

**FACULTY OF ENGINEERING & TECHNOLOGY**

**B.E. / B.Tech. (Bridge Course) I – Semester (Main) Examination, Dec 2013**

**Subject : Programming in C**

**Time : 3 hours**

**Max. Marks : 75**

**Note: Answer all questions. All question carry equal marks.**

- 1.a) Explain the components of digital computer with a block diagram.  
b) Write an algorithm for finding the sum of all digits in a given number.  
**OR**  
c) Explain the symbols used in drawing flowchart with diagram.  
d) Write an algorithm for printing first 'n' numbers in a Fibonacci series.
- 2.a) What are the preprocessor commands used in 'C' language?  
b) List the different data types used in C.  
**OR**  
c) Write short notes on :  
i) variables                      ii) symbolic constant  
iii) identifiers                  iv) keywords  
d) Write a program to demonstrate the different input / output statements.
- 3.a) Write a program to find the maximum of 3 numbers using only conditional operator.  
b) Write a program to print the prime numbers in a Fibonacci series upto 'n'.  
**OR**  
c) Write a program to print multiplication table.  
d) Explain Bitwise operator with example.
- 4.a) Write a program to find the maximum element in an array using a function.  
b) Write notes on various storage classes.  
**OR**  
c) Define recursion, write a recursive program to find the GCD of two numbers.  
d) Write a C program for matrix multiplication using function.
- 5.a) Write a program to find the student who get maximum marks in class using a structure definition for the students.  
b) Write a C program to find the number of characters, lines and words in a text file.  
**OR**  
c) Differentiate structure and union.  
d) Differentiate between call-by value and call by reference with suitable example.

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