(Please write your Exam Roll No.) Exam Roll No.

END TERM EXAMINATION

FIRST SEMESTER [MCA] DECEMBER 2011

Paper Code: MCA 103 Subject: Programming in C

Time : 3 Hours Maximum Marks :60

Note: Part I is compulsory. Attempt one question from remaining each parts II-V.

Part-I

Q1. Attempt **any ten** questions. Each question carries equal marks. (2x10=20)

(a) What are the different storage classes in C?
(b) What is the purpose of main ( ) function.
(c) Why N++ executes faster than N+1?
(d) Differentiate between an internal static and external static variable?
(e) What is void pointer?
(f) What is a modulus operator? What are the restrictions of a modulus operator?
(g) What is a null pointer?
(h) Can include files be nested?
(i) What is the difference between printf() and sprintf()?
(j) Write down the equivalent pointer expression for referring the same of element a[i][j][k][l]?
(k) Difference between const char*p and char const*p.
(l) When should a type cast be used?

Part-II

Q2. (a) What is meant by nested if statement? Explain if-else if ladder with example. (5)

(b) Write a program which computes a^b where a and b are of real and integer types respectively? (5)

Q3. (a) Differentiate between while and do while constructs with examples? (5)

(b) Write a program that reads a number and a single digit. It determines whether the number contains the digit or not. (5)

Part-III

Q4. (a) What is the difference between strings and character arrays? (5)

(b) Write a program that dynamically allocates an array of integers. A list of integers is read from the keyboard and stored in the array. The program determines the smallest in the list and prints its location in the list. (5)

Q5. (a) What is the difference between calloc() and malloc()? (5)

(b) Write a program that dynamically allocates in integer. It initializes the integer with a value, increments it, and print the incremented value. (5)

P.T.O.

Part-IV

Q6. (a) What is Preprocessor? And can a file other than a .h file be included with #include? **(3)**

(b) What should be done to execute a program having math.h in linux platform? **(3)**

(c) Explain the file system structure in Linux. **(4)**

Q7. (a) What is the benefit of using an enum rather than a #define constant? **(3)**

(b) Write a function similar to strlen that can handle unterminated strings. **(3)**

(c) Explain the directory structure of Linux. **(4)**

Part-V

Q8. (a) What are the different methods of opening a file? Explain with example. **(5)**

(b) Write an interactive menu driven C program to create a text file and display the file. Create another text file by reversing each line of the newly created text file. Display the newly created file. **(5)**

Q9. (a) How the end of file can be detected? Explain with example. **(5)**

(b) Write an interactive menu driven C program to create a text file and display the file. Create another text file by converting each line of the newly created text file into a lowercase string. Display the newly created file. **(5)**

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