

Adama Science and Technology University

School of Engineering

Department of Information Technology

Comp 234 Mid Exam

Time allowed: 1:00 hour

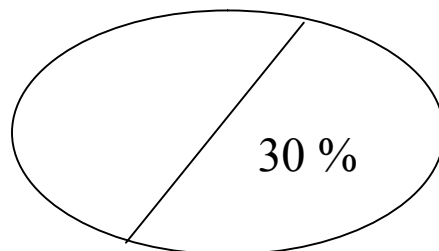
Name: _____

ID : _____

General instructions:

- **Do not start until instructed to do so!**
- **Make sure that the exam paper contains 10 questions**
- **Do not forget to write your name and ID**
- **Make your handwriting legible**

For instructor's use only



1. Define : (1 pt each)

a. Variable

b. Data type

2. Which of the following represent valid identifiers (variable)?(0.5 point each)

Identifier	Valid
seven_11	
unique	
gross-income	
gross\$income	
2by2	
Default	
average_weight_of_a_large_pizza	
Variable	

3. Describe steps of creating a C++ program (compilation process)(2 pts)

4. All programs can be written in terms of three types of control structures: _____,
_____ and _____.

5. The _____ selection statement is used to execute one action when a condition is `TRue` or a different action when that condition is `false`.

6. Identify and correct the errors in each of the following on the space provided (1 pt each)

a.

```
while ( c <= 5 )
{
    product *= c;
    c++;
```

b.

```
cin << value;
```

c.

```
if ( gender == 1 )
    cout << "Woman" << endl;
else;
```

d.

```
cout << "Man" << endl;
```

7. What, if anything, prints when each of the following C++ statements is performed? If nothing prints, then answer "nothing." Assume x = 2 and y = 3.(1 pt each)

- a.

```
cout << x; _____
```
- b.

```
cout << x + x; _____
```
- c.

```
cout << "x="; _____
```
- d.

```
cout << "x = " << x; _____
```
- e.

```
cout << x + y << " = " << y + x; _____
```
- f.

```
cin >> x >> y; _____
```
- g.

```
// cout << "x + y = " << x + y; _____
```
- h.

```
cout << "\n"; _____
```

8. Determine the output of the following fragment of code as if it is embedded in a working c++ program (4pts).

a.

```
{
int min, i = 10, j = 20;
    min = (i < j ? i : j);
cout << min << '\n';
}
```

Output

b.

```
int x = 7;
int y = 5;
cout << "x = " << x << ", y = " << y << endl;
x = y;
cout << "x = " << x << ", y = " << y << endl;
y = 9;
```

Output

```
cout<<"x = " <<x<<" , y = "<<y<<endl;
```

9. Develop a flow chart for a problem to add the numbers from 1 to 100 and display the sum(2pts)

10. Write a C++ program (using **for loop**) for the flow chart you developed in question # 9 (2 pts)