Exam.Code:0906
Sub. Code: 6244

2063

B.E. (Bio-Technology) Second Semester

ESC-X01: Programming for Problem Solving

(Bio-tech and EEE)

Time allowed: 3 Hours

Max. Marks: 50

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

x-x-x

I. Attempt the following:-

a) What is recursion?

b) Explain linker, loader, and preprocessor,

c) What is the time complexity of insertion and selection sort?

d) What are the possible file handling errors?

e) Write syntax to pass an array to a given function. (5x2)

UNIT - I

II. a) What are the various services provided by an operation system? Explain the built-in and user-defined datatypes of C language. (3,4)

b) Discuss different types of errors that can occur in a source code. (3)

III. a) Differentiate primary memory and secondary memory? Also explain its various types.

b) Explain step-by-step mechanism to sort the following list of numbers using insertion sort:

21, 40, 37, 28, 53, 47 (2x5)

IV. a) Write a program to print the sum of first n natural numbers.

b) Create arrays and find multiplication of two array elements. (2x5)

UNIT - II

V. a) Differentiate union and structure. Create a structure to store attributes and operations for student.

b) Explain with one example the different types of sequential and random access file operations. (2x5)

P.T.O.

IV. What are the four fundamental communication methods that you need to master to be a good communicator? (10)

VI. a) What are the various methods to pass parameters to a function? Explain the same with different examples.

b) Write a note on random and sequential access file operations. (2x5)

VII. Explain the following:-

a) array of structures

b) enumerations

c) syntax to create array dynamically

d) strcmp() and strcat() with example (4x2½)

x-x-x