CSC511 Introduction to C++

Lab – if then else and Switch statements

1. Draw a flowchart and write a c++ program for the tax deduction depending on total income earned. The following table shows the tax brackets. [use if then else]

Total Income($)	Tax rate($)
0-10000	50
10001 -20000	250 + 5% in excess of 15000
20001 - 30000	500 + 10% in excess of 25000
30000+	1000 + 15% in excess of 28000

2. Fiji Airways is running a promotion which gives special fare based on age and weight of a person. The following table shows the airline fare from Fiji to Australia. Draw a flowchart and write a c++ program to determine the airline fare depending on the weight and age of a person. Anyone who does not qualify in the given criteria pays a flat rate fare of $900. [use if structure]

Age (years)	Weight (kg)	Fare($)
0 - 10	15-25	300
11-15	26 - 35	450
16-25	36- 60	600
26 - 35	50- 70	650

3. Write a c++ program that LTA can use to determine the vehicle levy based on the engine capacity and weight of the vehicle. The following table shows the details.
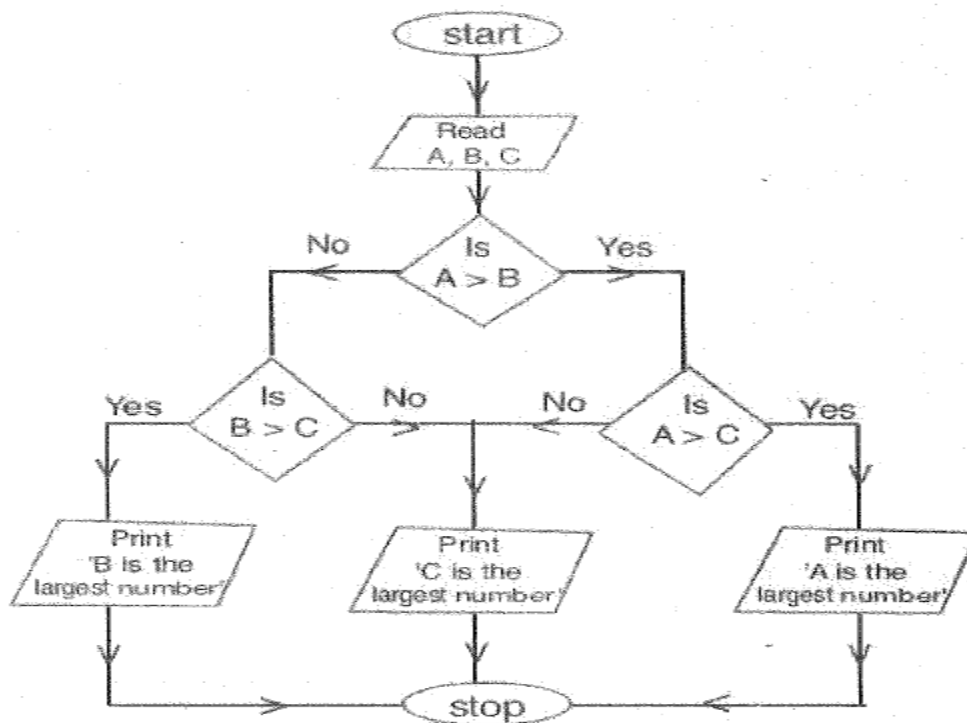
Engine capacity(cc)	Vehicle Weight(kg)	Levy($)
0-999	0 – 999	120.00
1000-1999	1000-1999	160.00
2000-2999	2000-2999	200.00
3000-3999	3000+	250.00

4. Draw a flowchart and write a c++ program for the following criteria.
A user enters 2 numbers and enters the operation (+,-,* ,/) to carry out between two numbers. Using switch..case statements write the program to evaluate the two numbers depending on the operator.

5. Convert the following **if** statement to **switch** statements:

```
if (code == 1)
        cout << "Product chosen is Apple";
else if (code == 2)
        cout << "Product chosen is Banana";
else
        cout << "Product code is wrong";
```

6. Write the c++ code for the following flowchart using nested if statements.

7. Write a c++ program for the flowchart below. (use nested if.)

```
                          ( START )
                             |
                     /  AGE , CASH  /
                             |
           T                 ◇                 F
        +--------  < IF AGE > = 20 >  --------+
        |                                     |
        ◇                                     ◇
   T    |    F                           T    |    F
 +-- <IF CASH > = 20> --+             +-- <IF CASH > = 20> --+
 |                      |             |                      |
/ NIGHT CLUB /      / MOVIE /     / MOVIE /              / HOME /
 |                      |             |                      |
 +----------------------+-----+-------+----------------------+
                         ( END )
```