

2016

**INTRODUCTION TO COMPUTER
PROGRAMMING**

Paper : CS 101

Full Marks : 100

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

Answer **any five** questions.

1. Answer **all** : 10×2

(a) What do you mean by computer program ?

(b) `int a[5] = {1,2,3,4,5} ;`
then what is the value of `*(a+2)` ?

(c) `int a[] = {1,2,3,4,5} ;`
then what is the value of `a[5]` ?

Contd.

(d) What will be the output in the following

```
main ( ){  
    int a=0, b=-1;  
    if (a > b ? a : b)  
        printf("TRUE")  
    else  
        printf("FALSE")  
}
```

(e) What is the difference between malloc () and calloc () ?

(f) What is l-value and r-value ?

(g) What is type casting ? Give example.

(h) What is the difference between 'a' and "a" in C-language ?

(i) What is recursion ?

(j) What is the difference between = and == in C-language ?

2. (a) What is the algorithm and flowchart ? Write their importance in programming.

- (b) Write unary, binary and ternary operator in C-language with example. 10+10
3. (a) Write a C-program to convert a decimal number to binary or a binary number to a decimal number. 10+10
- (b) Write a C-program to find three digits Armstrong number. [An Armstrong number of three digits is an integer such that sum of the cubes of its digits is equal to the number itself. Example : $371=3^3 + 7^3 + 1^3$]. 10+10
4. (a) Write a C-program to multiply two matrix. 10+10
- (b) Write a C-program to find the n -Fibonacci numbers. 10+10
5. (a) What is pointer (explain with an example) ? Write a C-program with function call to swap two numbers with call by reference. 10+10
- (b) What is the difference between user defined function and library function ? Write a user defined function to find the length of a given string. 10+10

6. (a) What is structure ? Write a program using structure to store your name, roll number, age and course.

(b) Some text is in a file (file name "test.txt"). Write a program to read the file and count the number of vowel and number of consonant. 10+10

7. Write the short notes on : 4×5

(a) Return value of a function (with example).

(b) Local and global variable (with example).

(c) Write a Macro in C-language to add two numbers.

(d) Variable and reserved word.