

Student Name (بالعربي):

Student ID:

Q1. Consider the following if-statement `if (x > 5) y = 3 else y = 4;`

Which of the following conditional operator (?:) statements are equivalent to the given if-statement?

I.	II.	III.
<code>x > 5? y = 3 : y = 4;</code>	<code>y = x > 5? 3 : 4;</code>	<code>y = if x > 5? 3 : 4;</code>

a. II only

b. I only

c. I and III only

d. I and II only

Q2. The following three functions are supposed to compute $n!$ ($1*2*3*...*n$) for positive n , 1 otherwise). Which ones work properly if called with an arbitrary integer expression as an argument?

I.	II.	III.
<pre>int fact(int n) { if (n <= 0) return 1; int i, f = 1; for (i=1; i<=n; i++) f = f * i; return f; }</pre>	<pre>int fact(int n) { if (n <= 1) return 1; int i, f = 2; for (i=3; i<=n; i++) f = f * i; return f; }</pre>	<pre>int fact(int n) { if (n <= 1) return 1; int i, f = 1; for (i=n; i>=2; i--) f = f * i; return f; }</pre>

a. II only

b. I and II only

c. I and III only

d. I, II, and III

Q3. What will be printed out if you attempt to run the following code?

```
int i=1;
switch (i) {
    case 0: printf("0"); break;
    case 1: printf("1");
    case 2: printf("2");
    case 3: break;
    default: printf("x"); }
```

- a. 1 b. 12x **c. 12** d. x

Q4. Which of the following is equivalent to the following while loop?

```
int x = 155;
while (x > 125){
    printf("%d", x);
    x = x - 3;
}
```

- a. for (int x = 155; x <= 125; x = x - 3) printf("%d", x);
b. for (int x = 125; x < 155; x = x - 3) printf("%d", x);
c. for (int x = 155; x < 125; x -= 3) printf("%d", x);
d. for (int x = 155; x > 125; x = x - 3) printf("%d", x);

Q5. What is the content of array *x* after executing the flowing statements?

```
int x[6] = {4, 2};
x[2] = x[1] + 1;
x[3] = x[x[1]] + 2;
x[4] = x[4] + 6;
```

- a. 4 2 3 5 6 **b. 4 2 3 5 6 0**
c. 4 2 3 5 0 0 d. 4 2 3 6 5

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Q1. Consider the following if-statement `if (x > 5) y = 3 else y = 4;`

Which of the following conditional operator (?:) statements are equivalent to the given if-statement?

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I.	II.	III.
<pre>int fact(int n) { if (n <= 0) return 1; int i, f = 1; for (i=1; i<=n; i++) f = f * i; return f; }</pre>	<pre>int fact(int n) { if (n <= 1) return 1; int i, f = 2; for (i=3; i<=n; i++) f = f * i; return f; }</pre>	<pre>int fact(int n) { if (n <= 1) return 1; int i, f = 1; for (i=n; i>=2; i--) f = f * i; return f; }</pre>

- a. II only
- b. I and II only
- c. I, II, and III
- d. I and III only

Q3. What will be printed out if you attempt to run the following code?

```
int i=1;
switch (i) {
    case 0: printf("0"); break;
    case 1: printf("1");
    case 2: printf("2");
    case 3: break;
    default: printf("x"); }
```

- a. 12 b. 12x c. 1 d. x

Q4. Which of the following is equivalent to the following while loop?

```
int x = 155;
while (x > 125){
    printf("%d", x);
    x = x - 3;
}
```

- a. for (int x = 155; x <= 125; x = x - 3) printf("%d", x);
b. for (int x = 155; x > 125; x = x - 3) printf("%d", x);
c. for (int x = 125; x < 155; x = x - 3) printf("%d", x);
d. for (int x = 155; x < 125; x -= 3) printf("%d", x);

Q5. What is the content of array *x* after executing the following statements?

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int x[6] = {4, 2};
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x[4] = x[4] + 6;
```

- a. 4 2 3 5 0 0 b. 4 2 3 6 5
c. 4 2 3 5 6 d. 4 2 3 5 6 0