GUJARAT TECHNOLOGICAL UNIVERSITY
MCA Integrated - SEMESTER– 1 EXAMINATION – WINTER 2018

Subject Code: 2618603   **Date: 05-01-2019**

Subject Name: Fundamental of Programming–I

Time: 10.30 am to 1.00 pm   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Do as directed:	**07**

1. Basic data types in C language are _____
2. C is middle – level language. [True/False]
3. C programming is _____ (top-down/bottom-up) programming.
4. Operators in C language are classified into _____
5. Types of comment available in C language is/are _____
6. How to pass an array to a user-defined function?
7. auto, extern, static & register are known as _____

	(b)	The extern storage class has the broader scope. Discuss with suitable example.	**07**
Q.2	**(a)**	Write all the iteration constructs and selection constructs available in C language with syntax and suitable example.	**07**
	(b)	Write a program/algorithm to input 10 strings and sort them in ascending/descending order using user-defined function.	**07**

OR

	(b)	Write a program/algorithm to input 10 numbers and sort them in ascending/descending order using user-defined function.	**07**
Q.3	**(a)**	Define the terms:	**07**

1. Compiler
2. Interpreter
3. Linker
4. Loader

	(b)	What is a variable? How to declare and define a variable? Explain the different types of variables and the range of values with suitable example.	**07**

OR

Q.3	**(a)**	What is an operator? How operators are classified in C language? How an operator is used to build an expression?	**07**
	(b)	Differentiate between (any 3):	**07**

1. = and = =
2. if..else if and switch
3. static and register
4. identifier and token

Q.4	**(a)**	What is an array? How to define a single dimension integer array and a single dimension character array? What is the basic difference between an integer array and a character array?	**07**
	(b)	Write a program to concat (joining two strings) two strings without using any built-in function.	**07**

OR

Q.4	**(a)**	Write a program to input a number (rupees) and find all the possible denominations. E.g. If the input number is 145, then the output should be: 100 rupee note is 1, 20 rupee note is 2, 5 rupee note is 1.	**07**

(b) What is a user-defined function? Write all the necessary steps to create a function that will do the sum of two integer values. The numbers should be passed as parameter to the function. **07**

Q.5 (a) What do you mean by array of Strings? Give suitable example. **07**

(b) What do you mean by iteration/looping? Discuss all the iteration/looping constructs available in C language. Also discuss nested loops with suitable example. **07**

OR

Q.5 (a) Discuss all the functions available in C for inputting data from keyboard with suitable example. **07**

(b) What do you mean by memory? Discuss how a computer stores data in memory. What is the significance of address in memory? **07**

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