

**KABARAK**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**2009/2010 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: 3.00 – 6.00 P.M.**

**DATE: 13/08/2010**

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**INSTRUCTIONS:**

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

**PLEASE TURNOVER**

**QUESTION ONE (40 MARKS) COMPULSORY**

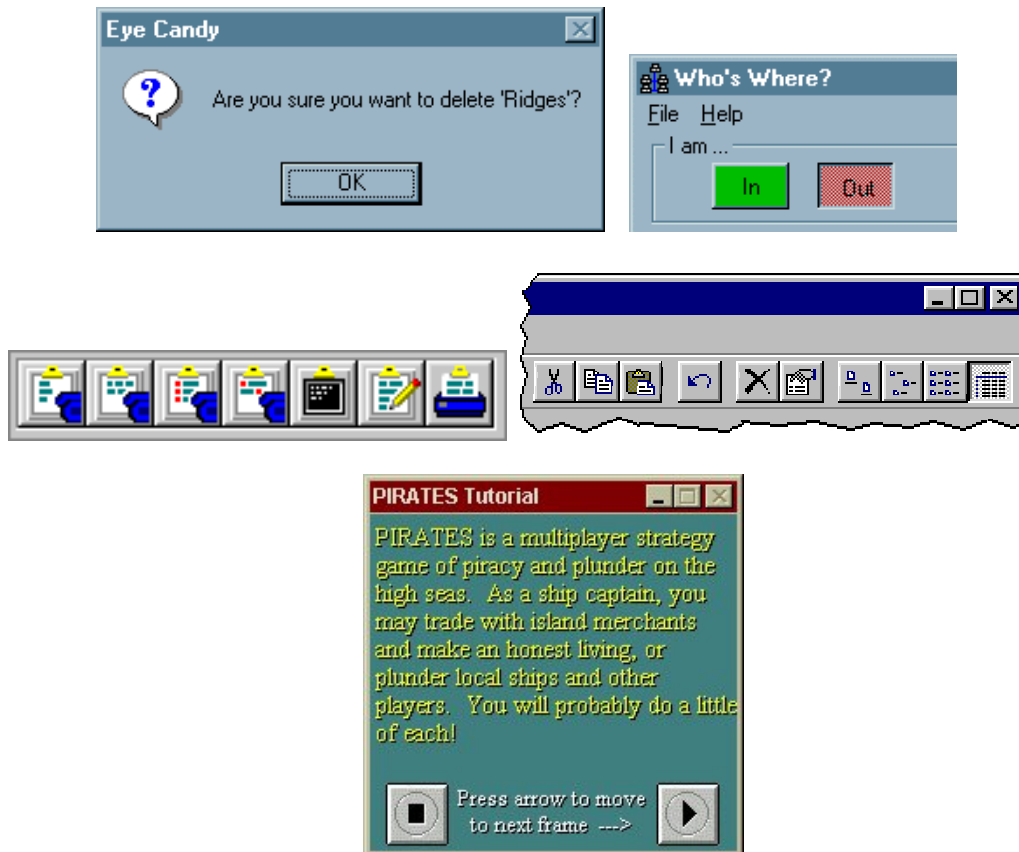
- (a) Explain the meaning of the following as used in programming  
 i. Primary key  
 ii. DBMS  
 iii. Validation  
 iv. Prototype  
 v. B2C (10mks)
- (b) Distinguish between  
 i. Integer and Long VB data type  
 ii. compiled and interpreted programming language  
 iii. event and procedure (6mks)
- (c) Most applications projects are developed in teams. List six qualities of a team leader (3mks)
- (d) Explain the functions of each of the following operators giving examples of how they function  
 i. =  
 ii. Mod  
 iii. &  
 iv. /  
 v. <> (5mks)
- (e) Write a general expression for if then else and for next control structures (6mks)
- (f) Use a Visual Basic application language to write a code that uses two option buttons to calculate either simple interest or compound interest on some principal amount(P) for a given time (T) and a rate (R) and the results displayed in a message box (5mks)
- (a) The six relations below are all in Third Normal Form and have been produced by normalization. Construct a Third Normal Form entity model from these relations (5mks)

<b>PROGRAMME</b>	<b>PROGRAMME CONTENT</b>	<b>COURSE</b>
<u>ProgCode</u>	<u>ProgCode</u>	<u>CourseCode</u>
ProgDescription	<u>CourseCode</u>	CourseTitle
		*LectureId
		*RoomNo.
<b>LECTURER</b>	<b>ROOM</b>	<b>BUILDING</b>
<u>LecturerId</u>	<u>RoomNo.</u>	<u>BuildingCode</u>
LecturerName	RoomCapacity	BuildingName
Tel.No.	*BuildingCode	

**QUESTION TWO (30 MARKS) ELECTIVE**

- (a) List any six purposes of a prototype in designing systems (6mks)

