**B.Tech(CSE) III Semester- (C++ Assignment-1)**

Program 1- Given below is a hypothetical table showing rates of Income Tax for male citizens below the age of 65 years:

|  |  |
| --- | --- |
| Taxable Income (TI) in | Income Tax in |
| Does not exceed 1,60,000 | Nil |
| Is greater than 1,60,000 and less than or equal to 5,00,000 | ( TI – 1,60,000 ) \* 10% |
| Is greater than 5,00,000 and less than or equal to 8,00,000 | [ (TI - 5,00,000 ) \*20% ] + 34,000 |
| Is greater than 8,00,000 | [ (TI - 8,00,000 ) \*30% ] + 94,000 |

Write a program to input the age, gender (male or female) and Taxable Income of a person. If the age is more than 65 years or the gender is female, display “wrong category\*.  
If the age is less than or equal to 65 years and the gender is male, compute and display the Income Tax payable as per the table given above.

**Program 2-**A cloth showroom has announced the following festival discounts on the purchase of items based on the total cost of the items purchased:

                                    Total cost                                   Discount (in Percentage)

                                    Less than Rs. 2000                                  5%

                                    Rs. 2001 to Rs. 5000                               25%

                                    Rs. 5001 to Rs. 10000                             35%

                                    Above Rs. 10000                                   50%

   Write a program to input the total cost and to compute and display the amount to be paid by the customer after availing the discount.

Program 3-  Write a program to Check whether a character is a vowel or consonant using switch statement.

Program 4-   Using a switch statement, write a menu driven C++ program to convert a given temperature Fahrenheit to Celsius and vice versa. For an incorrect choice, an appropriate error message should be displayed.

(Hints: C=5/9\*(F-32) and F=1.8\*C+32)

(Use switch statement)

Program 5-   An electronics shop has announced the following seasonal discounts on  
 the purchase of certain items:

|  |  |  |
| --- | --- | --- |
| **PURCHASE AMOUNT IN RS.** | **DISCOUNT ON LAPTOP** | **DISCOUNT ON DESKTOP PC** |
| **0 – 25000** | **0.0%** | **5.0%** |
| **25001 – 57000** | **5.0%** | **7.6%** |
| **57001 – 100000** | **7.5%** | **10%** |
| **More than 100000** | **10.0%** | **15.0%** |

Write a program based on the above criteria to input name, address, amount of purchase and the type of purchase (L for Laptop and D for Desktop) by a customer. Compute and print the net amount to be paid by a customer along with his name and address.  
(Hint: Discount = (discount rate / 100) \* amount of purchase, Net amount = amount of purchase – discount)

(Use switch statement)