

Code No: A10501

MLR15

MLR INSTITUTE OF TECHNOLOGY

(An Autonomous Institution)

B.Tech I Year I Sem Examinations , January-2016

COMPUTER PROGRAMMING

(Common to All)

Time: 3 hours

Max. Marks: 75

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 25 marks. Answer all Questions in part A.
 3. Part B consists of 5 units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART – A

[25M]

1. a) How is union different from a structure in 'C'? Explain giving suitable examples. [2 M]
b) Discuss the characteristics of (i) extern variable (ii) automatic variable [2 M]
c) What are the two ways of opening a file? Explain with example. [2 M]
d) If a=7, b=5, c=3, what is output of (a>b?(a>c?3:4):(b>c?6:8)) [2 M]
e) What is the difference between *ptr++ and ++*ptr? [2 M]
2. a) What is the difference between pass by value and pass by reference? [3 M]
b) Is the following statement valid? Justify your answer [3 M]
m = (float *) &p
c) Discuss self-referential structures with examples [3 M]
d) Differentiate between text files & Binary Files [3 M]
e) How are the logical operators written in C? [3 M]

PART - B

3. a. Write an algorithm to find the roots of a quadratic equation [5M]
b. What is an algorithm? Write an algorithm to generate first 20 member of the following sequence
0,0,1,1,2,2,3,3,4,4,..... [5M]

OR

4. a. Discuss the various loops present in C Programming Language. Explain in detail giving examples. [6M]
b. Write a program to find reverse of a given number. [4M]
5. a. How to pass arrays arguments to a function? Explain with example. [5M]
b. Implement a program Towers of Hanoi using recursions. [5M]

OR

6. a. Write a program that multiplies two given matrices. [6M]
b. What is an array? Explain the declaration and initialization of one and two dimensional arrays with example. [4M]

7. Write a C Program that
- i. Implements string copy operation STRCOPY(str1, str2) that copies a string str1 to another string str2 without using library functions [5M]
 - ii. Reads a sentence and prints frequency of each of the vowels and total count of consonants. [5M]

OR

8. a. What is a pointer? Explain how the pointer variable declared and initialized. [4M]
b. Explain the array of pointers with example [6M]
9. a. Discuss the use of enumerated types? Explain with an example. [5M]
b. Differentiate between a structure and a union. [5M]

OR

10. Define a structure student that consist of the following members: Reg_no, name, marks in 3 subjects [10M]
- i. To print the maximum mark in each subject along with name of the student
 - ii. To calculate total and average and print Rankwise list.

11. Explain the following functions with examples [10M]
- i. fopen()
 - ii. fgetc()
 - iii. ftell()
 - iv. fseek()
 - v. rewind()

OR

12. a) Write a program to read a string and store no.of lines, no.of words and no.of consonants in *vowel.txt* file. [6M]
b) Explain various Error handling functions in C with example. [4M]
