F2Y-003-3031002

B. C. A. (Sem. 1) (CBCS)

(W.E.F. 2022) Examination

December - 2022

CS-02 : Problem Solving Methodologies &

Programming in C

Faculty Code : 003
Subject Code : 3031002

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

1   (a)   Answer the following :   4

      (1)   C language was developed at_____

      (2)   What is the range of integer data type ?

      (3)   ASCII stands for _____.

      (4)   How many operands are required for binary operation?

  (b)   Answer in brief : (any one)   2

      (1)   Explain Keyword in C.

      (2)   Explain typedef keyword.

  (c)   Answer in detail : (any one)   3

      (1)   Explain scope and lifetime of variable.

      (2)   Draw a flow chart to display Fibonacci series.

  (d)   Answer in detail : (any one)   5

      (1)   Explain operators is available in C.

      (2)   Explain primary data types available in C.

2. (a) Answer the following : **4**

    (1) In switch.....case, case label follows which symbol?

    (2) Which loop is known as post-test loop?

    (3) Which statement is used to move the control to the beginning of the loop?

    (4) Iteration logic is used for looping statements. (True/False)

(b) Answer in brief : (any one) **2**

    (1) Explain goto statement.

    (2) Explain break.

(c) Answer in detail : (any one) **3**

    (1) Differentiate : do....while loop v/s while loop

    (2) Explain if...else statement with example.

(d) Answer in detail : (any one) **5**

    (1) Explain multiple branching statement in C.

    (2) What is loop ? Explain any one with example.

3 (a) Answer the following : **4**

    (1) What is the return type of strcmp ()?

    (2) When a function calls itself. is known as _____?

    (3) Which header file is required to use pow()?

    (4) Which function is used to check whether given argument is digit or not?

(b) Answer in brief : (any one) **2**

    (1) Explain calloc.

    (2) Explain atof().

(c) Answer in detail : (any one)   3

   (1) Explain any three functions of string.h header file.

   (2) Explain getch(), getche() and getchar() functions.

(d) Answer in detail : (any one)   5

   (1) What is UDF ? Explain any one type of UDF in detail.

   (2) Explain any two storage class in detail.

4   (a) Answer the following :   4

   (1) By default array index starts from _____.

   (2) Which symbol is used to declare pointer variable?

   (3) A pointer variable holds _____.

   (4) How many ways an array can be initialized?

   (b) Answer in brief : (any one)   2

   (1) How to initialize 1-D array ?

   (2) What is Array ?

   (c) Answer in detail : (any one)   3

   (1) Explain pointer to array.

   (2) Explain pointer to pointer.

   (d) Answer in detail : (any one)   5

   (1) Explain two-dimensional array with example.

   (2) Write a program to enter five numbers and sort them into ascending order using array.

5   (a) Answer the following :   4

   (1) Which keyword is used to define a structure?

   (2) Which function is used to set file pointer at desired position?

   (3) How many memory occupies by a union variable?

   (4) Which operator is used to access pointer to structure?

(b) Answer in brief : (any one)   2

   (1) Explain rewind()

   (2) Write down file opening modes.

(c) Answer in detail : (any one)   3

   (1) Differentiate : Structure v/s Union

   (2) Explain fopen(), fseek() and fclose() functions.

(d) Answer in detail : (any one)   5

   (1) Explain pointer to structure with example.

   (2) Write a program to input 5 students rollno. name and marks and copy them into a text file.

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