Max. Marks Date of MST	24	Time Duration	1 hour 30	) minutes			
Date of MIST	07 <sup>th</sup> June,2022	Roll Number	2004558				
Note: Attempt all questions				,			
Q. No.	Questi	ion		COs, RBT level	Marks		
What is biodiversity?	Explain briefly.			CO5, L1	2		
Describe the various people.	problems and conce	erns in context with rehabi	litation of	CO2, L4	2		
	Elaborate the possible solutions for sustainable development.  CC  CC  CC  CC  CC  CC  CC  CC  CC						
Identify different thre	The state of blodiversity with suitable examined						
Discuss the effects of	Discuss the effects of population growth on environment.						
Discuss the causes, effects and control measures of air and water pollution.  CO4, L4  8  CO4, L4							
Course Outcomes (CO)				1 CO4, L4			

		Danastan	k Dev Engineering (	ollege, Ludhiana			
rogram		B.Tech.(CSE)	of Computer Science Semester	and Engineering			•
ubject C	lode	PCCS-107	Subject		4	<u> </u>	************************
Iid Semo	ester Test (MST) No.	2				ware Engineerin	g
		1	Course	oordinator(s)		n Jyoti	
					Jasm Palak	ine Kaur	
Max. Ma		24	Time Du	ation		ır 30 minutes	
Date of N	IST	6 <sup>th</sup> June, 2022	Roll Nun		1 1100	ii 30 minutes	
Votes Au			Kon Mun	oci	9	004558	
Note: All	empt all questions					0 - 020	
Q. No.		Oı	iestion			CO. DDT	124
		V.	restion			COs, RBT	Mark
<b>2</b> 1	Explain the role of co	obesion and saw	1:			level	
	Explain the role of context example.	onesion and coup	ling in good soft	ware design? Give	;	CO3,L2	1 . 2
Q2/V		2					1
<b>42</b> /	Compare the role of	of driver and st	ub in integration	n testing. Explain	with	CO5, L4	2
	Thairipic.				. 1	,	
<b>X</b> 3	a) Examine an	d calculate cvc	omatic complex	ity for the given	code	CO5, L1	<del>-</del>
	Draw a Cont	trol flow graph f	or it	ty for the given			4
	1. IF $A = 354$	Brahii I	Oi It.	<b>→</b>			
	2. THENIF B	> C	. 🔨			7801	
	3. THEN A =	D D	35 1		K		
		D (	XIN		1)	8	
	4.  ELSE A = 0	j .			€		
	5. ENDIF		()		-		
	6. ENDIF						
	7. PRINT A						
	b) Design state	ement coverage	assed test suite for	or thefollowing Euc	1:		
	GCD comp	utation program	based lest suite it	r metollowing Euc	lid's		
							1
	intcompute(	JCD(x,y)					
	intx,y;				(mrs.)		green age -
	{	j	3	· · · · · · · · · · · · · · · · · · ·	(MEN)		
	l while (x!	=, y){			A		
	2  if  (x>y)  th	ien					
	3 x=x-y;	,					-1
	4 else y=y-x	ζ;	6		1	2	
١.	5}				1/8	2	
	6 return x;		14	1/1	برا ` ابر	3	
	o return x,	r	<i>~</i>	X e			
	, and					-	
0.4	SI I SII I						
Q4	Show the following	g activities if yo	i are the project	manager of a softw	vare   Co	O3, L3	4
	project.				1		
	a)Draw the Activity	Network represe	ntation of the proj	ect.	ĺ	- 7	
	b) Determine ES, É	F and LS, LF for	every task.				
	ActivityNo.Activity	NameDuration(w	eeks)ImmediatePi	edecessor 🚄 🔭			
	1. Obtain requ	uirements 4 -					
	2. Analyse operation		17.17				
	3.Define subsystems						
	4. Develop database						
	5. Make decision an						
-	6. Identify constrain				-		
		le 1.83,4,6					
1	8 Build module 2 12						1
	9. Build module 3 1						
	10. Write report 10						
	I I MATTER PROPERTY	U					
	10. Write report to						-
	10. White report 10						
	10. Wille report 10						

