

(i) Printed Pages : 3

Roll No.

(ii) Questions : 9

Sub. Code :

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Exam. Code :

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**Bachelor of Computer Applications 1st Semester
(2124)**

PROBLEM SOLVING THROUGH C

Paper : BCA-16-104

Time Allowed : Three Hours]

[Maximum Marks : 65

Note :— Attempt **five** questions in all, selecting **one** question from each of the Units I, II, III and IV and the compulsory questions number 9.

UNIT—I

1. (a) What do you mean by programming process ? How is it depicted through Data Flow diagrams and Decision Tables ? 7
- (b) What is an Operator ? Exemplify various arithmetic, relational and logical operators. 6
2. (a) Draw difference between Flowchart and Pseudo code. Write pseudo code and draw flowchart for any problem of your choice. 7
- (b) What is data type ? Explain various data types through examples. 6

UNIT—II

3. (a) What do you mean by decision control ? Explain various types of IF-statements to justify. 7
- (b) What is function ? Draw difference between library functions and user-defined functions. Justify through their implementation in a C program. 6
4. (a) What is control structure ? Explain it through the examples of "Switch" and "go to" statements. 7
- (b) How are functions defined and called ? Explain various methods of parameter passing to a function. 6

UNIT—III

5. (a) What is an Array ? Draw difference between single and two dimensional arrays through some program. 7
- (b) What is pointer ? Explain are address and indirection operators used to handle the arrays. Explain through C program. 6
6. (a) What is an Array ? Explain various matrix operations using arrays. 7
- (b) What do you mean by dynamic memory allocation ? Explain any three associated functions. 6

UNIT—IV

7. (a) What are Strings ? How are they read and written ? Explain through C program. 7
- (b) What are files ? Exemplify various I/O operations on files in detail. 6

8. (a) Exemplify strlen (), strcpy () and strcat () functions in detail. 7
- (b) Draw difference between structures and union through a C program. 6

(Compulsory)

9. Explain :
- (a) Rules for constructing variables. 3
- (b) Storage classes in C. 2
- (c) Recursion. 2
- (d) Passing array to a function. 2
- (e) Array of Pointers. 2
- (f) Array of Structures. 2