

D 53516

(Pages : 3)

Name.....

Reg. No.....

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, JANUARY 2014

(UG—CCSS)

Core Course

Computer Science

CS IB 01—PROBLEM SOLVING AND C PROGRAMMING

(2012 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Answer the following :-

```
1 int a = 10, b ;  
   b =a ++ + ++ a;  
   printf("%d, %d, %d, %d," b,a++,a, ++a);
```

What will be the output when following code is executed ?

- (a) 12, 10, 11, 13. (b) 22, 10, 11, 13.
(c) 22, 11, 11, 11. (d) 22, 13, 13, 13.
- 2 Which one of the following will read a character from the keyboard and will store it in the variable *c* ?
- (a) `c = get c()`. (b) `getc(&c)`.
(c) `c = getchar(stdin)`. (d) `c=getchar()`.
- 3 While declaring an array in C as ; `datatype arrayname[size]` ; the size can be :
- (a) any constant. (b) an integer constant.
(c) any variable. (d) any initialized integer variable.
- 4 In 'C' which of the following can be used to create the constants for float values :
- (i) Enumerations. (ii) `const`.
(iii) `# define`.
- (a) (i) and (ii). (b) (ii) only.
(c) (ii) and (iii). (d) (i) and (iii).

Turn over

5 What is the return value of the following function if the function is called as
int value = fun (10);

```
int fun(int n)
```

```
{
```

```
    if (n == 1 || n == 2) return 0;
```

```
    else return (n-1 + fun (n-2));
```

(a) 20.

(b) 26.

(c) 22.

(d) 24.

6 Which of the following is *not* a character constant ?

(a) '\60'.

(b) '\x24'.

(c) 'sum'.

(d) 'A'.

7 What is the value of a[0] [2] in int a [3][4] = {{1, 2}, {3, 4, 5}}; ?

8 The parameters in a function definition are known as _____.

9 What is the value of 'f' after execution of the following code ? float f = 1/4.0 + 1/4;

10 What is the result of the expression 6 + 12*3-4/2 ?

11 A declaration float a,b; occupies _____ bytes of memory.

12 Name the function that is used to copy one string to another string ?

(12 × ¼ = 3 weightage)

II. Answer *all* the questions :-

13 What is a variable and what is meant by the value of a variable ?

14 What is an operator ?

15 What is the general form of conditional operator ? Give an example.

16 What is an integer constant ?

17 Give the syntax of nested if-else statement.

18 How a string variable is declared ?

19 What are external variables ?

20 How a pointer is initialized ?

21 What is a file ?

(9 × 1 = 9 weightage)

II. Answer any *five* questions :-

- 22 Write a program to solve a quadratic equation ?
- 23 Explain switch statement.
- 24 Write a program to find the sum of even digits in a number ?
- 25 Write a program to sort an array of elements using function ?
- 26 What is the difference between call by value and call by reference ?
- 27 How a file can be opened ?
- 28 Distinguish between printf and fprintf.

(5 × 2 = 10 weightage)

V. Answer any *two* questions :-

- 29 Write a program that will generate a data file containing the list of customers and their corresponding telephone numbers. Use a structure variable to store the name of each customer. Create a data file using a sample list.
- 30 (a) Write a program to read a line of text and output the number of words and characters ?
(b) Write a program to find prime numbers between 50 and 500 ?
- 31 (a) Write a program to merge two sorted array into a single sorted array in ascending order.
(b) Write a function to remove duplicates from an ordered array.

(2 × 4 = 8 weightage)