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CBCS SCHEME

USN | | | | | | | | | | | **18CPS13/23**

First/Second Semester B.E. Degree Examination, June/July 2019
C Programming for Problem Solving

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. With a neat block diagram of computer, explain its components. **(10 Marks)**

b. Classify the following into input and output devices:
Monitors, visual display unit, Track balls. Bar code reader, Digital camera, Film recorder, Microfiche, OMR, Electronic Whiteboard, Plotters. **(05 Marks)**

c. Define the terms: Network, LAN, WAN, MAN and network topology. **(05 Marks)**

OR

2 a. Write the basic structure of C program. Explain each section briefly with suitable example. **(09 Marks)**

b. Define operator. Explain any 6 operators with suitable example. **(07 Marks)**

c. State whether the following are valid identifiers or not: integer, float, I am, 123_AbC. **(04 Marks)**

Module-2

3 a. Define and write the classification of Input and Output statements in C. Write a C-program that prints the following output:

(06 Marks)

b. Define branching statements. Explain them with syntax and suitable example. **(10 Marks)**

c. Evaluate:

```
i = 1
L : if (i > 2)
    {
      printf ("Saturday");
      i = i + 1;
      goto L;
    }
  printf ("Sunday");
```

Explain your result briefly. **(04 Marks)**

OR

4 a. State the drawback of ladder if-else. Explain how do you resolve with suitable example. **(08 Marks)**

b. Write a C program to get the triangle of numbers as a result:

```
1
1 2
1 2 3
1 2 3 4
```

(06 Marks)

c. Write a C program to check whether given number is prime or not. **(06 Marks)**

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Module-3

5 a. Define an array. Explain with suitable example how do you declare and initialize 1D array. **(10 Marks)**

b. Write a C program to search an element using linear and binary techniques. **(10 Marks)**

OR

6 a. Define a string. Explain any 4 string library functions with syntax and example. **(10 Marks)**

b. Write a C program to copy a string (combination of digits and alphabets) to another string (only alphabets). **(10 Marks)**

Module-4

7 a. Define a function. List and explain the categories of user defined functions. **(10 Marks)**

b. Write a C-program for evaluating the binomial coefficient using a function Factorial (n). **(10 Marks)**

OR

8 a. Define a recursion. Write a C recursive function for multiplying two integers where a function call is passed with two integers m and n. **(10 Marks)**

b. Differentiate: (i) User defined and built-in function (ii) Recursion and iteration **(10 Marks)**

Module-5

9 a. Define structures. Explain how do you declare, initialize and represent the memory for structure variable. **(10 Marks)**

b. Write a C program that accepts a structure variable as a parameters to a function from a function call. **(10 Marks)**

OR

10 a. Define pointers. Explain pass by value and pass by reference with C statements and an example. **(10 Marks)**

b. Define pre-processor directives. Write C program that finds the addition of two squared numbers, by defining macro for Square (x). **(10 Marks)**

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