KABARAK   **UNIVERSITY**

UNIVERSITY EXAMINATIONS

2010/2011 ACADEMIC YEAR
FOR THE DEGREE OF BACHELOR OF BUSINESS MANAGEMENT & INFORMATION TECHNOLOGY

COURSE CODE: BMIT 126

COURSE TITLE: BUSINESS APPLICATION SOFTWARE

STREAM: Y1S2

DAY: FRIDAY

TIME: 9.00 – 12.00 P.M

DATE: 17/12/2010

INSTRUCTIONS:

1. This question paper has FIVE questions
2. Answer question ONE and any other TWO questions

PLEASE TURNOVER

QUESTION ONE (40 MARKS)

   (a) Explain the meaning of the following terms
     i.   Data integrity
     ii.   Usability design   **(4mks)**

   (b) Distinguish between
     i. *BOFAction* and *EOFAction*
     ii. *Implicit* and *explicit* variable declaration   **(4mks)**
   (c) Describe any three types of information systems   **(6mks)**
   (d) Give any three advantages and three disadvantages of using ERPs   **(3mks)**
   (e) Write a general expression for Select Case control structures   **(5mks)**
   (f) What is the output of the following VB 6 code when executed   **(3mks)**

```
Dim i As Integer
i = 0
Do While i <= 9
i = i + 2
Print i
Loop
```

   (g) Use a For Next loop to write a VB code that lists all even numbers from 0 to 10   **(5mks)**

   (h) The following seven relations resulted from normalization to 3NF.

BORROWER	COPY	BOOK	RESERVATION	LOAN
Borrower#	Accession#	ISBN#	Borrower#	Borrower#
Surname	ISBN#	Title	ISBN#	Accession#
Othername	Purchase Price	Subject	Reservation Date	Return Date
Address		Publisher Code		
Telephone No.		Edition	**AUTHORSHIP**	**PUBLISHER**
		Location	ISBN#	PublisherCode
		Current Price	Author Name	PublisherName

       i. Identify and list all primary, compound and foreign keys.   **(4mks)**
       ii. Draw an entity relationship diagram for the relations.   **(6mks)**

QUESTION TWO (30 MARKS)

As an interface designer, you have been called upon by an institution to design a VB interface to link to an already database system:

    (a) Explain any six design heuristics you would adhere to **(6mks)**

    (b) Explain any six design consideration for designing multiple screens **(6mks)**

    (c) Describe the three types of users that might use the system **(6mks)**

    (d) Describe any three tools that you would use in evaluating your design **(6mks)**

    (e) Explain six uses of the prototype used to test the develop the system **(6mks)**

QUESTION THREE (30 MARKS)

    (a) Explain the meaning of the following terms
        i. foreign key
        ii. Entity model **(4mks)**

    (b) Distinguish between
        i. Validation and input mask
        ii. Top-down and down-up database design **(4mks)**

    (d) *Hekima Bookshop Inc* is a small bookshop company that wants to convert their manual book purchase order processing system into a computer based system using a database system. Following is a sample of summary of the order form for three orders made.

Purchase Order No.	Purchase Order Date	Publisher code	Publisher Name	ISBN	Book Title	Author Code	Author Name	Quantity
34673	20/10/05	MCG	McRaw-Hill	007709073X	SSADM A Practical Approach	G101	Goodland	20
				0077077253	Introduction to SSADM4	A234	Ashworth	15
				0077074092	SSADM4: User Guide	E753	Eva	3
34674	21/10/05	MAC	McMillan	0333197399	Fundamentals of Databases	S593	Deen	17
				0333371003	Principals of Databases	S593	Deen	2
35332	30/11/05	MCG	McRaw-Hill	0077077253	Introduction to SSADM4	A234	Ashworth	5

i. Normalize the data to Third Normal Form showing all the steps taken. Identify the primary, foreign and compound keys as well as giving appropriate names to the relations obtained in the 3NF. **(10mks)**

ii. Draw an ER diagram relating the relations obtained in i above **(5mks)**

iii. Identify MS Access data types and data type Field Size/Format applicable for Purchase Order No., Purchase Order Date, ISBN and Author Code fields **(4mks)**

iv. Write down the input mask that constraints Author Code field such that the first character is always upper case letter followed by three digits **(3mks)**

QUESTION FOUR (30 MARKS)

(a) Explain the meaning of the terms

i. Procedure
ii. Event
iii. Object
iv. Property

(8mks)

(b) The cost C of a used item depends on the original price (P), depreciation rate (R) and the time (T) in years it takes to appreciate, thus $C = P\left(1 - \dfrac{R}{100}\right)^{T}$. Write a VB code to perform the cost calculation. **(6mks)**

(c) Consider the VB 6.0 code below

```
Private Sub Form_Load()
Dim sum, n As Integer
lstSumNumbers.AddItem "n" & vbTab & "sum"
Do
   n = n + 1
   sum = sum + n
 lstSumNumbers.AddItem n & vbTab & sum
 If n = 10 Then
 Exit Do
 End If
Loop
End Sub
```

i Draw a flowchart showing the program flow **(5mks)**

ii Describe what each line of the code does during execution **(6mks)**

      iii   Sketch a sample of out put Window that results after execution of the code   **(5mks)**

QUESTION FIVE (30 MARKS)

  (a) Explain the meaning of the following terms

      i.   Bound control

      ii.   RecordSet   **(4mks)**

  (b) Explain the difference between *DataSource* and *DataField*   **(4mks)**

  (c) A business software developer wishes to link a VB interface to MS Access databases

      with the path: *C:\Student.mdb* using data control object.

      i.   Explain the meaning of the term *data control*   **(2mks)**

      ii.   Identify and describe any four data control properties   **(8mks)**

      iii.   Describe step by step the procedure of linking the VB interface to the database

                 (7mks)

      iv.   Write a VB Code for Next navigation button over existing records and displays a
            message incase there in no next record.   **(5mks)**