11. Integration and test § 7.8.9  12. Implementation 2 10,11  Classify following terms by taking suitable example. A). Software Re-engineeringB). forward engineering  C). reverse engineering  Summarize the purpose of data flow diagrams how they are different from structure chart diagrams. Draw context level and level-1 DFD for library  Management System and draw the structure chart diagram for the same.  Course Outcomes (CO)  Students will be able to  Plan a software engineering process life cycle, including the specification, design, and implementation.  Elicit, analyze and specify software requirements through a productive working relationship with various stakeholders of the project.  Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology.  Develop the code from the design and effectively apply relevant standards for quality management and practice.  Formulate a testing strategy for a software system, employing techniques such as unit testing, test driven development and functional testing.				
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2 Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology.  4 Develop the code from the design and effectively apply relevant standards for quality management and practice.  5 Formulate a testing strategy for a software system, employing techniques such as unit testing, test driven development and functional testing.				
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Develop the code from the design and effectively apply relevant standards for quality management and practice.  Formulate a testing strategy for a software system, employing techniques such as unit testing, test driven development and functional testing.	3			
Formulate a testing strategy for a software system, employing techniques such as unit testing, test driven development and functional testing.				software
Formulate a testing strategy for a software system, employing techniques such as unit testing, test driven development and functional testing.	4	Develop the code from the design and effectively apply relevant standards for quality management	t and practice	
	5	Formulate a testing strategy for a software system, employing techniques such as unit testing	and practice.	
6 Identify modern engineering tools necessary for software reengineering and reverse engineering		1	iesi driven developn	nent and
	6	Identify modern engineering tools necessary for software reengineering and reverse engineering		

L3

Applying

Lower Order Thinking Levels (LOTS)

LI

Remembering

L2

Understanding

RBT

Classification

RBT Level

RBT Level

Number

Higher Order Thinking Levels (HOTS).

Evaluating

L5

L6

Creating

L4

Analyzing

-			<u> </u>				
		Guru Nanak Dev	Engineering College, Ludhiana				
		Department of Cor	nputer Science and Engineerin	<u>g</u>			
Program	è	B.Tech.(CSE)	Semester		ing Systems		
Subject Co	ode	PCCS-105	Subject Title	- Operat	rjeet Kaur		
Mid Semester Test (MST) No.		2	Course Coordinator(s)	Er. Hai	rkomalpreet Kaur		
Max. Mar	ks	24	Time Duration		r 30 minutes		
Date of MST		1 <sup>ST</sup> June, 2022	Roll Number	2004	14558		
Note: Atter	mpt all questions						
Q. No.		Ques	tion		COs, RBT	Marks	
		level					
<b>Ø</b> 1	Classify the difference between paging and segmentation				CO1,CO2,	2	
		L2					
92	Categorize the diffe	rence between the	Contiguous, Linked and Inde	xed file	CO2, L4	2	

C. T. D.	Question	,	i
1		level	
Q1	Classify the difference between paging and segmentation	CO1,CO2,	2
		L2	
92	Categorize the difference between the Contiguous, Linked and Indexed file allocation.	CO2, L4	2
Ø3 /	Describe how deadlock can be avoided? Explain with algorithm.	CO3,L1	4
94	Explain the concept of Semaphores. How are they helpful in process synchronization? Explain with suitable example.	CO5, L2	4
9.5	Consider a reference string:4,7,6,1,7,6,1,2,7,2 the number of frames in the memory is 3. Find out the number of page faults respective to:  1. Optimal Page Replacement 2. FIFO Replacement  3. LRU Replacement	CO6, L4	4
<b>Ø</b> 6	Design the solution for the following criteria. Suppose that a disk drive has 500 cylinders, numbered 0 to 4999. The drive is currently serving a request at cylinder 143, and the previous request was at cylinder 125. The queue of pending requests, in FIFO order, is: 86, 1470, 913, 1774, 948, 1509, 1022, 1753, 130	CO6, L5	8
Course	Starting from the current head position. Evaluate the total distance (in cylinders) that a disk arm moves to satisfy all the pending requests for each of the following disk scheduling algorithms.  a) FCFS b) SSTF c) C-SCAN d) C-LOOK		
Course Ou	tcomes (CO)		