S.No. : 423 BCS3305

No. of Printed Pages : 04

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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