Bachelor of Computer Applications 1ˢᵗ Semester

(2122)

PROBLEM SOLVING THROUGH C

Paper : BCA-16-104

Time Allowed : Three Hours]   [Maximum Marks : 65

Note :— Candidate is required to attempt **FIVE** questions in all, including Question No. **9** which is compulsory and attempt remaining **FOUR** questions by selecting **ONE** question from each Section.

SECTION—A

1. Compare merits and limitations of data flow diagram, decision table, pseudo code and flow charts as tools of programming process.   13

2. Discuss various operators available in C language along with hierarchy of operations. What is the role of identifiers and keywords in developing C programs ?   13

SECTION—B

3. Explain various loop control structures available in C language along with illustrative examples of your own choice.   13

4. Explain the calling and definition of function in C language. Compare various methods of parameter passing to the function with example.

          13

SECTION—C

5. How is a two dimensional array initialized ? Write a C program to compute multiplication of two matrices of order 4×4.   13

6. Write a note on following :

   • Array of pointers

   • Dynamic memory allocation functions.   13

SECTION—D

7. How are string variables declared and initialized in C language ? Explain the working of following :

   strlen(), strcat(), strcmp(), strcpy().   13

8. Differentiate between structures and unions by taking sample code of your own choice. Write a C program illustrating basic I/O operation on C files.   13

(Compulsory Question)

9. (a) Distinguish between testing and debugging.   3

   (b) Define the role of goto statement.   2

   (c) What is the relevance of switch statement ?   2

   (d) Give an example of arrays of characters.   2

   (e) Write about array of pointers.   2

   (f) What are nested structures ?   2