MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL (A constituent unit of MAHE, Manipal)

I SEMESTER B.TECH. MAKE UP EXAMINATIONS DECEMBER 2018 SUBJECT: PROBLEM SOLVING USING COMPUTERS [CSE 1051]

Instructions to Candidates:

Date of Exam: 26/12/2018

Time of Exam: 8.30AM-11.30 AM

Max. Marks: 50

- Answer all questions
- Missing data may be suitably assumed
- Indicate all the steps where ever necessary.
- Do not seek any clarification from invigilator.
- 1A Write any four differences between main memory and secondary memory. 3M Name two language translators with an example for each.
- 1B Describe any four properties of an algorithm. Draw a flowchart to display the 4M largest of given three numbers.
- 1C Describe all the phases of a typical C program development environment. 3M
- Write a C program to convert a given decimal number to an octal number 4M using "for" loop. Write the two difference between for loop and do while loop.
 [Note: Octal is a term that describes a base-8 number system], Eg: Given decimal 79 its octal equivalent is 117.
- 2B Explain "else-if ladder" statement with proper syntax and flowchart. 4M
- 2C Write the difference between "break" and "continue" statements using an 2M example for each.
- 3A Write a C program to read an interger 1D array with N elements and swap 3M the adjacent elements of the array (consider N to be an even number)
- 3B Write two differences between selection sort and bubble sort techniques. 1+3=4M Illustrate the working of bubble sort for the given array { 5, 12, 3, 9, 6 }
- 3C Explain the strcmp() function with proper syntax. Write a C Program to input a string & store the ASCII values of the characters in an integer array & print the array.
- 4A Write a C program to read an integer 2D array and compute the sum of 5M elements of 2D-array using recursive function.

4B	Write the difference between "reference" and "dereference" operators. Using	3M
	these operator write a C program to swap two integer numbers.	

4C What do you mean by modularization? Write the advantages of (1+1)2M modularization.

5A	Create a structure called time with hours, minutes and seconds as its member	3M
	and write a C program to read start and end times and print the time difference	
	using a function findDifference() that accepts two structure variables of type	
	time as input and computes the time difference.	
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- 5BWith an example, write & explain the general format for opening and
closing a file using file pointers. Describe any four modes for opening a file.4M
- 5CDescribe the consequences of Cyber Security violations and simple3Mmeasures to be followed to prevent them.3M

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