

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]  
(2125)

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**MCA 1st Semester Examination**  
**Programming Methodologies C & C++ (NS)**  
**MCA-101**

**Time : 3 Hours**

**Max. Marks : 60**

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt five questions in all, select one question from each sections A, B, C & D. Section E is compulsory.

**SECTION - A**

1. What do you mean by algorithm? Write an algorithm to find the power of a number. Also give its advantages. (12)
2. Explain Various operators supported in C. (12)

**SECTION - B**

3. Write the program to find the grade of the student with following conditions:

Marks	Grade
80-100	A+
70-79	A
60-69	B+
50-59	B
40-49	C
0-39	F

(12)

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4. What do you mean by function? Write advantages of using functions. Differentiate between call by value and call by reference using suitable examples. (12)

**SECTION - C**

5. What do you mean by array? How we can declare, initialize and access members of 2d-array. Explain using an example. Also explain how memory is allocated to 2d-array? (12)
6. Write a program that compares two strings without using library functions. (12)

**SECTION - D**

7. Explain the concept of array of objects in structure using suitable examples. (12)
8. Write a program to copy the content of data.txt file to copy.txt file (12)

**SECTION - E**

9. Define the following.
  - (a) Pseudo code.
  - (b) Types of errors.
  - (c) constant.
  - (d) if else statement.
  - (e) pointer.
  - (f) linked list.
  - (g) malloc().
  - (h) do while.
  - (i) keywords.
  - (j) fscanf().
  - (k) typedef.
  - (l) file opening modes. (1×12=12)