SET-II

Subject Code: 20CS103ES

HT NO: 7 R

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B. Tech. I Sem Supply End Examinations, January-2024 Programming for Problem solving Common to CSE,IT&CSM

Time: 3 Hours

Max. Marks: 70

Note

- i. This Question paper contains Part- A and Part- B.
- ii. All the Questions in Part A are to be answered compulsorily.
- iii. All Questions from Part B are to be answered with internal choice among them.

PART-A

 $10 \times 02 = 20 \text{ Marks}$

			Marks	CO	BL
1.	a	Draw a flowchart to find sum of two given numbers.	2	CO1	3
	b	Write about conditional operator with an example	2	CO1	2
	c	Define a string and explain the difference with char array.	2	CO2	3
	d	Define and write an example of a pointer	2	CO2	2
	e	Write about pre-processor.	2	CO3	3
	f	Write about ftell().	2	CO3	2
	g	Write the syntax of calloc().	2	CO4	3
	h	Define recursion and a recursive function	2	CO4	2
	i	Find the time complexity of linear search.	2	CO5	3
	j	Define Sorting and list sorting techniques.	2	CO5	2

PART-B

 $5 \times 10 = 50 \text{ Marks}$

			Marks	CO	BL
2.	a	With a neat sketch, explain about creating, compiling and executing a program.	5	CO1	2
	b	Write the program for the simple, compound interest. OR	5	CO1	3
3	a	Differentiate while and do-while with examples.	5	CO1	2
	Ъ	Write a C program, which takes two integer operands and one operator from the user, performs the operation and then prints the result using switch	5	CO1	3
4	a	Explain about pointer to structures.	5	CO2	2

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	b	Write a function to compute mean, variance, Standa Deviation, sorting of n elements in a single dimension		5	CO2	(& X
5	a	Explain how a one-dimensional array is declared, in and elements are accessed.	itialised	5	CO2	2
	b	Write a C Program to find the length of a given strin without using strlen() function.	ng	5	CO2	3
6	a	Explain about various pre-processor commands.		5	CO3	2
	b	Write a C program which copies one file to another OR	file.	5	CO3	3
7	a	Write about file modes.		5	CO3	2
	b	Write a C program to display the contents of a file to standard output device	0	5	CO3	3
8	a	Explain how a function is declared, called and definexample.	ed with	5	CO4	2
	b	Write program to find n th term Fibonacci Series usin recursion. OR	ng	5	CO4	3
9	a	Write about call by reference with an example progr	ram.	5	CO4	4
	b	Write about Dynamic Memory Allocation functions syntax and example.		5	CO4	2
10	a	Write an algorithm to find the minimum, maximum given numbers.	n of 3	5	CO5	3
	b	Write a C Program to implement insertion sort. OR		5	CO5	2
11	a	Write an algorithm to implement Binary Search.		5	CO5	2
	b	Write a algorithm to generate whether given number prime number or not.	er is	5	CO5	3 -
CO	: 0	Course Outcomes				

: Bloom's Taxonomy Levels L 1: Remembering L 2: Understanding BL

> L 3 : Applying L 4 : Analysing

L 5 : Evaluating L 6 : Creating

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- Max. Marks: 70

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 $5 \times 10 = 50 \text{ Marks}$

Note

- i. This Question paper contains Part- A and Part- B.
- ii. All the Questions in Part A are to be answered compulsorily.
- iii. All Questions from Part B are to be answered with internal choice among them.

PART-A

			Marks	CO	BL
1.	a	Write an algorithm to find sum of two given numbers.	2	CO1	3
	b	Differentiate while and do-while	2	CO1	2
	c	Define one-dimensional and two-dimensional arrays.	2	CO2	2
	d	Define and write an example of self-referential structure.	2	CO2	3
	e	Differentiate text and binary files.	2	CO3	3
	f	Write about fseek().	2	CO3	2
	g	Differentiate Static and Dynamic Memory Allocation.	2	CO4	3
	h	Define recursion and a recursive function	2	CO4	2
	i	Find the time complexity of prime number program	2	CO5	3
	j	Define Searching and list searching techniques.	2	CO5	2

PART-B

			Marks	CO	\mathbf{BL}
2.	a	With a neat sketch, explain about components of a computer.	5	CO1	2
	b	Write a program for finding the max and min from the three numbers.	5	CO1	3
		OR			
3	a	Explain about datatypes in C.	5	CO1	2
	b	Write a C program to find the sum of individual digits of a positive integer.	5	CO1	3
4	a	Explain about String handling functions.	5	CO2	2
	b	Write a C program to find the minimum, maximum in an array of integers.	5	CO2	3
		OR			
5	a	Explain about pointer to arrays.	5	CO2	2
	b	Write a C Program to find the length of a given string without using strlen() function.	5	CO2	3

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6	a	Explain about various pre-processor commands. Write a C program to disclarate the			
•	b	Write a C program to display the contents of a file to standard output device	5	CO3	2
7	a	Differentiate text and binary files.			
	b	Write a C program which copies one file to another file.	5	CO3	3
8	a			CO3	3
	b	Write about call by value with an example program. Write a program to find factorial of a number using recursion.	5	CO4	2
9	0		5	CO ₄	3
,9	a	write about Dynamic Memory Allocation functions with syntax and example.	5	CO4	2
	b	Explain how an array is passed to a function with example.	5	CO4	4
10	a	Write an algorithm to find the roots of			7
	b	Write an algorithm to find the roots of a Quadratic equation. Write an algorithm to implement bubble sort.	5	CO5	2
11	a	Write an algorithm to involve		CO3	3
	b	Write an algorithm to implement Linear Search. Write an algorithm to implement selection sort.	5 5	CO5	2
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CO : Course Outcomes

BL : Bloom's Taxonomy Levels

L 1: Remembering

L 2: Understanding

L3: Applying

L 4 : Analysing

L 5 : Evaluating

L 6 : Creating
