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

PAPER ID : 33214　Roll No. | | | | | | | | | | |

B. Tech Examination 2023-24

(Odd Semester)

COMPUTER CONCEPTS & PRGRAMMING 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 is algorithm? Define.

　(b)　What is assemblar?

　(c)　Define variable in C programming.

　(d)　What is pointer? Define.

　(e)　Define array.

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(f) What is the outcome of sizeof ()?

(g) Diffrentiate between library and user defined functions.

(h) Differeentiate between structure and array.

SECTION – B

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

(a) Explain storage classes in C programming. Compare all the storage classes with a suitable table.

(b) Explain the following with suitable examples :

   (i) Identifiers

   (ii) Constants

   (iii) Keywords

   (iv) Data types in C

(c) What is programming environment? Explain different strategies of designing algorithms.

(d) Explain various bitwise operators with suitable examples.

SECTION – C

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

3. (a) Explain nested if else with its general format. Differentiate it with if else ladder. Write a suitable program.

    (b) Write down the C program for multiplication of two matrices.

    (c) Differentiate between structure and union. Write down a C program which accepts the name, price and number of pages of a book and display it.

4. (a) Explain the procedure of creating user defined functions. Write a C program to calculate factorial of any number using user defined functions.

    (b) Write down the C program for binary search.

    (c) Explain the concept of insertion SORT with a suitable example.

5. (a) Differentiate between call by value and call by reference. Write a suitable C program.

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(b) What is pointer? Explain pointer to pointer with a suitable example. Write a C program to justify your answer.

(c) Explain the following with suitable examples :

    (i) Preprocessor directives

    (ii) Conditional compilation

6. (a) What is dynamic memory allocation? Explain the role of following functions with suitable C-syntax:

    (i) malloc ()

    (ii) calloc ()

    (iii) realloc ()

    (iv) free

(b) Write a note on File handing in C programming.

(c) Write notes on the following with suitable example and C cole.

    (i) Stack

    (ii) Linked list

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