

R19

Code No: 861AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**MCA I Semester Examinations, July/August - 2021****COMPUTER PROGRAMMING AND DATA STRUCTURES****Time: 3 Hours****Max.Marks:75****Answer any five questions****All questions carry equal marks**

- 1.a) What are the steps to solve the problem in a computer system?
b) What are the characteristics of an algorithm? [7+8]
- 2.a) What is type casting? Explain.
b) Explain the structure of C program with example. [7+8]
3. Describe the ways of passing parameters to functions with example. [15]
- 4.a) Explain the following:
i) Automatic and static variables ii) Scope and visibility of variables.
b) Write a C program for finding factorial of a number using recursion. [8+7]
5. Explain about pointer to function and how to pass the pointers to function. [15]
- 6.a) What is a string? Also explain different string functions with example.
b) Write a C program to check whether a string is palindrome or not. [8+7]
- 7.a) What is a pointer to structure? Give example.
b) What is nested structure? Give example. [8+7]
8. Explain the operations and the implementation of Queue using Array. [15]

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