TIME : 2 Hrs.   **Marks :** 60

Note :

1. All questions are compulsory.

2. All questions carry equal marks.

Q.1 A) State whether the following statements are TRUE or FALSE.   **[6]**

1. The one's complement of a binary number is defined as the value obtained by inverting all the bits in that binary number.

2. The third Generation of computers used transistors.

3. Compiler converts the entire program to machine code.

4. The format character of character is %s.

5. Printf( ) function is a keyword.

6. \t is an escape sequence which moves the cursor to the next tab position is the same line.

B) Select the appropriate option from the following .   **[6]**

1. Accumulator is a type of register in the ....

    a) Input unit   b) output unit

    c) control unit   d) ALU

2. The decimal number system has a base of ....

    a) 2   b) 8

    c) 10   d) 16

3. The parellelogram shape in the flowchart signifies

    a) Processing   b) Input/output

    c) Decision making   d) all of these

4. An identifier must begin with ....

    a) Alphabet   b) underscore

    c) digit   d) Alphabet or underscore

5. If x = 1234 then output of the statement printf ("% 6d/n", x); is ....

    a) bb1234   b) b 1234

    c) 1234bb   d) 1234

6. The function which can read multi word string is ....

Q.2 Answer the following question : Any TWO   [12]

a) Explain different characteristics of computer.

b) i) Convert the following binary number to decimal

    1) $(10101)_2$ ii) $(10110)_2$ 3) $(1100)_2$

ii) Find 2's complement of the following binary numbers.

    1) (11101) 2) (110011) 3) (01010)

c) Write a short note on :

    1) Super Computer   2) Laptops

Q.3 Answer the following questions :Any TWO   [12]

d) Explain characteristics of interpreter and campiler.

e) Draw the flowchart & write an algorithm to display numbers from 1 to 20.

f) Discuss the application of computers in relation with social media and ecommerce.

Q.4 Answer the following question :Any TWO   [12]

g) What is constant ? Which are the different types of constants ? Give example of each.

h) Write C- programm to input the amount invested (p), the rate of interest (r) and the period of investment in years (n) and calculate & display the simple interest on the same, Hint, si = pnr / 100.

i) Give the difference between the following in C language.

    1) gets ( )   and scanf ( )

    2) puts ( ) and printf ( )

Q.5 Answer the following question :Any TWO   [12]

j) Write c-program to input purchase amount, if purchase amount exceeds 15000 then also count of 10% is given else 5% is given. Display purchase amount, discount and net amount.

k) Write c-programm to display all even numbers from 1 to 50

l) Explain break statement and the continue statement with its syntax and