BCA/M-20   **1887**

ADVANCED PROGRAMMING IN 'C'
BCA-121

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. Explain the following :
   (a) Function islower() and to lower()
   (b) Calloc()
   (c) Puts()
   (d) Union of structures
   (e) Enumerated data type
   (f) Pointer arithmetic
   (g) #define directive
   (h) Command line arguments.

Unit I

2. (a) Write a program to sort the list of names of employees in alphabetic order.
   (b) What is the difference between a string and character array ? Explain with examples.

3. (a) Differentiate between structure and union.

(b) Define structure and also write rules for declaring and accessing the structure with an example.

Unit II

4. What is a pointer ? How would you declare and initialize a pointer variable ? Write a simple program to show usage of pointer.

5. (a) What do you mean by pointer to pointer ? Explain its with the help of an example.

(b) Explain the concept of dynamic memory management using pointer.

Unit III

6. (a) What is a file ? Explain various operations performed on a file.

(b) How will you open a file ? What are various file opening modes ?

7. (a) What are various errors that may occur during i/o operations on a file ? How will you handle them ?

(b) What are the functions performed by fseek() and ftell() function ?

Unit IV

8. (a) What is a macro and how will you define it ? What are the advantages of using a macro ? Explain with suitable example.

(b) Explain the use of #error, #ifdef, #ifndef and #include with some suitable examples.

9. (a) What is recursion ? Illustrate it with suitable example.

(b) Explain the usage of command line arguments with the help of a program.