(c) Write a program to add two matrices A and B having dimension $3 \times 3$ rice and store the result in another matte.

5. (a) What do you mean by storage classes? Discuss different types of storage classes used in C with suitable example.

(b) Write a program in C to check whether an entered string is panlindrome or not.

(c) Write a program in C to copy the contents of one file into another file.

6. (a) Discuss the significance of operator precedence and associativity in detail.

(b) Write a program in C to simulate a simple calculator using switch case statement.

(c) What do you mean by macros? Explain different types of macros with suitable example.

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No. of Printed Pages : 04

Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 43201 Roll No. 1 2 3 0 4 3 2 4 7 7

# B. Tech Examination 2023-24

## (Odd Semester)

## COMPUTER CONCEPTS & PROGRAMMING IN C

*Time : Three Hours]* *[Maximum Marks :60*

Note :– Attempt all questions.

### SECTION–A

1. Attempt all parts of the following : $1 \times 8 = 8$

(a) What are the various characterstics of an algorithm?

(b) Write diferences between compiler and interpreter.

(c) What is an enumerated data types in C language?

(d) Differentiate between structure and union.

(e) Distinguish between actual arguments and formal arguments.

(f) List various file opening modes in C.

(g) Differentiate between system software and application software.

(h) What will be value of d if d is an integer after the operation d=2/7.0?

## SECTION – B

2. Attempt any two parts of the following . $6 \times 2 = 12$

(a) Draw the functional block diagram of a digital computer and discuss its components in brief.

(b) What are the different types of bitwise operators used in C? Give an example of each.

(c) Write a program in C to find the factorial of a given integer using recursion.

(d) What do you mean by pointers in card? How are they declared? Write a program in C to swap the values of two variables by using pointers.



## SECTION – C

3. Attempt any two parts from each question. Each part carry equal marks. $8 \times 5 = 40$

(a) Define data types in C. Discuss primitive data types in terms of memory occupied, format specifier and range.

(b) What do you mean by dynamic memory allocation? Explain the malloc () and Calloc () function in details.

(c) Write a program in C to print the following patern.

```
*
***
*****
*******
```

4. (a) What is an operating system? Explain various types of function performed by an operating system.

(b) Explain call by value and call by reference mechanism for function call using proper example.

*[ P. T. O.*