

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

(CCSS)

Computer Science—Core Course

CSIB 01—COMPUTER FUNDAMENTALS AND PROGRAMMING IN 'C'

Time : Three Hours

Maximum : 30 Weightage

## I. Answer the following :—

1 The \_\_\_\_\_ operator is used to link related expressions together.

2 Consider the statements :

```
float x ; int a = 20, b = 10 ;
```

```
x = (a > b) ? b : a ;
```

What would be the value stored in x ?

3 What will be the value of sum after executing the following program segment :

```
sum = 0 ;
```

```
for (int i = 1 ; i < 20 ; i++)
```

```
{   if(i% 4 == 0) continue;
```

```
    sum+=i;
```

```
}
```

4 State whether true or false: A switch statement can always be replaced by a series of if...else statements.

5 What will be the value of x printed if

```
x = '7' - '0';
```

```
printf("%d", x);
```

6 \_\_\_\_\_ function compares two strings given as its arguments.

7 Which of the following statement is correct ?

(a) static value [10];

(b) int matrix [10, 20];

(c) static int value [] = {1, 2, 3, 4};

(d) None of the above.

8 By default, a function return \_\_\_\_\_ type value.

Turn over

- 9 \_\_\_\_\_ operator tell us the size of a given variable.
- 10 Consider the declaration `int arr [100]`; then `arr+10` is equivalent to \_\_\_\_\_.
- 11 \_\_\_\_\_ takes a file pointer and resets the position to the start of a file.
- 12 In Dynamic allocation, memory is allocated from \_\_\_\_\_ region.

(12 × ¼ = 3 weightage)

II. Answer *all* questions :—

- 13 What is a truth table ?
- 14 Draw a flow chart to find the factorial of a number.
- 15 With suitable example, explain *break* statement.
- 16 Write a program to read four digit integer and print the sum of its first and third digits [from left]. For example, if  $n = 2457$ , then  $\text{sum} = 2 + 5 = 7$ .
- 17 What is a global variable ?
- 18 Explain the difference between call by value and call by reference.
- 19 Give suitable examples illustrating the two approaches to access structure members.
- 20 List and explain functions to fill images.
- 21 With suitable example, explain “#define” statement.

(9 × 1 = 9 weightage)

III. Answer any *five* questions :

- 22 Discuss precedence of arithmetic, relational and logical operators.
- 23 With suitable example, explain nesting of for loops.
- 24 Write a program to find the largest and second largest numbers from a list of  $n$  numbers.
- 25 Write a recursive function to find sum of first  $n$  natural numbers.
- 26 Write note on union.
- 27 Write a program to add two matrices. Use pointers to access array elements.
- 28 With suitable example, explain command line arguments.

(5 × 2 = 10 weightage)

IV. Answer any *two* questions :

- 29 Write a program for searching a name in a list of  $n$  names. Include appropriate messages.
- 30 Give a detailed discussion on data files.
- 31 Write a program to create a structure with name, number and age of a student. Using the structure, write a program to read and print details of  $n$  students.

(2 × 4 = 8 weightage)