

# Assignment

## MCQ Part

1) Which of the following comment syntax is correct to create a single-line comment in the C++ program?

- a. `//Comment`
- b. `/Comment/`
- c. `Comment//`
- d. None of the above

2) how many relational operator are there in C++?

- a) 4
- b) 5
- c) 6
- d) 7
- e) 8

3) Which of the following is the correct identifier?

- 1. `$var_name`
- 2. `VAR_123`
- 3. `varname@`
- 4. None of the above

4). The following data ( 72 , 'A' , "Hello World" , 2.8712 ) are all examples of

- a) Variables
- b) Literals or constants
- c) Strings
- d) None of the above

5. Every C++ program must have a

- A) cout statement
- B) function main
- C) #include statement
- D) All of the above

6. Which of the following are not valid assignment statements? (Circle all that apply.)

- A) total = 9;
- B) 72 = amount;
- C) profit = 129
- D) letter = 'W';

7) . When do preprocessor directives execute?

- A) Before the compiler compiles your program
- B) After the compiler compiles your program
- C) At the same time as the compiler compiles your program
- D) None of the above

8) The negation operator is

- A) Unary
- B) Binary
- C) Ternary
- D) None of the above

9) A(n) \_\_\_\_\_ is like a variable, but its value is read-only and cannot be changed during the program's execution.

- A) secure variable
- B) uninitialized variable
- C) named constant
- D) locked variable

10) Which of the following are not valid cout statements? (Circle all that apply.)

- A) `cout << "Hello World";`
  - B) `cout << "Have a nice day"\n;`
  - C) `cout < value;`
  - D) `cout << Programming is great fun;`
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### True or False

The following truth table shows various combinations of the values true and false connected by a logical operator. Complete the table by indicating if the result of such a combination is TRUE or FALSE

Logical Expression	Result (true or false)
true && false	
true && true	
false && true	
false && false	
true    false	
true    true	
false    true	
false    false	
!true	
!false	

## **Programming Problems**

### **Q1 Budget Analysis**

Write a program that asks the user to enter the amount that he or she has budgeted for a month. A loop should then prompt the user to enter each of his or her expenses for the month and keep a running total. When the loop finishes, the program should display the amount that the user is over or under budget

### **Q2. Lets Calculate**

Write a program with any loop that lets the user enter a series of integers. The user should enter -99 to signal the end of the series. After all the numbers have been entered, the program should display the sum , largest and smallest numbers entered.

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### **Q3. Lets check are you getting the admission or not?**

Write a C++ program to find the eligibility of admission for a professional course based on the following criteria:

Eligibility Criteria :

Marks in Maths  $\geq 65$

Marks in Phy  $\geq 55$

Marks in Chem  $\geq 50$

and Total in all three subject  $\geq 190$

or Total in Maths and Physics  $\geq 140$

tell the user that is he is eligible for admision or not and tell him where is lagging behind

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#### Q4.Let Make a Calculator

Calculate the user SGPA by asking him how many courses to add ask the credit hour for each course and grade he got for each course and at the display the total credit hour he obtained. Using this grade point matrix

GRADE POINT MATRIX		
Grade	Numerical Equiv.	Grade Points
A	85 – 100 %	4.00
A-	80 -- 84 %	3.75
B+	75 – 79 %	3.50
B	70 – 74 %	3.00
C+	65 – 69 %	2.50
C	60 – 64 %	2.00
D+	55 – 59 %	1.50
D	50 – 54 %	1.00
F	Below 50 %	0.00

Hint : suppose I have two subject and both are 3 credit hour and I got a A and C in it.

$A = 4 \text{ grade point} * 3 \text{ credit hour} = 12$

$C = 2 \text{ grade point} * 3 \text{ credit hour} = 6$

$\text{Sum} = 18 / \text{total credit hour} = 18 / 6 = 3.00$

Output : Total GPA = 3.00

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## Q5.Lets play a game

Can you get all six creatures across the river safely?

A maximum of two creatures are allowed in the boat for each crossing. The Human must never be outnumbered by the monsters. The boat will not move if there is no creature in it.

Play and under this game ( [https://www.transum.org/software/River\\_Crossing/Level3.asp](https://www.transum.org/software/River_Crossing/Level3.asp) )

Write the code in C++ using simple loops and conditional statements where you have to show a ship or boat as shown in image

```
#include <iostream>

using namespace std;

int main()
{
    cout<<"H,H,H M,M,M _()SHIP()_____ "<<endl;
    cout<<"enter your choice"
    //choice can be H for human or M for monster or HH ( both human) or HM or MH (human monster) or MM ( BOth monster
    cout<<"H,H,H M _()SHIP()__M,M"<<endl;
    cout<<"enter your choice"
    //choice can be H for human or M for monster or HH ( both human) or HM or MH (human monster) or MM ( BOth monster
    cout<<"H,H,H M M _()SHIP()_____M"<<endl;
    return 0;
}
```

Take input from user and move the ship to other place , input could be a single human / monster or double but not more then 2 in a single trip value can be

- M for single monster
- H for single Human
- MH or HM for human monster
- MM for 2 monsters
- HH for 2 humans

