**Structured Programming Language Sessional**

**Course Code: CSE 106**

**Lab -3 Evaluation**

**Problem 1**: Print a menu using switch and take a character input to do the following work:

|  |
| --- |
| Sample: |
| Please select your choice to choose a calculation:  Circle: a  Triangle: b  Cylinder: c |

|  |  |  |
| --- | --- | --- |
| Circle | Triangle | Cylinder |
| Take input r(int )and the calculate:  **Area= πr2**  **Perimeter= 2πr** | Take input c(int) and h(int):  **Area= (1/2)\*bh**  **Perimeter= a+b+c ;where a=2,b=3** | Take input r(int) and h(int):  **Volume: πr2h**  **Area: 2πr(1+h)** |
| **Sample input**: 5  **Output:** Area= 78.54  Perimeter=31.416 | **Sample input:**c=6, h=8  **Output:** Area=12  Perimeter= 11 | **Sample input:** r=5,h=3  **Output:** Volume= 235.62  Area=125.664 |

**Problem 2:** Write a C program to input basic salary and age of an employee and calculate its gross salary. Find the amount of **tax** each employee must be given from gross salary.

[HRA = House Rent Allowance; Gross Salary = Basic Salary + Basic Salary x HRA]

20000 > Basic Salary >= 10000 : HRA = 20%

[Employee age between 20-35,then **tax**=10%

Employee age between 36-45,then **tax**=20%

Employee age between 46-52,then **tax**=25% ]

30000 > Basic Salary >= 20000 : HRA = 25%

[Employee age between 20-35,then **tax**=12%

Employee age between 36-45,then **tax**=22%

Employee age between 46-52,then **tax**=26% ]

Basic Salary >= 30000 : HRA = 30%

[Employee age between 20-35,then **tax**=15%

Employee age between 36-45,then **tax**=24%

Employee age between 46-52,then **tax**=28% ]

**Problem 3**: Write a C Program to Make a Simple Calculator Using If .. Else. It should calculate two numbers and display the result for the following operation

1. Addition ( + ).
2. Subtraction ( - ).
3. Multiplication ( \* ).
4. Division ( / ).

**Problem 4**: Categorize letters into vowel and consonant using switch statement.