

R16

Code No: 131AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech I Year I Semester Examinations, September - 2023

COMPUTER PROGRAMMING IN C
(Common to CE, ME, MCT, MMT, AE, CEE)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

- 1.a) What is an algorithm? [2]
- b) Compare between computer software and hardware. [3]
- c) What is type qualifier? [2]
- d) Write the need for a function prototype with an example. [3]
- e) Describe typical applications of pointers in developing programs. [2]
- f) What is pointer to pointer? [3]
- g) Define Union. How to represent an union? [2]
- h) Write an example of nested structure. [3]
- i) Write the purpose of fseek() with example. [2]
- j) Write about different file modes? [3]

PART - B

(50 Marks)

- 2.a) Distinguish between While and Do-While looping structures.
- b) Write a program in C to find whether the given year is a leap year or not using while-loop. [5+5]

OR

3. Describe different Relational, Logical, Bitwise and Arithmetic operators available in C- Programming Language. [10]

- 4.a) Write a C-program using function to check whether the given number is prime or not.
- b) Write C programs that uses both recursive and non-recursive functions to find the Nth Fibonacci number. [5+5]

OR

- 5.a) What do you understand by user- defined functions? Explain need for user-defined functions.
- b) Write a C Program to transpose a matrix. [5+5]



6. Write a C program to sort strings using Bubble Sort. [10]

OR

7.a) Write a C program to check whether a string is palindrome or not without using built-in function.

b) What is dynamic memory allocation? How does it help in building complex programs? Discuss. [5+5]

8.a) Write a program to add two complex numbers by passing structures to a function.

b) Explain Array of structure with an example. [5+5]

OR

9.a) Explain structure within a structure with an example.

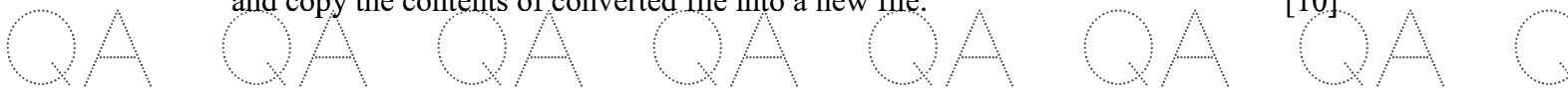
b) Discuss command line arguments with examples. [5+5]

10.a) Differentiate between text file and binary file.

b) Write a C program to display the contents of the file in reverse order. [5+5]

OR

11. Write a C program to read a given file, convert first letter of each word into uppercase and copy the contents of converted file into a new file. [10]



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