

B.Tech I Year II Semester (R15) Supplementary Examinations December 2019

COMPUTER PROGRAMMING

(Food Technology)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- List the advantages and disadvantages of flowcharts over algorithms.
 - List out the basic data types and their sizes in C.
 - Differentiate between while and do-while loop.
 - List out any four string handling functions in C.
 - Write the syntax and one example for any two dynamic memory allocation functions in C.
 - List out the storage classes in C.
 - Write a recursive function to compute factorial of an integer.
 - Differentiate between structures and unions.
 - Write the syntax and one example for any two formatted console I/O statements in C.
 - Write the syntax of fopen and fclose functions.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 With a neat diagram, explain the software development method.

OR

- 3 Explain the arithmetic operators in C. Write a C program to test whether a given number is positive or negative with and without using conditional operator.

UNIT – II

- 4 Write the syntax of for, while and do-while loops. Write a C program to print the sum of first n natural numbers.

OR

- 5 Discuss two-dimensional array. Write a C program to calculate the sum of two matrices and obtain the transpose of the resultant matrix.

UNIT – III

- 6 What is a pointer? What are the problems with the pointers? Write a C program to print the elements of a one-dimensional array using pointers.

OR

- 7 Discuss in detail about the scope of functions with suitable examples.

UNIT – IV

- 8 Discuss in brief about the prototype of functions. Write recursive and non-recursive functions in C to calculate the n^{th} Fibonacci number defined below:

$$f(n) = f(n-2) + f(n-1), \forall n \geq 2 \text{ and } f(0) = f(1) = 1$$

OR

- 9 How structures are passed to functions? Discuss bit fields and enumerations in brief.

UNIT – V

- 10 Write a C program to open a text file. Read the contents of the file and write the content into a new file by converting all the lower case letters into upper case letters.

OR

- 11 Discuss the following pre-processor directives:

(i) #define. (ii) #if. (iii) #else. (iv) #include. (v) #elif
