R13

Code: 13A05101

B.Tech I Year (R13) Supplementary Examinations June 2016

PROBLEM SOLVING & COMPUTER PROGRAMMING

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define a variable.
(b) What is a Flowchart? Why it is used?
(c) What is Type Conversion?
(d) What is the difference between while and do-while loops?
(e) What are the applications of Factorial Computation Method?
(f) Write some examples for Standard Functions.
(g) How strings are stored in C?
(h) What are enumerated data types?
(i) Define Pointer.
(j) List the different Memory Allocation Functions.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT - I

2 (a) List and explain briefly about the different computer languages.
(b) What are the requirements for solving problems by Computer? Discuss.

OR

3 (a) What is an Identifier? Explain the rules to define an Identifier.
(b) List the Qualities and Capabilities of Good Algorithms.

UNIT - II

4 (a) Illustrate the importance of Precedence and Associativity in Evaluating Expressions.
(b) Design an Algorithm for computing the factorial of a given number.

OR

5 With Suitable C programs, describe Two Way Selection and Multiway Selection. Explain the differences between them.

UNIT - III

6 What is an Array? With a suitable example, explain Binary Search method using arrays.

OR

7 (a) Write an algorithm to find the GCD of given two non-zero integers.
(b) Describe in detail about the user defined functions.

UNIT - IV

8 (a) Illustrate different String Input/output functions.
(b) With a suitable example, explain the difference between Structure and Unions.

OR

9 (a) Define String? What are the various string manipulation functions available in C? Explain.
(b) Discuss in detail about the Shift operators in C with examples.

UNIT - V

10 (a) Write a C program to illustrate passing an array to a function.
(b) Explain how to insert a node at beginning of a Single Linked list with example.

OR

11 (a) Describe briefly about the pointer arithmetic.
(b) Discuss in detail about the Standard Library Functions for Files.

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