S.No. : 219 NCS4101

No. of Printed Pages : 04

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

PAPER ID : 43201 Roll No. [redacted]

B. Tech Examination 2024-25

(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 : $8 \times 1 = 8$

   (a) What do you mean by flowchart?

   (b) Give the rules for variable declarartion.

   (c) What is the use of sizeof () operator?

   (d) Differentiate between break and continue.

   (e) What is recursion?

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(f) Write some of the differences between structure and union?

(g) Why do we use header files?

(h) What is the full form of EOF?

SECTION – B

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

(a) What are the different data types available in "C"? How many bytes are occupied by them?

(b) Explain the difference between betwise AND and logical AND operators with the help of examples.

(c) Write a C program to print the sum of diagonal elements of 2-D matrix.

(d) Explain different categories of pre-processor directives used in C.

SECTION – C

Note:- Attempt all questions. Attempt any two parts from each question. $5 \times 8 = 40$

3. (a) What is an operating system? Mention the types of operating systems and explain any two of them in detail.

(b) Explain the basic structure of a "C" program.

(c) Explain the significance of an assembler and compiler.

4. (a) What are different bit operators used in C? Give an example of each.

(b) Write a program to print the count of even numbers between 1 to 200. Also print their sum.

(c) What are iterative control statements? Explain the difference between while loop and do while loop.

5. (a) How will you pass parameters to a function? Briefly describe two mechanisms of parameter passing in "C" language.

(b) What is an array? How a single dimension and two dimension arrays are declared and initialized?

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(c) Write a C program to read and display student details using structure.

6. (a) How a pointer variable is declared? What is the purpose of data type included in the declaration?

(b) Explain the following preprocessor directives?

(i) #include

(ii) #define

(c) Write a short notes on:

(i) fgets()

(ii) fputs()

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