GUJARAT TECHNOLOGICAL UNIVERSITY
B. E. - SEMESTER – I-II (NEW) • EXAMINATION – WINTER • 2014

Subject Code: 2110003   **Date: 01-01-2015**
Subject Name: Computer Programming and Utilization
Time: 10:30 am - 01:00 pm   **Total Marks: 70**
Instructions:
1. **Question No. 1 is compulsory. Attempt any four out of remaining six questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1   **MARKS**

(a) Objective Question (MCQ)   **07**
1. Software required to run the hardware is known as
   (a) Task Manager   (b) Task Bar
   (c) Program Manager   (d) Device Driver
2. Which the following is application software?
   (a) Compiler   (b) Power Point
   (c) Debugger   (d) None of the above
3. Which of the programming language is said to be machine independent language?
   (a) High Level Language   (b) Machine Language
   (c) Assembly Language   (d) All the Above
4. What will be a meaning of 1KB of memory
   (a) 1 Kit Bit   (b) 1 Kilo Byte   (c)1 Kernel Boot   (d) 1 Key Block
5. Which of the following is smallest Network?
   (a) MAN   (b) LAN   (c) WAN
6. FTP stands for
   (a) File Transport Protocol   (b) File Transfer Protocol
   (c) Folder Transfer Protocol
7. When a key is pressed on keyboard, which standard is used for converting the keystroke into the corresponding bits
   (a) ANSI   (b) ASCII
   (c) EBCDIC   (d) ISO

OR

(a) Objective Question (MCQ)   **07**
1. Which one is input device?
   A   Monitor   C   Keyboard
   B   CPU   D   Printer
2. Which part of CPU perform calculations and make decision
   A   Alternate Logic Unit   C   Arithmetic Local Unit
   B   Arithmetic Logic Unit   D   Alternate Local Unit
3. RAM stands for
   A   Random Access Memory   C   Read Access Memory
   B   Random Automatic Memory D   Read Automatic Memory
4. The memory capacity of a computer is represented in
   A   Kilobits   C   Kilobytes
   B   Memory chips   D   None of the above
5. HTML is used to design
   A   Webpage   C   Website

B   Multimedia Objects   D   Tables and frames

6. What type of memory is volatile?

   A   Cache   C   RAM

   B   ROM   D   Hard Drive

7. With regards to Email Addresses:

   A   They must always contain an @ symbol

   B   They are case sensitive

   C   They can never contain space

   D   All of above

(b)   **07**

1. Structure can contain elements of the same data type

   (a) true   (b) false

2. Which of the following operator is used to select a member of a structure variable

   (a) .(dot)   (b) ,(comma)

   (c) : (colon)   (d) ;(semicolon)

3. C is a ___ language

   (a) High Level   (b) Low Level

   (c) Middle Level   (d) Machine Level

4. A declaration float a,b; occupies _____of memory ?

   (a) 1 bytes   (b) 4bytes

   (c) 8byte   (d) 16 bytes

5. Which function reallocates memory?

   (a) realloc   (b) calloc

   (c) malloc   (d) None of these

6. Which of the following is used as a string termination character?

   (a) 0   (b) \0

   (c) /0   (d) None of these

7. File manipulation functions in C are available in which header file?

   (a) streams.h   (b) stdio.h

   (c) stdlib.h   (d) files.h

Q.2	**(a)**	Explain the different data types of C language	**03**
	(b)	Recall the definition of dynamic memory allocation? Differentiate between malloc and calloc?	**04**
	(c)	What is string? Write a program to concatenate two strings without using built in function.	**07**
Q.3	**(a)**	Compare "call by value" & "call by reference" with suitable example.	**03**
	(b)	Explain inline function with example.	**04**
	(c)	Write a program to print the following pattern	**07**

```
        1
      2   2
    3   3   3
  4   4   4   4
```

Q.4	**(a)**	What is Pointer in C? Explain its advantages.	**03**
	(b)	Write a C Program to check whether the given number is prime or not.	**04**
	(c)	Explain various categories of functions with suitable example.	**07**

Q.5 **(a)** What do you understand by recursive function? Explain with small example.   **03**

(b) Illustrate the concept of "structure"? Explain how can we access structure members?   **04**

(c) Write an algorithm and draw a flowchart to print first N Fibonacci numbers.   **07**

Q.6 **(a)** Distinguish between Structure and Union.   **03**

(b) Write a program to do swapping of two elements using function with two pointers as arguments.   **04**

(c) Discuss about various operators used in C language.   **07**

Q.7 **(a)** Describe file management? Recall various file modes.   **03**

(b) Explain following string manipulation function.   **04**
strcat( ), strcpy( ) ,strcmp( ) and strlen( )

(c) What do you understand by looping? Explain different types of loops in C with example and compare them.   **07**
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