

4) What of the following sets of values for A, B, C, and D would cause the string "three" to be printed?

- | | A | B | C | D |
|----|------|------|-------|-------|
| 1) | true | true | true | true |
| 2) | true | true | true | false |
| 3) | true | true | false | true |
| 4) | true | true | false | false |
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- | | |
|---------------------|--------------------|
| 5) All of the above | 8) 2 and 3 only |
| 6) 1 and 2 only | 9) 1, 3 and 4 only |
| 7) 1, 2 and 3 only | 10) None of these |
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5) Consider executing the following code fragment (assume x is an int variable):

```
if ( x <= 0 )
    cout << "One" << endl;
else if ( x <= 10 )
    cout << "Two" << endl;
else if ( x <= 20 )
    cout << "Three" << endl;
```

The string "Two" will be printed if and only if x satisfies the condition:

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|----------------------------|----------------------------|
| 1) $x \leq 10$ | 4) $0 \leq x$ and $x < 10$ |
| 2) $0 < x$ and $x < 10$ | 5) $0 \leq x$ |
| 3) $0 < x$ and $x \leq 10$ | 6) None of these |
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For questions 6 and 7, consider execution of the following switch statement:

```
int Enter = 10;
cin >> Enter;

switch (Enter) {
case 1: Enter = -4;
case 2: Enter = -6;
case 4: break;
case 6: Enter = -8;
       break;
default: Enter = -1;
}
```

6) What would the value of `Enter` be after execution of this code if the value read for `Enter` were 4?

- | | | |
|-------|-------|------------------|
| 1) -4 | 3) -8 | 5) 10 |
| 2) -6 | 4) -1 | 6) None of these |

7) What would the value of `Enter` be after execution of this code if the value read for `Enter` were 1?

- | | | |
|-------|-------|------------------|
| 1) -4 | 3) -8 | 5) 10 |
| 2) -6 | 4) -1 | 6) None of these |

17) To produce the output 2 4 6 8 10, what loop condition should be used in the blank below?

```
int N = 0;
do {
    N = N + 2;
    cout << N << ' ';
} while ( _____ );
```

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|------------|-----------|------------------|
| 1) N <= 10 | 3) N < 8 | 5) N > 8 |
| 2) N < 10 | 4) N >= 2 | 6) None of these |
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18) After execution of the following code, what value is printed for Length?

```
int Length = 5,
    Count = 4;
while (Count <= 6) {
    if (Length >= 100)
        Length = Length - 2;
    else
        Length = Count * Length;

    Count++;
}
cout << "Length = " << Length << endl;
```

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|-------|--------|------------------|
| 1) 20 | 3) 100 | 5) None of these |
| 2) 98 | 4) 600 | |
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19) In the following code fragment, a semicolon appears at the end of the line containing the while condition.

```
cout << 'A';
int loopCount = 1;
while (loopCount <= 3);
{
    cout << 'B';
    loopCount++;
}
cout << 'C';
```

The result will be:

- | | |
|---------------------|-------------------------|
| 1) the output AC | 4) a compile-time error |
| 2) the output ABC | 5) an infinite loop |
| 3) the output ABBBC | 6) None of these |

20) What is the output of the following code fragment?

```
int Sum = 0,
    outerCount = 1;

while (outerCount <= 3) {
    int innerCount = 1;

    while (innerCount <= outerCount) {
        Sum = Sum + innerCount;
        innerCount++;
    }
    outerCount++;
}
cout << Sum << endl;
```

- | | | |
|------|-------|------------------|
| 1) 1 | 3) 10 | 5) 35 |
| 2) 4 | 4) 20 | 6) None of these |

21) Which for loop is equivalent to the following while loop? Equivalent here means that the value of each of the variables would be the same when the code has completed execution.

```
int count = -5, sum = 0;
while (count <= 15) {
    sum = sum + count;
    count++;
}
```

- | | |
|---|------------------|
| 1) int count, sum = 0;
for (count = -5; count <= 15; count++)
sum = sum + count; | 8) 1 and 4 only |
| 2) int count, sum = 0;
for (count = -5; count <= 15; count++) {
sum = sum + count;
count++;
} | 9) None of these |
| 3) int count, sum;
for (count = -5, sum = 0; count <= 15; count++) {
sum = sum + count;
} | |
| 4) int count, sum = 0;
for (count = 1; count <= 21; count++)
sum = sum + count; | |
| 5) All of these | |
| 6) 1 and 2 only | |
| 7) 1 and 3 only | |

22) What is the output of the following code fragment?

```
for (int loopCount = 1; loopCount <= 6; loopCount = loopCount + 2)
    cout << loopCount << ' ';

cout << "Done" << endl;
```

- | | |
|-------------|------------------|
| 1) Done | 4) 1 3 5 Done |
| 2) 1 Done | 5) 1 3 5 7 Done |
| 3) 1 3 Done | 6) None of these |
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23) What is the output of the following code fragment?

```
for (int loopCount = 1; loopCount > 3; loopCount++)
    cout << loopCount << ' ';

cout << "Done" << endl;
```

- | | |
|-------------|------------------|
| 1) Done | 4) 1 2 3 Done |
| 2) 1 Done | 5) 1 2 3 4 Done |
| 3) 1 2 Done | 6) None of these |
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24) In the following code fragment, the programmer mistakenly placed a semicolon at the end of the for statement heading. What is the result?

```
cout << 'A';
for (int count = 1; count <= 3; count++);
    cout << 'B';
cout << 'C';
```

- | | |
|-------------------------|---------------------|
| 1) a compile-time error | 4) the output ABBC |
| 2) an infinite loop | 5) the output ABBBC |
| 3) the output ABC | 6) None of these |
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25) What is the output of the following code fragment?

```
int n = 2;

for (int loopCount = 1; loopCount <= 3; loopCount++) {
    while ( n <= 4 )
        n = 2 * n;
}
cout << n << endl;
```

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|-------|------------------|
| 1) 4 | 4) 32 |
| 2) 8 | 5) 64 |
| 3) 16 | 6) None of these |