CSE122 Computer Programming

Sheet 01

1- Identify and correct the invalid C++ statements.
   a. float bus#1;
   b. char ch=’mxyz’
   c. int 115LLX;
   d. double sue’s=$155.75;

2- Identify and correct the invalid C++ statements.
   a. char c=’d’;
   b. char c=’100’;
   c. double $x=15.0;
   d. int ah#1=$155;
   e. float 112ffx=100;

3- Which of the following is a valid C++ constant? Identify the corresponding data type.
   a. 15
   b. ‘xyz’
   c. ‘*’
   d. $
   e. 25.123
   f. 15.0
   g. -999
   h. .123
   i. ‘x’
   j. “x”
   k. ‘True’
   l. ‘-5’
   m. 32e-4

4- Which of the following is a valid C++ statement? Justify your answers.
   a. Train=Bus;
   b. Balance=Balance-$155.55
   c. ++(n*m);

5- Compute the following expressions if x=3, y=4, and z=5:-
   a. x>y||y<z
   b. x%$y + z == x + z$
   c. $x/y + + +$z
   d. (int)sqrt(floor(fabs(-144.45)))+(int)ceil(48.55)%7>10
   e. (double)(x/y)+z
   f. (double) x/y+z
   g. !(y<=2) &&x%2==0

6- Write a C program to compute the following formula:-
   Ans=√ b+c- 2bc cos(xr), where xr=xd*π/180.0, and π=3.14159.

7- Evaluate the following expressions if x=12.5, y=9.2, m=5, and n=2:-
   a. x/(float) m;
   b. (double)(m*n);
   c. (float)(m/n)+y;
   d. (double)n/m+y;

8- Write a program that takes the distance in feet then converts and prints it in meters, given that 1 foot = 0.3048 meter.

9- What is the result of the following expressions, if the values of x= 10, y=5, and z=20?
   a. A=x+y-z/2;
   b. A=x*(y%2);
   c. A=x++-y++;

d. A=--z+z--;
e. A=--y+ ++z-y++/x++;

10- Write the expected output of the following program.

```
int x = 15;
int y = 2;
int z;
float r;
z = x/y;
cout<<z<<endl;
```

```
r = x/y
cout<<r<<endl;
r = x/float(y);
cout<<r<<endl;
r = x/(y * 1.0);
cout<<r<<endl;
```

11-

Evaluate each of the following expressions if a = 5, b = 10, c = 15 and flag is 1:

a. c==a+b || !flag;
b. a!=7&& flag || c>=6;
c. !(b<=12)&&a%2==0;
d. !(a>5||c<a+b);

12- Write a program that prints the ASCII code (decimal and hexadecimal value) of any given characters. (Hint: use ***hex*** and ***dec*** directives)

13- Write a program that generates the following table: (use the function ***setw()***)

1990 135

1991 7290

1992 11300

1993 16200