**TAKORADI TECHNICAL UNIVERSITY**

**FACULTY OF APPLIED SCIENCE**

**HND INFORMATION COMMUNICATION TECHNOLOGY**

**END OF SECOND SEMESTER EXAMINATIONS 2017/2018**

**COURSE: JAVA PROGRAMMING LANGUAGE (REGULAR)**

**MAY 2018 TIME: 3 HOURS**

**GENERAL INSTRUCTIONS**

1. Create and name your project as **prjFullNameIndexNumber**.

Example, **prjAbeikuFrench0716060.**

**5 marks** will be deducted from students’ marks if student does not adhere to this instruction.

1. Name your package **as com.lastnameIndexNumber**.

Example, **com.French0716060.**

**5 marks** will be deducted from students’ marks if student does not adhere to this instruction.

1. Save All your work inside the package created in point **2** above.

**5 marks** will be deducted from students’ marks if student does not adhere to this instruction.

**SECTION A**

**QUESTION 1**:

Using the UML diagram create a console program that implements a banking system. **[30]**

**Transaction**

-amount

**BankAccount**

-accountNo

-balance

-returnBalance()

-updateBalance()

**SavingsAccount**

-calculateCharges()

-calculateInterest()

**CurrentAccount**

-calculateCharges()

-calculateInterest()

**NB**

1. Name your class **BankAccountIndexNumber**. Example, public class **BankAccount0716060**.

**5 marks** will be deducted from students’ marks if student does not adhere to this notice.

**SECTION B**

**QUESTION 2**

Using a loop, create an application that accepts user **10** inputs of examination marks. Using a method, print in ascending order, the examination marks.

**NB.** Name of Class; **LoopIndexNumber**. Example, **Loop0716080 [10]**

**QUESTION 3**

Using an Arraylist, create two collections named **namesOfStudents1** and **namesOfStudents**2.

Using a foreach loop, change the first letter of **each element** inside the **namesOfStudents**1 collection and paste the **changed names** into **namesOfStudents2.**

**NB.** Name of Class; **ArrayListIndexNumber**. Example, **ArrrayList0716080 [10]**

**QUESTION 4**

Develop a piece of program that implements a function to determine the largest prime number in any set of 15 numbers supplied by a user. **[10]**

**NB.**

1. Name of Class; **LargestPrimeNumberIndexNumber**.

Example, **LargestPrimeNumber0716080**

1. Name of function ; **maxPrimeIndexNumber**.

Example, **maxPrime0716060**