Q.P. Code: 18CS0504

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							(AU	TON	OMO	JS)						
		B.T	Tech II	I Year	· I Sen	nester	Supp	oleme	ntary	Exam	inatio RITH	ons De	ecember	-2021		
					DAT	(C	ommo	on to C	SE&	CSIT	)					
	Time: 3 hours Max										Max. N	Marks: 60				
								PA	RT-A		10.1					
1		(Answer all the Questions $5 \ge 2 = 10$ Marks)												T 1	214	
1	a	a What is a double linked list? Name the three fields of double linked list. Write the postfix and profix potations for the following expression:											21VI 2M			
	b	A/B*C-D*E+F/G											2111			
	с	<b>c</b> What do you mean by level of the tree and height of Tree?										L3	2M			
	<b>d</b> What is hashing? What do you mean by hash function?										L4	2M				
	<b>e</b> What is difference between quick sort and heap sort?										L4	<b>2M</b>				
	PART-B															
(Answer all Five Units 5 x 10 = 50 Marks)																
								UN	IT-I							
2	a	What is the	e diffe	rence	betwe	en the	array	s and 1	linkec	list?					L1	5 <b>M</b>
	<b>b</b> What are the advantages and disadvantages of circular linked list?											L2	5M			
2		W/1	9 E		1:00-				OR						Т 1	43.4
3	a	What is an	ray? E	xplain	differ	ent ty	pes of	array	s.							4M
	U	Explain au	out an	ray op	cration	15.		UN	IT-II	1					115	UIVI
4	а	What are t	he dra	wback	s of a	ieues	? Disc	uss in	detail	about	the ci	rcular	aueues.		L2	5M
	b	<b>b</b> What is a dequeue? What are the various operations that can be performed on ther								them?	L1	5M				
		Explain.														
									OR							
5	Wı	rite a progra	m to p	berforn	n basic	e oper	ations	on sta	ick.						L3	10M
		~		~	1			UN	IT-II	9						
6	a	Construct	Binary	$\sqrt{2}$ Searc	h Tree	e by 11	isertir	ng the	tollov	ving ke	ey elei	ments	_		L4	5M
	h	10, 12, 3, <sup>2</sup> Construct l	+, ∠0, ∂ height	s, 7, 0, balan	red tre	e for t	he fol	lowin	σ afte	r rotati	on				L4	5M
	N	e e instruct i	nongin	ourun		0 101 1			Burte	. Totati	on				21	
		(	14	$\sum$												
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	OR			
7	Construct a binary search tree from the given values. Consider the first value as the root	L4	10M	
	value. Values:45, 23, 29, 85, 92, 7, 11, 35, 49, 51			
	UNIT-IV			
8	a Compare binary search and linear search techniques.	L3	6M	
	<b>b</b> Find the number 77 from the following set of numbers using binary search:			
	6, 12, 17, 23, 38, 45, 77, 84, 90.	L4	<b>4</b> M	
	OR			
9	Write and explain Dijkstra algorithm for finding shortest path. Give an example.	L1	10M	
	UNIT-V			
10	Sort the following numbers using merge sort:45, 34, 12, 46, 27, 56, 11, 87, 6, 33, and 28.	L3	<b>10M</b>	
	OR			
11	Explain about bubble sort with algorithm.	L3	10M	

\*\*\*END\*\*\*