



## 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.  $(\text{int})\sqrt{\text{floor}(\text{fabs}(-144.45))} + (\text{int})\text{ceil}(48.55) \% 7 > 10$
- e.  $(\text{double})(x/y) + z$
- f.  $(\text{double}) x/y + z$
- g.  $!(y \leq 2) \ \&\& x \% 2 == 0$

6- Write a C program to compute the following formula:-

$\text{Ans} = \sqrt{b+c-2bc \cos(xr)}$ , where  $xr = xd * \pi / 180.0$ , and  $\pi = 3.14159$ .

7- Evaluate the following expressions if x=12.5, y=9.2, m=5, and n=2:-

- a.  $x / (\text{float}) m$ ;
- b.  $(\text{double})(m * n)$ ;
- c.  $(\text{float})(m/n) + y$ ;
- d.  $(\text{double})n/m + y$ ;

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