

**SCHOOL OF BUSINESS & ECONOMICS**

**MIS 282A: SYSTEM ANALYSIS &DESIGN II/ACS 216A: VISUAL PROGRAMMING**

**FINAL JAN 2012 SEMESTER EXAMINATION**

Answer All the Questions

Time: 2 hours

**QUESTION ONE**

Course Registration System

A collage course registration system works in such a way that after a successful login the systems check whether the user is an old or new student. For old students after a successful login they are allowed to register for courses as follows.

Masters only a maximum of 12 hours (4 courses)

Bachelor only a maximum of 18 hours (6 courses)

Diploma only a maximum of 15 hours (5 courses)

The study levels Masters, Bachelors and Diploma are held in a single combo box, while their respective projected courses are held each in its own combo box. If Masters is selected in the study level combo box only the combo box with Masters Courses is active the other two combo boxes are inactive and verse-versa.

All the courses selected are held in a list box with the number of courses and their total hours held in text boxes just below the list box. The registration form has two commands namely *Select Course and Invoice.*Select Course helps in moving selected course from combo box to list box while Invoice helps in generating an invoice for the selected courses.

A new student after a successful login is prompted by the system to sign up in order to start using it.The sign up forms contains information in frames

 Frame 1: Personal details - Regno, Name, Gender, DoB, Nationality

Frame 2: Education details – KCSE mean score, First Degree

Frame 3: Operational Commands – Sign up, Edit, Exit

After a successful sign up the system automatically transfers to register for the courses

Required

(a) Draw a flow chart diagram that clearly depicts the narrative.

 **(8 marks)**

(b) Draw a system interface dialogue diagram showing clearly how the modules call one other.

 **(10 marks)**

(c) Write a visual basic code that can be used to implement

(i) Thelogin command **(4 marks)**

(ii) The Select Course command for Bachelors **(4 marks)**

**QUESTION TWO**

Grade Processing System Module

Grade processing system which is a module of the course registration system helps in grade

processing as follows.

|  |
| --- |
| Study level |
| Masters | Bachelors | Diploma |
| Mark  | Grade | Remark | Mark  | Grade | Remark | Mark  | Grade | Remark |
| 100- 70 | A | Excellent | 100 - 85 | A | Excellent | 100 - 70 | A | Excellent |
| 50 -79 | B | Good | 61 - 84 | B | Good | 61 - 70 | B | Good |
| 0 - 49 | F | Fail | 45-60 | C | Fair | 51 - 60 | C | Fair |
|  |  |  | 0 - 44 | F | Poor | 41 - 50 | D | Poor |
|  |  |  |  |  | Fail | 0 - 40 | F | Fail |

Required

(a) Draw a tree diagram that clearly captures this information

 **(7 marks)**

(b) Design a single form that can be used to assign grade when the mark is entered. Explain the functions of each object included in the form

 **(6 marks)**

(c) Write a visual basic code that can be used to assign both the Grade and Remark given mark for

 (i) Master level using IF..THEN …ELSE statement

 **(3 marks)**

 (ii) Bachelor level using SELECT CASE statement

 **(4 marks)**

**QUESTION THREE**

(a) *Joseph wants to ADD any two numbers of his choice where the first and second numbers are held in an integer NUM1 and NUM2 while the result is held in another integer called ANS*

 (i) Draw a form that can used to ADD the two numbers

 **(2 marks)**

(ii) Write a visual basic code to actualize the ADDITION

 **(4 marks)**

 (iii) Write a visual basic code that can output the answer in (ii) in form2

 **(2 marks)**

(b) Mary has ten records in her file indexed 1 to 10. As shown below

|  |  |
| --- | --- |
| Index | File Name |
| 1 | Genesis |
| 2 | Exodus |
| 3 | Leviticus |
| 4 | Numbers |
| 5 | Deuteronomy  |
| 6 | Matthew  |
| 7 | Mark |
| 8 | John |
| 9 | Luke |
| 10 | Acts |

Write a visual basic code to PRINT

(i) The files with **odd** index only using FOR..NEXT Loop statement

**(4 marks)**

(ii) **ALL** the files using DO..UNTIL loop statement

**(4 marks)**

(iii) Files indexed 4 to 8 using DO..WHILE loop statement

**(4 marks)**