Note: 1. All questions are compulsory

2. All questions carry equal marks

1. A.   State whether the following statements are True or False: (Attempt any Eight)   (8)

1. Multiprogramming and time sharing became a reality in third generation of computers.

2. Microprocessors were developed and used in the fourth generation computers.

3. Operating systems were developed in the third generation of computers.

4. WinRAR is not utility software

5. The format character % s is used to represent integers .

6. = and = = is not the same in C language.

7. while(condition) is a decision making statement.

8. Nested if () means one if () within another if ().

9. The for (x=0; x < 5; x++) will repeat 5 times.

10. y++ is called a pre-increment of the value of y.

B. Select the appropriate option from the following: (Attempt any Seven)   (7)

1. The technology used in first generation computers is_____.

    a)   Integrated circuit   b)   transisters

    c)   vaccum tubes   d)   radios

2. Fifth generation computers are based on _____

    a) Artificial Intelligence   b)   transistors

    c) vacuum tubes   d)   Integrated circuits

3.   A formatted output function is _____

    a) scanf()   b)   printf()

    c) put ()   d)   getchar()

4.   The oval shape in the flowchart signifies

    a)   Processing   b)   Decision making

    c)   Input/Output   d)   Start/End

5.   Which of these operating systems provides a Command line user interface?

    a)   Windows XP   b)   Linux

    c)   Android   d)   Microsoft DOS

6. Which of these is an Operating System?

    a) C   b) C++

    c) Linux   d) JAVA

7. The logical operator AND is written in C as _____.

    a) &&   b) ++

    c) || d) !

8. Which of the following is a system software?

    a) Microsoft Word   b) Microsoft Windows XP

    c) Tally   d) Corel Draw

9. Using a single if () we can check at the most_____ alternatives

    a) 1   b) 3

    c) 2   d) 4

10. The octal number system has a base of _____

    a) 2   b) 8

    c) 10   d) 16

Q.2 Answer the following questions:

a)   Explain the different kind of Primary Memory available   (8)

b)   Convert the following decimal numbers to binary   (7)

       i) $(256)_{10}$ ii) $(128)_{10}$ iii) $(78)_{10}$

OR

Q.2 c)   Differentiate between Super computers and Mainframe computers   .   (8)

    d)   Explain in brief the functional units of a computer.   (7)

Q.3 Answer the following questions:

a)   What are the applications of computer in business.   (8)

b)   Write an algorithm to find the find great number among three numbers.   (7)

OR

Q.3 c)   Draw the flowchart that read two numbers and prints the average of them.   (8)

d)   Explain in detail how can we use computer in education of the student.   (7)

Q.4 Answer the following questions:

a)   Explain the different input functions in C   (8)

b)   Write a program in C using a 'for()' loop to display all the positive integers from   (7)
      1 to 100 that are exactly divisible by11.

OR

Q.4 c)   What is the output of the following C program?   (8)

```
#include <stdio.h>
void  main()
  {
      int x,y,z;
      for(x=10;x<15; x+=4  )
        for(2=2; y<5; y+=2)
          {
             z=x*y;
             printf(" %d  %d  %d\n", x,y,z);
          }
  }
```

d)   What is the output of the following C program?   (7)

```
#include <stdio.h>
void main()
  {
      int i=0,x=0;
        for(i=1; i<10; i++)
        {
           if(i%2==1)
           x=x+I;
```

```
            else
                x--;
                printf("%d", x);
                break;
        }
    Printf("x= %d\n",x);
    }
```

Q.5 Answer the following questions:

a) Write a program in C to calculate and display the square of 1 to 10 numbers. (8)

b) Write a program in C to input for 5 persons their purchases and calculate and display

discount and net amount of each person where the discount is 1.5 of the purchases

upto 3000 and 2% on the excess.

OR

Q.5 c) Write short notes on any Three of the following giving suitable examples: (8)

    1.   The continue statement   2. for () loop

    3. while () loop   4.   nested if

d) Write a program in C to input principle amount (p) number of (7)

years(n) and rate (r) and display for each year the compound

interest and the maturity value.