

Code No: 121AF**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech I Year Examinations, May/June - 2019****COMPUTER PROGRAMMING****(Common to CE, EEE, ME, ECE, CSE, EIE, IT, MCT, MMT, AE, AME, MIE, PTM)****Time: 3 hours****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) Give the list of basic data types in “C” language and explain. [2]
- b) Distinguish between a keyword and a reserved word. [3]
- c) Distinguish between a function declaration and definition. [2]
- d) Give the list of preprocessor directives in “C” language. [3]
- e) Why is the void pointer useful? When would you use it? [2]
- f) Distinguish between calloc() and malloc() functions in “C” language. [3]
- g) What are self-referential structures? Give an example. [2]
- h) Give the syntax for bit-field declaration and explain. [3]
- i) Distinguish between a stack and a queue. [2]
- j) Give the applications of linked lists. [3]

PART-B**(50 Marks)**

- 2.a) Distinguish among ‘while’, ‘do-while’ and ‘for’ statements in “C” language.
 - b) Write a program that prints the binary equivalent of a decimal number. [5+5]
- OR**
- 3.a) Demonstrate nested if-else statements in “C” language using an example.
 - b) Demonstrate the usage of break and continue statements using an example. [5+5]
4. Give an overview of storage classes in “C” language. [10]
- OR**
5. Explain the following:
 - a) Multi-dimensional arrays in “C”.
 - b) Structured programming. [5+5]
- 6.a) Distinguish between a constant pointer and a pointer to constant.
 - b) Write a “C” program to find length of a string and concatenation of two strings without using string handling functions. [3+7]
- OR**
7. What is a function pointer? Give the syntax and applications of a function pointer. Demonstrate how to initialize function pointers and use them in the program. [10]

- 8.a) Write a program to add two complex numbers by passing structure to a function.
b) Demonstrate the following operations using examples:
i) fwrite ii) fseek [5+5]
- OR**
- 9.a) Write a “C” program to find number of lines in a file.
b) Give an overview of standard I/O in “C” language. [5+5]
- 10.a) Demonstrate bubble sorting using an example.
b) Write a program to reverse a word using a stack. [5+5]
- OR**
- 11.a) Write a program to demonstrate operations on a linked list.
b) Write a program to demonstrate the operations on a queue. [5+5]

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