

CS11001: Programming and Data Structures

Class Test I

Answer All Questions. Write your answers in the boxes provided.

<u>Section:</u>		<u>Roll:</u>			<u>Name:</u>		
Q1(2)	Q2(3):	Q3(3):	Q4(3):	Q5(3):	Q6(3):	Q7(3):	Total (20)

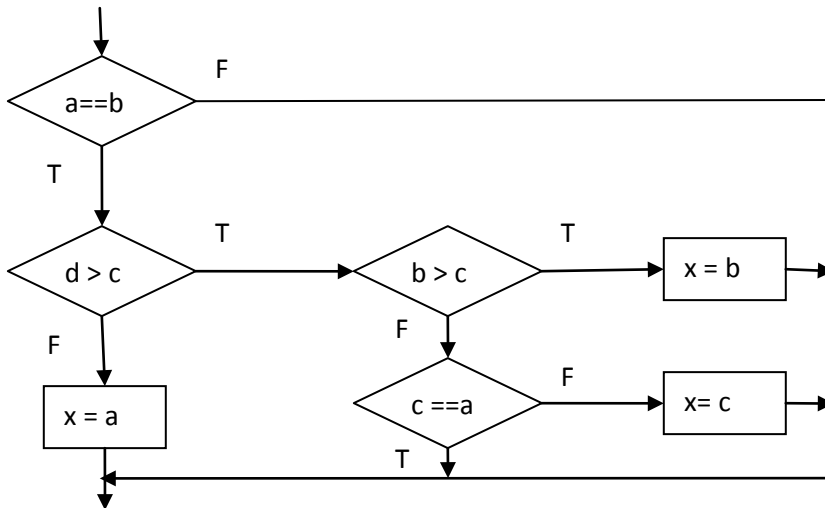
1. Evaluate the following expressions.

Expression	Value	Expression	Value
$3 + -5 * -2$	13	$10 - 5 - 7 / 4 * 4$	1
$3 > 5 - 2$	0	$3 + 5 \% 2 - 1$	3

2. From the expression $(- 2) * (x - 3) < x + (2 * z) \ \&\& \ (z < 10)$, remove *all* the unnecessary parenthesis so that the meaning does not change.

$- 2 * (x - 3) < x + 2 * z \ \&\& \ z < 10$

3. Which of the following *nested if* statements are logically equivalent to the flow chart below?



A
(A, D) also gets full marks

- (A) `if(a==b)if(d>c) if(b>c)x=b; else if (c==a);else x=c; else x=a;`
- (B) `if(a==b)if(d>c) if(b>c)x=b; else if (c==a) x=c; else x=a;`
- (C) `if(a==b)if(d>c) if(b>c)x=b; else if (c!=a) x=c; else x=a;`
- (D) `if(a==b)if(d>c) if(b>c)x=b; else if (c!=a) x=c; else; else x=a`
- (E) None of the above.

4. How many times will the following program segment print **chocolate** ?

4

```
int x = 3; int y = 10;
while (x < y)
{
    printf("chocolate");
    x = x + 1;
    y = y - 1;
}
```

5. Fill in the empty boxes in order to have this program segment to print **cartoon**

```
int one = 
int two = 
int three = 
int i;
do
{
    one++;
    printf("cart");
} while (one < 3);
for (i = 0; i < two; i++)
{
    printf("o");
}
while (1)
{
    three++;
    if (three == 5)
    {
        break;
    }
    printf("n");
}
```

6. How many times **biscuit** will be printed by the following program segment?

5

```
int value = 5; int value2 = 1;
while (value2 < 4)
{
    for ( ; value >= value2 ; value-- )
    {
        printf("biscuit");
    }
    value2++;
}
```

7. What will be printed run the following program segment?

onetwodefualt

```
int j, i=1;
for(j=0;j<5;j=j+2)
{
    i=(i*i)+j;
}
switch (i)
{
    case 3:
        printf("zero");
        break;
    case 13:
        printf("one");
    case 175:
        printf("two");
    default:
        printf("default");
}
```

Rough Work