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10MCA11

First Semester MCA Degree Examination, December 2011
Problem Solving Using C

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain constants in 'C' language, with examples. (10 Marks)
b. Write and explain ANSI additions (preprocessor). (10 Marks)
- 2 a. Write an algorithm for finding the biggest of 3 numbers. (04 Marks)
b. Write short notes on : i) CALLOC ; ii) Two dimensional array. (10 Marks)
c. Explain error handling during I/O operations. (06 Marks)
- 3 a. Write a program to evaluate the power series

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!}, 0 < x < 1$$
 using If.....else. (06 Marks)
b. Write short notes on GOTO statement. (04 Marks)
c. Explain jumps in loops with examples. (10 Marks)
- 4 a. Explain the runtime initialization of arrays, with an example. (05 Marks)
b. Write a program of matrix multiplication. (07 Marks)
c. Explain the string handling functions with examples. (08 Marks)
- 5 a. What is the need for user defined functions? (05 Marks)
b. Explain category of functions in 'C' with examples. (10 Marks)
c. Write short notes on recursion, with C 'Code'. (05 Marks)
- 6 a. Define structures and UNION in 'C'. (05 Marks)
b. Explain structures within structures. (05 Marks)
c. Explain pointers to functions and array of pointers. (10 Marks)
- 7 a. Explain the declaration of storage class. (06 Marks)
b. Write commonly used 'scanf()' format codes. (10 Marks)
c. Write short notes on logical operators in 'C'. (04 Marks)
- 8 Write short notes on :
a. High level I/O file handling functions.
b. Random access files.
c. MALLOC.
d. Pointers in 'C'. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.