



# ADITYA UNIVERSITY

B.Tech – I Semester End Examinations Regular (B.Tech2024)

## PROGRAMMING FOR PROBLEM SOLVING USING C

(Common to EEE, ECE, CSE, IT, CSE(DS) &amp; AIML)

Time: 3 hours

Max. Marks: 50

**Answer ONE question from each unit****All Questions Carry Equal Marks****All parts of the questions must be answered at one place only****UNIT-I**

- 1 a Explain about different computer languages. L2 CO1 [5M]  
b Discuss about algorithm and flowchart with an example. L2 CO1 [5M]
- (OR)**
- 2 a Demonstrate the structure of C Program with neat Diagram. L2 CO1 [2M]  
b Illustrate the concept of Conditional operator with an example. L2 CO1 [8M]

**UNIT-II**

- 3 a Describe looping statements with syntax and give examples? L2 CO2 [5M]  
b Write a C program to check a given number is palindrome or not. L3 CO2 [5M]
- (OR)**
- 4 a Define Array. Describe the process of initializing 1-D and 2-D array with suitable examples L2 CO2 [2M]  
b Write a C program to find the maximum element in the given array. L3 CO2 [8M]

**UNIT-III**

- 5 a Explain different types of string handling functions with examples. L2 CO3 [6M]  
b Write a C program to sort a given list of names in alphabetical order. L3 CO3 [4M]
- (OR)**
- 6 a Differentiate between call by value and call-by-reference with examples. L3 CO3 [5M]  
b Write a C program to search an element using binary search. L3 CO3 [5M]

**UNIT-IV**

- 7 a Explain about various categories of functions L2 CO4 [6M]  
b Explain in detail about the scope of variables in C. L2 CO4 [4M]
- (OR)**
- 8 a Explain about dynamic memory allocation in detail. L2 CO4 [5M]  
b Write a program to swap two numbers using functions. L3 CO4 [5M]

**UNIT-V**

- 9 a Write short notes on: i) Pointers and Arrays L2 CO5 [6M]  
ii) Command line Arguments
- b Describe different file opening modes that can be used with the fopen(), fclose() function. L3 CO5 [4M]
- (OR)**
- 10 a Define pointer. How to initialize and declare pointer variables? L2 CO5 [6M]
- b Write a program to copy contents of one file to another file. L3 CO5 [4M]

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MODEL QUESTION PAPER