- (b) Novice users are users who are new to the task, system and or technology. The principal is therefore to design a system that provides them with sufficient support and allow them learn the system.
- i. Explain three learnability factors to be considered (6mks)
  - ii. Describe any three training support to accompany the system (6mks)
- (c) Describe any three tools/techniques used in Usability evaluation (6mks)
- (d) Consider the following samples of five form screen shots



The forms design violates a number of design guidelines. Identify and explain any six design guidelines that have been violated (6mks)

### QUESTION THREE (30 MARKS) ELECTIVE

- (a) What is DBMS? (2mks)
- (b) Discuss any four components of DBMS (8mks)
- (c) As a database expert, you have been invited to talk about DBMS. Part of the speech is to talk about the advantages and disadvantages of a DBMS. Explain then any five advantages and five disadvantages of using DBMS in managing databases that you can include in your speech (10mks)

(d) Consider a sample data for bookings by customers' database as shown

**CUSTOMER**

<b>CusNo</b>	<b>Name</b>	<b>Address</b>
1027	Noel	17 Nyumbani
1027	Abigael	
2030	Joash	13 Shauri Moyo

**ROOM**

<b>RmNo</b>	<b>Type</b>	<b>Rate</b>
12	Double	KSh.1500
33	Single	1200

**BOOKING**

<b>CusNo</b>	<b>RmNo</b>	<b>StartDate</b>	<b>EndDate</b>
1027	36	27/6/2010	28/6/2010
1027	41	28/8/2010	28/8/2010
2030	36	28/8/2010	30/8/2010
4786	12	28/8/2010	28/8/2010

The requirement is to manage data related to the Bookings by customers for hotel rooms. The entities are in Bold and Primary Key fields are underlined.

**Customer**

CusNo 4 digits, must be positive  
 Name 10 characters  
 Address 20 characters, required

**Room**

RmNo 2 digits, must be positive  
 Type 10 characters  
 Rate Currency in KSh.

**Booking**

CusNo 4 digits, must be positive  
RmNo 2 digits, must be positive  
 StartDate Date, Must be after today  
 EndDate Date, Must be after today

- i. Explain the meaning of terms *business*, *referential* and *domain* constraints (3mks)
- ii. Which of these constraints have been violated in sample tables? How? (4mks)
- iii. Draw an entity-relationship diagram relating the three tables: customer, room and booking (3mks)

**QUESTION FOUR (30 MARKS) ELECTIVE**

- (a) List six examples VBA events (3mks)
- (b) Explain the functions each of the following objects as used in VBA
  - i. List Box
  - ii. Label Caption
  - iii. Command Button
  - iv. Input Box (8mks)

- (c) With the aid of a flowchart, differentiate between a For next and a do while loops (4mks)
- (d) Write a VB code to list all even numbers between 1 and 30 (5mks)
- (b) (i) Explain what each of the following VB code line does when executed (7mks)

```
Dim nResponse
If miAdding Then
miCancel = True
Data1.Recordset.Bookmark = sPreviousRecord
miAdding = False
Else
    If Data1.Recordset.EOF Or Data1.Recordset.BOF Then Exit
Sub
        nResponse = MsgBox("Do you really want to delete
this record?",20, "Delete Record")
    If nResponse = 6 Then
        Data1.Recordset.Delete
        Data1.Recordset.MoveFirst
    End If
End If
```

- (ii) Sketch a runtime response form that appears when the code is run (3mks)

### QUESTION FIVE (30 MARKS) ELECTIVE

- (a) explain the meaning of the following terms
- i. DataReader
  - ii. DataSource
  - iii. DataNavigator
  - iv. ConnectionString (8mks)
- (b) The data below is of a sample transcript of a student. Normalize the data contained in the transcript to Third Normal Form (10mks)

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**ProgCode:** BSc      **Description:** B. of Science in Computer Science

CourseCode	Description	CF	Mark	ResultCode	Result
BMIT 126	Applications	6.0	70	P	Pass
COMP 314	Database	3.0	60	P	Pass
BIB 220	Religion	2.0	30	RE	Refer Exams
MAT 314	Numerical	3.0	20	RCE	Defer Coursework

- (c) The figure below is of a sample of VBA form linked to access application

The screenshot shows a Windows application window titled "Form1". At the top, there is a status bar with navigation icons and a record count of "0 of 0". Below this, there are two groups of buttons: "Search surname" with "First" and "Next" buttons, and "Go to record" with "First", "Next", "Previous", and "Last" buttons. The main form area contains several input fields: "Registration Number:" (text box), "Surname:" (text box), "Othernames:" (text box), "Gender:" (dropdown menu), "Date of Birth:" (calendar picker showing Thursday, July 15, 2010), "Programme:" (dropdown menu), and "Date of Admission:" (calendar picker showing Thursday, July 15, 2010). On the right side, there is a "Form operations" panel with buttons for "Add record" (highlighted in blue), "Delete", "Save", "Update", "Clear", and "Exit".

- i. Explain the difference between *DataSet* and *DataAdapter* objects (4mks)
- ii. Write down the VB code used in coding the Add record command that adds records to existing ones (4mks)
- iii. Describe how you can use a wizard to link the form to an access application (4mks)