END TERM EXAMINATION

FIRST SEMESTER (BCA) JANUARY 2024

Paper Code: BCA-103　　　　Subject: Programming Using 'C' Language

Time: 3 Hours　　　　　　　　　　　　　　Maximum Marks: 60

Note: Attempt five questions in all including Q. no.1 which is compulsory.
Select one question from each unit.

Q1　Write short notes of the following:　　　　　　　　　　　(2x10=20)

(a) What are shorthand assignment operators?

(b) What is #define and write its syntax?

(c) Differentiate between call by value and call by reference.

(d) Name the language necessarily need heap allocation in the run time environment and why?

(e) Define static storage class.

(f) What is typecasting?

(g) Define self-referential structure.

(h) Name functions of standard library process.h.

(i) Write usage of command line arguments.

(j) Define memory allocation for structure and array.

UNIT-I

Q2　(a)　Write a C program to check Least Significant Bit (LSB) of a number is set or not.　　　　(5)

　　(b)　Explain nested control structure with an example.　　　　(5)

Q3　(a)　Explain labelled continue statement with flow diagram.　　　　(5)

　　(b)　Write a program to check whether the number is even or not and print using the goto statement.　　　　(5)

UNIT-II

Q4　(a)　Write a C program to calculate sum of array elements using pointers.　　　(5)

　　(b)　Explain the pointers for inter-function communication.　　　(5)

Q5　(a)　Write a program to find out maximum number in array using pointer. (5)

　　(b)　What are callback functions and how functions can be passed to other functions as an argument.　　　(5)

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UNIT-III

Q6   (a)   Write a C program to access members of a structure using pointers.   (5)

      (b)   Why do we need File Handling? Write types of files and functions in file operations.   (5)

Q7   (a)   Write a C program using passing structure by reference.   (5)

      (b)   Explain file positioning functions.   (5)

UNIT-IV

Q8   (a)   Write a C program to calculate the sine of an argument.   (5)

      (b)   Explain string library functions with suitable example.   (5)

Q9   (a)   Write a program in C that write 10 integers in data.txt file and copy into the duplicate.txt file.   (5)

      (b)   Define virtual functions. Explain wide char and library functions.   (5)

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