UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, NOV/DEC 2018

COURSE NO: EL 261
COURSE NAME: OBJECT ORIENTED PROGRAMMING WITH C++
CLASS: EL II **TIME:** 2 HOURS

Name**:** _____Index Number: _____

Answer any Two Questions. Each question carries 30 marks.

Question one

An employee is expected to pay tax of 15% if his salary is greater than $5 000 and 11% if his salary is greater than $3 500 but less than or equal to $5 000. In the same system, if an employee's salary ranges from $2 000 to $3 500, the tax is 8%. Any salary less than $2 000, exempted from tax. Create a single class and write a program which takes an employee's salary and computes and returns the amount of tax an employee is expected to pay. The number of member data and member functions in the class should be based on your discretion.

Question one

A publishing company markets both book and audiocassette versions of its works. Create a class publication that stores the title (a string) and price (type float) of a publication. From this class derive two classes: book, which adds a page count (type int). Assume that the publishing company decides to add a third way to distribute books: on computer disk, for those who like to do their reading on their laptop. With this assumption, derive a disk class from publication. The disk class should incorporate the same member functions as the other class. The data item unique to this class is the disk type: either CD or DVD. The user could select the appropriate type by typing c or d.

Question Three

Create a class person with the following data members: *Name, Age, Height and weight*. Add two no-argument member functions named *getData()* and *putData()* respectively. Implement *getData()* in such a way that, when called it allows user to input *Name, Age, Height and weight* of a specific person. Implement *putData()* in such such a way that, it displays whatever the user has entered.

Derive a class *athlete* from the class *person.* The *athlete* class should contain *distance* as feature (member data) unique to itself.

Create an object of the class *athlete* and write a program in main which should allow users to input and output *Name, Age, Height and weight* and *distance* of an athlete.

Examiner: *W. A. Agangiba*