

## **BCA-02/DIT-06**

### **Introduction to Computer Programming Using C**

Bachelor of Computer Application (BCA-11/16/17)

Diploma in Information Technology (DIT-17)

1<sup>st</sup> /2<sup>nd</sup> Semester Examination, 2019

**Time : 3 Hours**

**Maximum Marks : 80**

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**Note** : This paper is of Eighty (80) marks divided into three (03) Sections A, B and C. Attempt the questions contained in these sections according to the detailed instructions given therein.

### **Section –A**

#### **(Long Answer Type Questions)**

**Note** : Section 'A' contains four (04) long answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

(2X19=38)

Q1. Answer the following question. **(9.5×2)**

- a. While purchasing certain items, a discount of 10% is offered if the quantity purchased is more than 1000. If quantity and price per item are input through the keyboard, write a program to calculate the total expenses.

- b. If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or incurred loss. Also determine how much profit he made or loss he incurred.

Q2. Answer the following questions. **(9.5×2)**

- a. Explain with example the three types of loops available in C i.e. for, while, and do-while?
- b. Write a function to find the binary equivalent of a given decimal integer and display it.

Q3. Answer the following questions. **(9.5×2)**

- a. See the following program of automatic storage class. Please write its output:

```
Main()
{
  auto int i=1;
  {auto int i=2;
    {
      auto int i=3;
      printf ( "\n%d",i);
    }
    printf ( "%d",i);
  }
  printf ( "%d", i);
}
```

- b. Discuss different types of storage classes in c differentiating between them with example.
- Q4. Answer the following questions. **(9.5×2)**
- a. Write a C program to create a text file named as “test.txt” and write “hello world” in the created file using your C program.
- b. Discuss procedure of function call by value and call by reference using an example of each.

### **Section – B**

#### **(short-answer- type Questions)**

**Note :** Section ‘B’ contains eight (08) short –answer type questions of Eight (08) marks each. Learners are required to answer four (04) questions only. (4x8=32)

Q1. Write the output of following program:

```
Stuct gospel
{
Int num;
Char mess 1[50] ;
Char mess 2[50] ;
} m1 = {2, “If you are driven by success”,
“makes sure that it is a quality drive”
}
Stuct gospel m2,m3 ;
M2 = m1 ;
M3 = m2 ;
```

```
        Printf (“\n%s %s “, m1. Num, m2.mess1,  
m3.mess2);  
    }
```

Q2. Take a look at the following declarations:

```
COLORREF color;  
HANDLE h;  
WPARAM w;  
LPARAM l;  
BOOL b;
```

What are they? And how can they be defined and used?

Q3. Twenty-Five numbers are entered from the keyboard into an array. The number to be searched is entered through the keyboard by the user. Write a program to find if the number to be searched is present in the array and if it is present, display the number of times it appears in the array.

Q4. Write a program that interchanges the odd and even components of an array.

Q5. Tell the output of following program.

```
printf (“integer: %d\n” sizeof i);  
printf (“float: %d\n “sizeof x);
```

```
printf ("double: %d\n",sizeof d);  
printf ("character: %d\n",sizeof c)
```

- Q6. How will you open a file in 'C'? Write the process of reading and writing of files?
- Q7: What is the purpose of the do-while statement? When is the logical expression evaluated? What is the minimum number of times that a do-while loop can be executed?
- Q8. How are multidimensional arrays defined? Compare with the manner in which one-dimensional arrays are defined.

## Section –C

### (Objective Type Questions)

**Note** : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this section are compulsory. (10×1=10)

1. What is the output of this C code?

```
Void main()  
{  
  Int x = 43 %2;  
  Printf("value of x is %d ",x);  
}
```

- A. Value of x is 1.3
- B. Value of x is 2
- C. Value of x is 0.3
- D. Compile time error

2. Operation "a=a\*b+a" can also be written as:
- A. A \*=b+1;
  - B. (c =a \*b)=(a=c + a );
  - C. A= (b + 1)\* a;
  - D. All of the mentioned
3. The keyword 'break' cannot be simply used within:
- A. Do-while
  - B. If-else
  - C. For
  - D. While
4. What is the output of this C code?
- ```
Void main()
{
    Double k =0;
    For (k = 0.0; k < 3.0; k++);
    Printf("%lf' , k);
}
```
- A. 2.000000
  - B. 4.000000
  - C. 3.000000
  - D. Run time error
5. Names of functions in two different files linked together must be unique
- A. True
  - B. False

6. A function may have any number of return statements each returning different values.

- A) True
- B) False

7. Which of the following statements mentioning the name of the array begins DOES NOT yield the base address?

U: When array name is used with the size of operator.

V: When array name is operand of the & operator.

W: When array name is passed to scanf() function.

X: When array name is passed to printf () function.

- A. U
- B. V,W
- C. V
- D. V,X

8. +,-,/and \* are:

- A. Logical operator
- B. Relational operator
- C. Bitwise operator
- D. None of the above

9. Which function used for Dynamic memory Allocation.

- A. Malloc C
- B. Convert C
- C. Memory –alloc C
- D. None of the above

10. We can allocate a 2- Dimensional array dynamically.

A. True

B. False

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