

**I B. Tech II Semester Regular Examinations, September- 2021**  
**PROGRAMMING FOR PROBLEM SOLVING USING C**  
 (Com. to CE, Agri E)

Time: 3 hours

Max. Marks: 70

**Answer any five Questions one Question from Each Unit**  
**All Questions Carry Equal Marks**

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**UNIT-I**

1. a) Explain the procedure for creating and executing a program in C language. (7M)  
 b) Write the structure of 'C' program. (7M)

**Or**

2. a) Illustrate Implicit & Explicit Type Casting in 'C' programming. (7M)  
 b) What is a data type? Discuss about the range for different data types. (7M)

**UNIT-II**

3. a) Explain Conditional & relational Operators. Write a C program that illustrate Conditional & relational Operators. (7M)  
 b) Explain Pre test & Post-test loops with examples. (7M)

**Or**

4. a) Which statement is a multi way selection statement? Explain its execution. (7M)  
 b) Write a C program to print Pascal triangle. (7M)

**UNIT-III**

5. a) Write a C program to search for an element in the given list by using binary search. (7M)  
 b) Explain about bit fields with an example. (7M)

**Or**

6. a) Write a C program to find the length of the given string without using string handling functions. (7M)  
 b) Explain how the structure variable passed as a parameter to a function with example. (7M)

**UNITIV**

7. a) Write a C program to compare two strings using Pointers. (7M)  
 b) Describe about pointers to pointers in 'C'. (7M)

**Or**

8. a) How to declare a pointer to a function? What is its use? (7M)  
 b) What is the difference between calloc and malloc functions? (7M)

**UNIT-V**

9. a) Explain about call by value and call by reference with reference to functions. Write a function to swap the values between the variables using call by value and Call by reference. (7M)  
 b) Explain different random file access functions with example. (7M)

**Or**

- 10 a) Explain how arrays are passed as function arguments. Write a C program to add two 2-dimensional arrays using the concept of arrays as function arguments. (7M)  
 b) Discuss about file I/O operations. (7M)