

BIL 104E QUIZ 2 (Section A)

1) Given the following declarations:

int x = 3, y = 5, z = 7;

bool b1 = true, b2 = false, b3 = x == 3, b4 = y < 3;

evaluate the following Boolean expressions: (24)

(a) x == 3 (T)

(b) x < y (T)

(c) x != y - 2 (F)

(d) x < 10 (T)

(d) x >= 0 && x < 2 (F)

(e) x < 0 || x < 10 (T)

(f) b3 (T)

(g) !b4 (T)

2) Consider the following section of C++ code:

```
// i, j, and k are ints
if (i < j) {
    if (j < k)
        i = j;
    else
        j = k;
}
else {
    if (j > k)
        j = i;
    else
        i = k;
}
cout << "i = " << i << " j = " << j << " k = " << k << endl;
```

What will the code print if the variables **i**, **j**, and **k** have the following values? (18)

(a) **i** is 3, **j** is 5, and **k** is 7 i=5, j=5, k=7

(b) **i** is 3, **j** is 7, and **k** is 5 i=3, j=5, k=5

(c) **i** is 5, **j** is 3, and **k** is 7 i=7, j=3, k=7

3) Use a loop to rewrite the following code fragment so that it uses just one **cout** and one **endl**. (15)

```
cout << 2 << endl;
cout << 4 << endl;
cout << 6 << endl;
cout << 8 << endl;
cout << 10 << endl;
cout << 12 << endl;
cout << 14 << endl;
cout << 16 << endl;
```

for(int i=2; i<17; i+2)
cout<<i<<endl;

4) How many asterisks does the following code fragment print? (10)

```
int a = 0;
while (a < 100)
    cout << "★";
cout << endl;
```

Infinite

5) Write a C++ program that allows the user to enter exactly twenty double-precision floating-point values. The program then prints the sum and average (arithmetic mean) of these numbers. Do not include values between less than -100 and greater than 100 when calculating the average value. (33)

```
Int main() {
```

```
Double a, sum, average, count=0, sum2=0;
```

```
For(int i=1; i<21; i++) {
```

```
    Cout<<"Enter the "<<i<<". Number:";
```

```
    Cin>>a;
```

```
Sum=sum+a;
If(a<100 && a>-100){
Sum2=sum2+a;
Count++;
}
}
Average=sum2/count;
Cout<<"Sum: "<<sum<<endl;
Cout<<"Average: "<<average<<endl;
}
```