



UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA
FIRST SEMESTER EXAMINATIONS, NOV/DEC 2018

COURSE NO: ES 351
COURSE NAME: COMPUTER PROGRAMMING PRACTICALS
CLASS: ES III **TIME:** 3 HOURS

Name: _____ Index Number: _____

Answer Only One Question

Question 1

The UMaT grading system is described briefly as follows:

If a student's Examination score is less than 50, the grade is F. If the score is equal to or greater than 50 but less than 60, the grade is D. Any student who scores 60 or more but less than 70 gets the grade C. A student is assigned grade B if he scores greater than or equal to 70 but less than 80. Any student who scores 80 or more gets grade A.

Write a Visual Basic console application program that takes the following information from a student:

1. Student name
2. Faculty name he/she belongs
3. Department name he/she belongs
4. The marks in the range of 0 to 100 to be obtained for all courses this current semester.

The program should be able to determine the appropriate Grade (A, B, C, D, E, F) for a mark obtained in a particular course and compute the semester average for the student where:

$$\text{Semester Average} = \sum \frac{\text{marks obtained in a particular course} * \text{course credit}}{\text{total credit}}$$

The output of the program should be sent to a text file.

[40 MARKS]

Question 2

Given the following arrays:

List of Values = {-3, 3, 19, 5, -2, -5, 0, 23, 12, -4, 13, 1, 10, 14, -15}

List of Names = {"Marry", "John", "James", "Thomas", "Claire", "Bertie", "Noah", "Marta", "Afiok,", Felix}

List of Ages = {25, 51, 56, 30, 78 ,92,16, 35, 28,24}

Write a VB.Net program to get the following:

1. The list of all positive/negative values using the queue data structure. Use the list with name **List Of Values** as your source data.
2. A new list using the array list data structure containing the values in **List Of Ages** in ascending order.
3. A new list with each value in **List Of Ages** corresponding to each element in **List Of Names**.

Please output all result to a **text file** instead of the console.

[40 MARKS]

Examiner: T. Kwantwi