

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

B.VOC. –SEMESTER 1(NEW SYLLABUS) EXAMINATION- WINTER 2018

**Subject Code: 1110203**

**Date: 18-01-2019**

**Subject Name: Programming in C**

**Time: 10:30 AM to 12:30 PM**

**Total Marks: 50**

**Instructions:**

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

	<b>Marks</b>
<b>Q.1 (a)</b> Answer the following:	<b>05</b>
1) Why is “C” called a middle level language?	
2) What is data type?	
3) List the various conditional statements.	
4) What do you understand by %d?	
5) Name any three header files other than stdio.h and conio.h.	
<b>(b)</b> Give the basic C structure of a C program. Support your answer with a small sample code.	<b>05</b>
<b>Q.2 (a)</b> Write a brief account on the various operators used in C. Also explain all the relational operators in details.	<b>05</b>
<b>(b)</b> What are the basic data types in C. Support your answer examples.	<b>05</b>
<b>OR</b>	
<b>(b)</b> What do you mean by conditional statements? Explain any one of them with proper example.	<b>05</b>
<b>Q.3 (a)</b> Discuss the need of arrays? Write a C program to print the third element in the array.	<b>05</b>
<b>(b)</b> What are iterative constructs? Differentiate between while and do-while iterative construct.	<b>05</b>
<b>OR</b>	
<b>Q.3 (a)</b> Write a C code to find the sum of all the numbers in a given array. Also find the average of the numbers entered.	<b>05</b>
<b>(b)</b> Write a brief account on Strings. What is need of terminating the string with a null character?	<b>05</b>
<b>Q.4 (a)</b> Write a brief account on storage classes in C.	<b>05</b>
<b>(b)</b> Discuss the need of functions? Write a function in C that accepts two numbers and returns the sum of the two numbers entered.	<b>05</b>
<b>OR</b>	
<b>Q.4 (a)</b> Discuss the need of pointers. Explain dynamic memory allocation	<b>05</b>

functions malloc and calloc with proper syntax and example.

- (b) Explain recursion. Write a C program to find factorial of a number using recursion. **05**
- Q.5** (a) Create a structure “Student” that has id as integer, marks as integer and name as string. Write a C code to accept and print the details of three students through the “Student” structure. **05**
- (b) Discuss the various modes for the fopen() function. **05**

**OR**

- Q.5** (a) What is the need of creating structures? Give the difference between arrays and structures. **05**
- (b) Devise a C program that checks whether a given number is odd or even. If the number is odd, write it to OddNo.txt file and if the number is even, write it to EvenNo.txt file. **05**

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