[51	1/Ag] <sup>S1</sup>	B.C.A.( Sen	FEL UNIVERSITY  1-2 ) Examination  nming and Introduction to Data Structo	ares
Date: Thur	28-03-		00 am - 1.00 pm	Marks: 70
Q-1	auny	Select the correct option for the following	owing questions.	10
Q-1	(1)	Which operator is used with a pointer to access the value of the variable		• whose
		address is contained in the pointer?  A. Address (&)	B. Indirection (*)	
		C. Assignment (=)	D. Selection (->)	
	(2)	Which of the following defines a point	er variable to an integer?	
		A. int *ptr;	B. int **ptr;	
		C. int &ptr	D. int &&ptr	
	(3)	Which of the following allows a port data?	on of memory to be shared by different	types of
		A. Array	B. Structure	
-		C. Union	D. File	
	(4)	Which of the following is not a derived	d data type?	
-		A. Arrays	B. Pointers	
		C. Structure	D. Float	
	(5)	The term "push" and "pop" is related to		
		A. array	B, stacks	
		C. queue	D. All of these	
	(6)	An operation that is used to insert an	element on a stack is known as	
		A. Push	B. Pop	
		C. Peep	D. Change	
	(7)	A linked list is type of data structure.	cture?	
		A. Linear	B. Non-Linear	
		C. Both (A) and (B)	D. None of the Above	l .
	(8)	A data structure that contains not a known as	only a data field but also contains point	er field is
		A. Queue	B. Stack	
		C. Tree	D. Linked List	
	(9)	Which of the following is NOT the type	•	
		A. Two-way list	B. Three-way list	
		C. Doubly Linked list	D. Circular linked list	
	(10)	Two dimensional arrays are also called		
		A. tables arrays	B. matrix arrays	
		C. both A and B	D. None of these	<b>-</b>
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Q-2		Do as directed. (ATTEMPT ANY TEN)	20			
	(1)	Define: indirection operator, pointer variable.				
	(2)	List out benefits of pointers.				
	(3)	Differentiate between '*' and '&' operators in pointers.				
	(4)	Differentiate: structure and union.				
	(5)	List file modes available to manage the file in C.				
	(6)	Explain the fclose() function with example.				
	(7)	Draw the Hierarchical Structure of Data Structure.				
	(8)	Differentiate: primitive and non primitive data structure.				
	(9)					
	(10)					
	(11)	Define: Queue and Deque.				
	(12)	Differentiate between singly linked list and doubly linked list.				
Q-3	A.	Explain pointer arithmetic with example.	5			
	B.	Write a note on Dynamic memory allocation.	5			
		OR				
Q-3	A.	Write note on: pointer to pointer.	5			
	B.	Explain pointer to structure using suitable example.	5			
Q-4		What is structure? Explain its definition, declaration and assigning values to members	10			
		of structure. Also mention advantages of structure over other data types.				
		OR				
Q-4		Explain fprintf and fscanf function with example.	10			
Q-5	A.	Write an algorithm to insert an element into a Stack.	5			
	В.	Write a short note on linear data structure.	5			
	OR					
Q-5	A.	Write an algorithm to delete an element from a Stack.	5			
	В.	Write a short note on non-linear data structure.	5			
Q-6	A.	Write an algorithm to insert an element into a simple queue.	5			
	B.	Write a short note on Singly linked List.	5			
	OR					
Q-6	<b>A.</b>	Write an algorithm to delete an element from a simple queue.	5			
	В.	Write an algorithm to insert an element at the beginning of a Singly linked list.	5			

