



Attempt *all* the following questions:

Question 1:

(4 Marks)

Determine the output for each of the following code snippets (assuming successful compilation):

a) (2 Mark)	b) (2 Mark)
<pre>int x = 3 ; char Grade = 'Z' ; switch (x) { case 1: Grade = 'A'; break; case 2: Grade = 'B'; break; case 3: Grade = 'C'; default: Grade = 'F'; } cout<< Grade;</pre>	<pre>for (int i = 1; i <= 10; ++i) { if (i == 5 i == 6) { continue; } cout<<i<<"\t"; }</pre>

Question 2:

(5 Marks)

Software Sales:

A software company sells a package that retails for \$100. Quantity discounts are given according to:

Quantity	Discount
10–19	20%
20–49	30%
50–99	40%
100 or more	50%

Write a complete C++ program that asks the user to enter the number of packages purchased. The program should then display the amount of the discount (if any) and the total amount of the purchase after the discount.

Question 3:

(6 Marks)

Write a complete program that reads a list of n numbers and prints its range. The range is the difference between the maximum and minimum values of the list.

Example:

If the numbers are {2, 4, 6, 8, 10}, then the range is $10 - 2 = 8$.



Attempt *all* the following questions:

Question 4:

(5 Marks)

- 1) The expression $a = + 5$ is equivalent to
(a) $a = a + 5;$ (c) $a = a - 5;$
(b) $a = a * 5;$ (d) none of the above

- 2) Below is an example of a logical operator.
(a) $\& \&$ (c) $+$
(b) $= =$ (d) $=$

- 3) The expression $!(2 \leq 4)$ evaluated to
(a) true (c) false
(b) -1 (d) none of the above

- 4) The expression $a = 5 + 2 \% 6$ is evaluated to
(a) 6 (c) 8
(b) 7 (d) none of the above

- 5) In the expression `if (Y == '5')` the type of the variable Y should be
(a) int (c) long int
(b) long (d) char

Good Luck
Dr. Shady Yehia Elmashad