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**BCA/M-15**

**ADVANCED PROGRAMMING IN C**

**Paper-BCA-121**

**Time allowed: 3 hours]**

**[Maximum marks: 80**

Note: Attempt five questions in all including question bo.1 and selecting one question from each section. All question carry equal marks.

Compulsory Question

1. (a) What is enumerated data type? Write its uses.  
(b) Explain NULL pointer.  
(c) What is significance of a pointer to pointer?  
(d) Differentiate puts() and fputs to pointer?  
(e) Explain 'argc' and 'argv' command line arguments.  
(f) Write any four operations on files?

**Section- A**

2. (a) What are similarities and differences between a structure type and a union data type?  
(b) Write a program to transfer a union type data to a function subprogram?
3. (a) Explain advantages and limitation of array of pointers?  
(b) Write a program in C-language to compare to compare two strings without using strcmp function to check the strings are equal or not.

### **Section- B**

4. Explain with example of each:
  - (a) Pointer to a string
  - (b) Pointer to structure type
  - (c) Pointer to two dimensional array
  - (d) Void pointer
5. Differentiate the following
  - (a) Pointer expression and pointer assignment
  - (b) Malloc () and Calloc () functions.

### **Section- C**

6. (a) Write a program in C- language to create a file called employee and store employee and store employee data from keyboard to file.  
(c) Explain fwrite () fprintf () functions with argument of your choice?
7. Differentiate:
  - (a) “r” and “r+” mode for opening
  - (b) Fseek () and rewind () functions

### **Section- D**

8. (a) Define a macro to find sum of digits of a three digit number? Illustrate the use of this macro in a C-language program?  
(c) Explain:
  - (i) Object like macro and function like macro
  - (ii) Pre processor directive handling and macro expansion.
9. Differentiate the following:
  - (a) #if and #elif
  - (b) #ifdef and #endif
  - (c) File inclusion directive