

- (c) Write a program to add two matrices A and B having dimension 3×3 and store the result in another matrix.
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 palindrome 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.

1,200

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

PAPER ID : 43201	Roll										
	No.	1	2	3	0	4	3	9	3	6	0

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 × 8 = 8
- (a) What are the various characteristics of an algorithm?
- (b) Write differences between compiler and interpreter.
- (c) What is an enumerated data type in C language?
- (d) Differentiate between structure and union.

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- (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 pattern.

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      *
    * * *
  * * * * *
* * * * * *

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- 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.