

July 2022

Exam.Code:0905
Sub. Code: 6632

2072

B.E. (Bio-Technology) Second Semester
ESC-X01: Programming for Problem Solving
(Common with IT and ECE)

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Part.

x-x-x

Q1. Attempt the following:-

- i) What is difference between Loader and Linker? (1)
- ii) Briefly explain how error handling is done in C? (1)
- iii) Why fseek() is preferred over rewind() in C? (1)
- iv) Briefly differentiate between Call by value and Call by reference in C? (1)
- v) How does the break statement provide a better control of loops? (1)
- vi) Briefly explain use of pointers in self-referential structures. (1)
- vii) Briefly explain the difference between an algorithm, pseudo code and flowchart. (1)
- viii) Briefly distinguish between text mode and binary mode operation of a file. (1)
- ix) Briefly give advantages of Unions over Structures? (1)
- x) What is pointer to a pointer in C? (1)

Part-A

Q2.

- i) Write a C program to check whether the given string is palindrome or not without using in built function. (5)
- ii) Write a C Program to print full Pyramid of numbers (5)

```
1
2 3 2
3 4 5 4 3
4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
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Q3.

- i) Write a C program to sort the numbers of an array using Selection sort. (5)
- ii) Write a C Program to count frequency of digits in a number. (5)

Q4.

- i) Write a C program to find sum of the diagonal elements of a matrix. (5)
- ii) Explain the difference between assembler, compiler and interpreter. (5)

Part-B

Q5.

- i) Write a C Program to compare two files, printing the first line where they differ. The program should take the name of files as command line arguments. (5)
- ii) Write a C-program using recursive function for Binary to Decimal Conversion. (5)

Q6.

- i) Write a C program to read a data file containing integers. Find the largest and smallest integers and display them. (5)
- ii) Write a macro in C program to determine whether the given number is odd or even. (5)

Q7.

- i) Write a C program to maintain a record of n employee detail using an array of structures with three fields (id, name, salary) and print the details of employees whose salary is above 50000. (5)
- ii) How dynamic memory allocation is done in C? (5)

x-x-x