North Western University, Khulna

Department of Computer Science and Engineering

Semester: Fall-2020

Course Title: Object Oriented Programming

Course Code: CSE-1202

1. Write a C++ program that can solve the following equation:

$$Z = 2x^{10} + 3y^{8} - 31$$

2. Write a C++ program to display the following output using any loop:

1
22
333
4444
55555

3. A cricket team has the following table of batting figures for a series of ODI matches:

Player Name	Runs	Innings	Time not out
Shakib Al Hasan	6062	200	20
Tamim Iqbal	5689	167	10
Mushfiqur Rahim	5521	171	15

Write a C++ program to read the following figures set out in the above form, to calculate the batting averages and to display the complete table including the batting averages.

4. Write a C++ function that can solve a particular problem using function overloading.
(**NB: You can use Problem no. 3**)

5. Define a class that represents a bank account. Include the following members:
Member Data:
i) Name of the depositor
ii) Account number
iii) Type of account
iv) Balance amount in the account
Member Function:
i) To assign initial values (name, account no., type of acc., balance)
ii) To calculate total amount after a certain number of years (use the compound interest formula to calculate the final amount)
iii) Display account holder name and total amount

6. Write a C++ program that can initiate private member data using constructor function.

7. Write a C++ program to call a constructor function both implicitly and explicitly.

8. Write a C++ program to solve a particular problem using single/ multiple/ multilevel/ hierarchical.
(**NB: You can use same problem in different types of inheritances**)

9. Write a C++ program that can convert temperature in Celsius into Fahrenheit.

10. Write a C++ program that uses objects as function arguments.

11. Write a C++ program that can take and display all the employees' names and ages in a company. Use array of objects to access individual employee.

12. Write a C++ program to solve the following equation:

$$A = 1 + (1/2)^2 + (1/3)^3 + (1/4)^4 + \ldots + (1/n)^n$$

13. Write a C++ program that can take the input from users and calculate the "AREA" of the corresponding shape from the table below:

Shape	**Input**
Trapezium	T
Circle	C
Square	S
Rhombus	R

POINTS TO BE TAKEN:

I. Assignment must be hand-written (Cover page can be printed).
II. Variable names should be your first name. For example: rahim1, rahim2,…..
III. Function names should be your last name. For example: islam1, islam2……
IV. Assignment will be revoked should any trace of dishonesty be found.
V. Make a single pdf. file and submit to the classroom.