TABLE OF SPECIFICATIONS FOR EXAM QUESTIONS

University of Liberal Arts Bangladesh

Department: Computer Science and Engineering (CSE)

Midterm Examinations, Semester: Fall 2020

Program: B.Sc. in CSE

Course Code: CSE201 **Course Title: Object Oriented Programming C++** **Credit Hr: 3**

Time: 1 Hours **Total Marks: 25**

Name & Designation of the Examiner: Satyaki Das, Lecturer

Learning Outcomes (LO):

1. **Describe** the principles and concept of OOP
2. **Explain** important features of object-oriented programming that are important to design and develop OOP
3. **Solve** a wide range of practical problems using C++ computer programming language.
4. **Understand** a real-life problem and **be able** to design and code a small system using C++ language

Levels in Bloom's Cognitive Domain:

C1: Remember ***C2: Understand*** ***C3: Apply*** ***C4: Analyze*** ***C5: Evaluate*** ***C6: Create***

Question No.	Learning Outcomes (CO)	Level in Bloom's Cognitive Domain along with Allocation of Marks					
		C1	C2	C3	C4	C5	C6
1			5				
2			5				
3				10			
4			5				
Total Allocation of Marks	**25**		15	10			

Question No.		Learning Outcome					
		CO1	CO2	CO3	CO4	CO5	CO6
1		5					
2		5					
3				10			
4			5				
Total Allocation of Marks	**25**	10	5	10			

Signature of the Examiner **Date: 23.11.2020**

Department of Computer Science and Engineering
University of Liberal Arts Bangladesh
Mid-Term Examination (Fall 2020)
Course: Object Oriented Programming C++ (CSE 201)
Section: 2 --- Duration: 1 Hour
Name & Designation of the Examiner: Satyaki Das, Lecturer

PLEASE ANSWER ALL QUESTIONS. **Total 25 Marks**

QUESTION 1

What is encapsulation and how can you achieve it using C++? What is the goal of abstraction? How do you implement abstraction in C++? **(2+1+2=5 Marks)**

QUESTION 2

Define the terms "class" and "object". Why do you think they are important in OOP? **(5 Marks)**

QUESTION 3

A program needs a class to represent the time. You are the hired programmer to write the class. Suppose you are naming the class `CustomTime`. Here is a list of your responsibilities:

- Define the class `CustomTime` with three integer attributes for hour, minute and second. The class must also have the following methods:
  - `void init(int hour, int minute, int second);`
    takes three parameters and sets the value of each attribute to the value of the parameter with the corresponding name.
  - `void init();`
    writes the current time to the corresponding attribute.
  - `void print();`
    outputs time using the the format `hour:minute:second`.
- Assume a 24-hour format for the class and write a main function where a `CustomTime` is created using both `init` functions. Display the time for both objects.
- To get current time, include the library ctime and then add the following code:

```
time_t now = time(0);
tm *ltm = localtime(&now);
hour = ltm->tm_hour;
minute = ltm->tm_min;
second = ltm->tm_sec;
```

Implement the code. **(10 Marks)**

QUESTION 4

Describe the usage of setprecision, setw and setfixed in C++ with proper examples. **(5 Marks)**

****END OF QUESTIONS****