

# C.U.SHAH UNIVERSITY

## Summer Examination-2019

**Subject Name : Fundamental of Computer Programming**

**Subject Code : 4TE01FCP1**

**Branch: B.Tech (All)**

**Semester : 1**

**Date : 22/03/2019**

**Time : 02:30 To 05:30**

**Marks : 70**

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
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**Q-1 Attempt the following questions:**

**(14)**

- a) What is software?
- b) What is algorithm?
- c) Differentiate between system software and application software.
- d) Why is it not recommended to use GOTO statement?
- e) C is a middle level language. Justify.
- f) Explain strcat() function.
- g) An interpreter is a program that \_\_\_\_\_.
  - i) places programs into memory and prepares them for execution
  - ii) automates the translation of assemble language into machine language
  - iii) accepts a program written in a high level language and produces an object program
  - iv) appears to execute a resource as if it were machine language

**h) What should be the output:**

```
void main()
{
    int a = 10/3;
    printf("%d",a);
}
```

i) 3.33

ii) 3.0

iii) 3

iv) 0

**i) Trace the output.**

```
int main()
{
    int a=5;
    printf("%d %d %d", a ,a++, ++a);
    return 0;
}
```

i) 5, 6, 7.

ii) 7, 6, 6

iii). 5, 6, 6

iv). None of the above



- j) What is token in C?
- k) What is use of typedef in C?
- l) Give an example of sizeof() operator in C.
- m) How to declare a file pointer in C?
- n) Explain fopen() in C.

**Attempt any four questions from Q-2 to Q-8**

- Q-2 Attempt all questions (14)**
- (a) What is computer? Explain block diagram of computer system in detail
  - (b) What is the use of continue statement and explain it with the help of an example.
- Q-3 Attempt all questions (14)**
- (a) What is flowchart? Draw a flowchart to find maximum number among given three numbers.
  - (b) Explain basic structure of a C program with suitable example.
- Q-4 Attempt all questions (14)**
- (a) Write a C program to find all prime numbers from an array of integer elements.
  - (b) Explain four storage classes automatic, register, extern and static available in C.
- Q-5 Attempt all questions (14)**
- (a) What do you mean by entry controlled loop and exit controlled loop in C? Explain both with suitable example.
  - (b) How switch statement differs from if statement? Write a C Program to perform basic arithmetic operations addition, subtraction, multiplication and division using switch statement. (Hint: get choice of operation from user)
- Q-6 Attempt all questions (14)**
- (a) Write a C program to find vowels and consonants from a given string input.
  - (b) What is command line argument in C? Explain with an example.
- Q-7 Attempt all questions (14)**
- (a) What is pointer? How to use pointer in C? List out advantages of pointer in C.
  - (b) What is structure and union in C? Differentiate structure and union in C with suitable example.
- Q-8 Attempt all questions (14)**
- (a) Explain use of malloc(), calloc() and free() functions with their syntax and an example.
  - (b) What is recursion? Write a C program to find factorial of a given number using recursion.

