Computer

Q.1 A. State whether the following statements are true or false and justify your answer.
(Attempt any seven)
1. First generation of computers used transistors.
2. scanf() is input function.
3. %s is format character for single character.
4. An operating system is part of Application software.
5. Rectangle shape in the flow chart signifies input.
6. ALU is part of memory in hard drive.
7. An assembler is a program that translates mnemonic code into machine code.
8. --y is post increment in C programming.
9. Second generation of computers used vacuum tube.
10. = and == is the same in C programming.

B. Fill in the blank using appropriate option(Attempt any eight)

1. Second generation computers are based on_____
   a)Artificial Intelligence   b)transistor   c)vacuum tube   d)IC

2. Which of these operating system does not provide a graphical user interface?
   a) Windows XP   b)Linux   c)Android   d) Microsoft DOS

3. Which of the following is a system software?
   a) Microsoft word   b) Tally   c) Coral Draw   d)Windows XP

4. Flow lines or arrows in a flowchart are used to connect _____.
   a) Two terminals   b) Two connectors   c) Two input/output   d) All of these

5. The logical operator OR is written in C as
   a) &&   b) ++   c)|| d) __

6. The data type int uses _____bytes of memory.
   a) 4   b)2   c)8   d)6

7. Unformatted function to input single character is_____.
   a) scanf()   b)gets()   c) getchar()   d) puts()

8 .An escape sequence used for horizontal tab is _____.
   a) (\h)   b) (\v)   c) (\n)   d) (\t)
9. Nested if should be used when we have more than _____alternative.
   a)2   b)3   c)4   d)1
10.Which of these is not a programming language?
   a) C   b)C++   c)Linux   d)JAVA

Q.2 A Write note on Basic component of a computer.
　　B. Explain Supper computers and mainframe computers
　　　　　　　　OR
　　C. Convert into decimal number system
　　　　1)$(10101)_2$　　　　2)$(11001)_2$　　　3)$(1110.01)_2$
　　D. Convert into binary number system
　　　1)43　　　2)67.5　　　　3)89

Q.3 A. Write note on Application software.
　　B. Write an algorithm and draw flowchart for following problem. the name and salary of an employee and calculate and display the name, sales, discount and net amount for the customer and commission for the salesman. Commission is 2% of sales for sales up to 15000 and 3% otherwise. Discount is 5% on sales up to 20000 and 8% otherwise.
　　　　　　　　OR
C.Write note on system software.
D. Write an algorithm and draw a flowchart that read two numbers and print the larger number.

Q.4
A. Write a C program to input the amount invested(P), rate of interest(r) and the period of investment in years(n) and calculate and display the simple interest on the same. Si=Prn/100.

B.What is the output of the following C program?

```c
#include <stdio.h>
void main()
{ int x=5,y=9;
 x=x++*2;
 y+=++x;
  y-- ;
 x-=2;
printf("%d %d\n",x,y);
}
```

　　　　　　　　OR
C. Write C program to accept sales amount and then display the sales amount, discount, and net amount, where discount is 5% of sales.
D. What is the output of the following C program?

```c
#include <stdio.h>

void main()
{ int a=5,b=10,c,d;
  a+=b++;
  c=a*2+b;
  d=++a-4;
printf(%d %d %d %d \n"a,b,c,d);
```

Q.5 A. Write a program to input telephone number and number of calls made. Calculate and display the bill amount which includes a fixed rent of 250,the first 60 calls are free and excess calls are charged @80 paise each.

B. Input two numbers and an arithmetic operator and give the result of the operation on the numbers using switch()

OR

C. Sales tax is calculated on thebsis of sales as follow.

Sales	Sales Tax
First 5000	2%
Next 20000	5%
Excess	8%

Write a C program to input the bill no.(b) and sales amount and display the bill no, sales amount, sales tax(t) and total amount(ta).

D. Write a program to input the basic pay, name and type (1-permanent,2—temporary) and calculate the DA and HRA as follows:

	Permanent	Temporary
DA	40%	25%
HRA	20%	10%

Display the total pay which includes the basic salary, DA and HRA.