



## B.TECH.

## THEORY EXAMINATION (SEM-II) 2016-17

## COMPUTER PROGRAMMING

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

## SECTION – A

1. Explain the following:

10 x 2 = 20

- What is meant by storage classes of a variable?
- Why we use do-while loop in c?
- Define the concept of top down development and stepwise refinement process.
- What is meaning of continue and break keyword in c?
- What is recursion?
- Explain the difference between function declaration and definition of a function.
- Explain flow chart and the symbols used.
- Write an algorithm to find the greatest number among three numbers.
- Explain call by value with suitable example.
- What do you mean by Macro?

## SECTION – B

2. Attempt any five of the following questions:

5 x 10 = 50

- Explain differences between a flow chart and algorithm with an example.
- What is a pointer? Write a C program to swap the values of two variables making the use of pointers.
- Distinguish between actual arguments and formal arguments with the help of example.
- Write a program in C to print the number of days using switch statement.
- Write a program to print all the diagonal elements of the Matrix.
- What is recursion? Write a program to print the Fibonacci series using recursion.
- Write a program to generate the following pattern

```

      *
     * *
    * * *
   * * * *
  * * * * *

```

- Write a program to rearrange a list of names in ascending order.

## SECTION – C

Attempt any two of the following questions:

2 x 15 = 30

- What are the different file opening modes in C. Suppose a file contains student's records with each record containing name and age of a student. Write a C program to read these records and display them in sorted order by name.
- Write short notes on: i) Dynamic Memory allocation in C , ii) Command Line arguments
- Write macro definition with arguments for calculation of simple interest and amount.
  - Write a C program to add first seven terms of the following series using for loop.  $1/1! + 2/2! + 3/3! + \dots$

