USN [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]   **06CCP13/23**

First / Second Semester B.E. Degree Examination, Dec.09-Jan.10
Computer Concepts and C Programming

Time: 3 hrs.   Max. Marks:100

Note: 1. *Answer any FIVE full questions, selecting atlest TWO questions from each Part.*
2. *Answer all objectives type questions only on OMR sheet, page No 5 of the Answer booklet.*
3. *Answer to the objective type questions on sheets other than OMR will not be valued.*

1 a. Select the right answers in the following :
   i) Stylus is used to input data in   (04 Marks)
       A) Super computer   B) Workstation
       C) Smart phone and PDA   D) None of these.
   ii) Resolution is measured in terms of
       A) Dots per inch   B) Dot pitch   C) Pixels   D) None of these
   iii) The first six alphabetical characters on top row of a standard key board is
       A) QWERTY   B) QEWRTY   C) QERWTY   D) QYERTW
   iv) Which of these are also known as PDA s?
       A) Workstations   B) Mainframes   C) Hand held PC s D) Super Computers

   b. Explain in brief about optical character recognition (OCR) and also mention its advantages and disadvantages.   (06 Marks)
   c. Explain different types of impact and non – impact printers.   (10 Marks)

2 a. Select the right answers in the following :
   i) Number of tracks on a standard magnetic disc is   (04 Marks)
       A) 79   B) 80   C) 81   D) 78
   ii) Which of the following can store maximum data?
       A) Floppy   B) Compact disc   C) DVD   D) Blu ray disc
   iii) Which of the following converts parallel data to serial data?
       A) UART   B) USB   C) SCSI   D) MIDI
   iv) An example for magnetic storage device is
       A) CD ROM   B) Diskette   C) DVD   D) Flash memory

   b. How are the data stored on a optical device such as CD and how does this differ from storing data on a magnetic device such as Floppy? Explain.   (08 Marks)
   c. What are the differences between RAM and ROM?   (04 Marks)
   d. Explain the factors that affect the processing speed of a computer.   (04 Marks)

3 a. Select the right answers in the following :
   i) GUI is an acronym for   (04 Marks)
       A) Geo-graphical usage interface   B) Graphical user interface
       C) Global union of internet   D) Geometrical user interface
   ii) 1 Nibble is equal to
       A) Half byte   B) 2 bits   C) 2 bytes   D) 8 bits
   iii) Following is not a network device
       A) Hub   B) Bridge   C) Router   D) USB
   iv) Which of the following is not a valid topology?
       A) Star topology   B) Ring topology   C) Bus topology   D) Grid topology

b. What is an operating system? What are its primary functions? **(04 Marks)**

c. Discuss in brief, the four versions of windows operating system with their merits and demerits. **(08 Marks)**

d. Define the following terms : i) URL   ii) HTTP   iii) IP address   iv) WWW. **(04 Marks)**

4 a. Select the right answers in the following :

    i) Symbol used in flow chart for repetition of a loop is **(04 Marks)**

       A) Rectangle   B) Parallelogram C) Circle   D) Hexagon

    ii) If $X = 1$, $Y = 2$ and $Z = 3$, then $Z + X * \frac{1}{2} - Y = ?$

       A) Zero   B) 1   C) -1   D) None of these

    iii) Which of the following is a valid integer?

       A) 10,000   B) OX 1234   C) 10 20   D) OX ABCD

    iv) Range of unsigned n bit number is

       A) 0 to $2^{(n-1)}$ B) 0 to 2^n C) 0 to $2^{(n+1)}$ D) 0 to 2^n-1

b. What are tokens? Explain the various types of tokens with examples. **(08 Marks)**

c. Write an algorithm and flow chart to find the solution of a quadratic equation. **(08 Marks)**

PART - B

5 a. Select the right answers in the following :

    i) Each case statement in switch is separated by **(04 Marks)**

       A) Break   B) Continue   C) Exit   D) Goto

    ii) What is the output of the following code?

```
main ( )
{
    int X ;
    print f("% d", X) ;
}
```

       A) Error   B) Garbage value C) X   D) Zero

    iii) What is the value of A after execution?

```
main ( )
{
    int A = 10; B = 7;
    print f("% d", ++A – B - -);
}
```

       A) 10   B) 9   C) 04   D) None of these

    iv) The value of $\| x > 9 \&\& y! = 3 \|$ for $x = 11$ and $y = 6$ is

       A) Zero   B) 1   C) 2   D) -1

b. Explain the following with syntax : i) if – else statement   ii) Simple if   iii) nested if – else   iv) else if ladder. **(08 Marks)**

c. Write a C program using switch statement to perform the following operations between two variables. The operations are 1 – addition, 2 – subtraction. 3 – multiplication, 4 – division and print error message for default statement. **(08 Marks)**

6 a. Select the right answers in the following :

    i) A do – while loop is useful when we want to execute the statements within the loop to be executed **(04 Marks)**

       A) Only once   B) At least once C) Atmost once D) None of these

    ii) Pick the odd one out

       A) $a = a + 1$ B) $a + +$ C) $a += 1$ D) $a = + 1$

iii)   How many times the statements in loop will executed?
    for (i = 0 ; i > 1 ; i + +)
        {
            Statements ;
        }
    A) 1 time   B) 2 times   C) Zero times   D) Many times

iv)   Which of the following is palindrome?
    A) 1101   B) 1234   C) 565   D) 1010

b.   Explain the following with their syntax : i) for loop   ii) while loop   iii) Do while   **(06 Marks)**

c.   Write a program to check whether a given number is Palindrome or not. Print suitable statements.   **(05 Marks)**

d.   Write a C program to add the digits of any given integer number.   **(05 Marks)**

7   a.   i)   An array is a group of related data that shares a common   **(04 Marks)**
    A) Name   B) Address   C) Index   D) All of these

ii)   Which of the following is valid array?
    A) int a [2] [2] = {1, 2}   B) int b [N] = {1, 2, 3}
    C) int c [10] = {1.2, 3, 4, 5, 'b', ...}   D) int d [2] = {1, 2, 3}

iii)   Given int a[2] [2] = {1, 2, 3, 4} ; what is the element in 2nd row and 1st column?
    A) 1   B) 2   C) 3   D) 4

iv)   Number of elements in an array defined by a[2][2][3] is
    A) 7   B) 12   C) 8   D) None of these

b.   Write a C program to compute sum of 2 matrices of dimensions (n × n) and output the result matrix using suitable statements.   **(04 Marks)**

c.   Write a C program to input N integers into a single dimensional array and sort them in descending order using Bubble sort technique. Print both given array and sorted array with suitable headings.   **(08 Marks)**

d.   Write a C program to find largest number in a given array of N elements.   **(04 Marks)**

8   a.   Select the right answers in the following :
    i)   The default return type of function is   **(04 Marks)**
    A) void   B) int   C) char   D) float

    ii)   Which of the following function prototype is invalid?
    A) int average (int x , int y , int z)   B)   float power (float a , float b)
    C) double minimum (float a ; float b)   C)   none of these.

    iii)   A function that calls itself is known as
    A) recursive function   B)   main function
    C) iterative function   D)   none of these

    iv)   What happens if actual and formal argument types do not match?
    A) error message will be generated   B)   garbage value will be passed
    C) program will not be executed   D)   none of these

b.   Write a function 'Prime' that returns 1 if its argument is a prime number and returns zero otherwise.   **(06 Marks)**

c.   Write a C program to compute the factorial of a given number using a function.   **(06 Marks)**

d.   Write a user defined function to find larger of two numbers.   **(04 Marks)**

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