

Roll No.

Total Pages : 03

MCA/D-18

10060

PROGRAMMING IN C

MCA-14-11

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What is the use of header files ?
- (b) List the arithmetic operators available in C language with their associativity.
- (c) Discuss the syntax and semantic of if statement in C language.
- (d) Differentiate between static and dynamic memory allocation. Discuss the library functions in C for dynamic memory allocation.
- (e) Comment on the validity of the following for loop :
for(;;);

Unit I

2. (a) What do you understand by hierarchy of operators ? Draw the table indicating the hierarchy of operators in C language.

- (b) What do you understand by side effect ? Discuss the operator in C language causing the side effect.
- 3. (a) What do you understand by storage class ? What are the different storage classes available in C language ? Discuss them using suitable examples.
- (b) What are the different data types available in C language ? Discuss.

Unit II

- 4. (a) What is the difference between break and continue statement ? Write a program in C to print first N natural numbers except perfect square numbers.
- (b) What is goto statement ? Why should one avoid the use of goto statement ? Discuss.
- 5. What is the difference between while and do-while loop ? Write a function in C to generate first N prime numbers using while loop only.

Unit III

- 6. What is an array ? How is it passed to function as an argument ? Write a function in C to sort an array of integer in ascending order passed as an argument.

7. (a) What is a Pointer ? Write a function C to swap the values of two integers.
- (b) What is String ? Discuss the following string handling library functions in C :
- (i) strlen
 - (ii) strcmp
 - (iii) strcpy.

Unit IV

8. What is a Struct ? Write a program in C with a function to read an array of struct where the different fields of struct are emp_no, emp_salary. The emp_no is integer type, emp_name is a string and emp_salary is float. Also write a function to print this array.
9. (a) What are the different modes to open a file in C language ? Discuss.
- (b) What do you understand by macro ? Explain using suitable examples.