

Roll No.

Subject Code—2070

M.C.A. (First Year) EXAMINATION

(5 Years Integrated Course)

COMPUTER PROGRAMMING AND
PROBLEM SOLVING USING C

MCA-102

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. What is a flowchart ? What are the various basic symbols used in flowcharting ? Draw their pictorial representation. Also describe the functions of the various basic flowcharting symbols. 20
2. (a) What is C token ? List the different types of C tokens. 10

- (b) Give the basic structure of a C program with any program example. 10
3. (a) What are the input-output statements available in 'C' language ? How is the formatted I/O done ? Explain with example. 10
- (b) "C supports a rich set of operators." Justify. 10
4. (a) What is a selection statement ? Which selection statement does C provide ? 10
- (b) Explain the general syntax of a switch statement with example and also explain its use in programming. 10
5. (a) What is an array ? How are arrays declared and initialized ? What are multidimensional arrays ? 10
- (b) Write a C program to read a matrix of order $M \times N$ and obtain its transpose. 10
6. (a) What is Recursion ? While writing any recursive function what thing must be taken care of ? 10

- (b) How is call by value method of function calling is different from call by reference method ? Give suitable example. 10
7. (a) Explain with example, how a string is declared and initialized ? 10
- (b) What is Pointer ? Discuss the applications and disadvantages of them. 10
8. (a) What do you understand by opening a data file ? How is this performed ? List the main advantages of using data files. 10
- (b) Write a C program to concatenate two text files. 10