

Code No: 111AF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, June - 2015

COMPUTER PROGRAMMING

(Common to all Branches)

Time: 3hours

Max.Marks:75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A.

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

(25 Marks)

- 1.a) Describe type casting with example. [2M]
- b) Distinguish between while and do-while statement in C. [3M]
- c) Why is it necessary to give the size of an array in an array declaration? [2M]
- d) Is it better to use a macro or a function? [3M]
- e) What is the difference between an array and pointer? [2M]
- f) Mention the various String Manipulation Functions in C. [3M]
- g) What is meant by Enumerated data type? [2M]
- h) What are File I/O functions? [3M]
- i) What is Binary search? [2M]
- j) How will you find that the singly linked list is in circular state? [3M]

PART-B

(50 Marks)

- 2.a) Explain with example switch and for statements.
- b) Write a C Program to print prime numbers between 1 and 100. [5+5]

OR

- 3.a) Explain the bitwise operators with suitable examples.
- b) Write a Program in C to read a set of n single digits and converts them into single decimal integer. For example the program should convert the set of 5 digits [1,2,3,4,5] to integer 12345. [5+5]

- 4.a) Write an algorithm that would check whether the elements in a given array are distinct or not.
- b) Explain preprocessor commands with examples. [5+5]

OR

- 5.a) What is an array? Explain the declaration and initialization of one and two dimensional arrays with example.
- b) What is function parameter? Explain different types of parameters in C functions. [5+5]

- 6.a) Write functions in C using pointers that would Get an input string and computes its length?
- b) Write a C Program that would accept a string of any number of characters. Provide the function to count the number of vowels in the given string? [5+5]

OR

- 7.a) Write a C program to swap two numbers using call by pointers method.
- b) Write a program which will read a string and rewrite it in the alphabetical order. For example the word STRING should be written as GINRST? [5+5]

- 8.a) What is a Structure? Define a structure called salary and another structure called allowance. Use the structure variable allowance in salary structure and write program to read data into the structure variables.
- b) Write short notes on random access file functions. [5+5]

OR

- 9.a) Write a recursive function that would scan the created structure array and print the complete date, day, month and year information if the date is an even number?
- b) Two files DATA 1 and DATA 2 contain sorted list of integers. Write a program to produce a third file DATA which hold a single sorted, merged list of these two lists. [5+5]

10. Explain the concept of addition and deletion of a node in a doubly linked list with an example. [10]

OR

- 11.a) What is a stack? Explain its applications.
- b) Write a C program to perform insertion and deletion operations in a QUEUE? [4+6]

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