# FINAL EXAM
FIRST SEMESTER SESSION 2011/2012

<table>
<thead>
<tr>
<th>COURSE CODE/NAME</th>
<th>: SQIT1013 PENGATURCARAAN DALAM APLIKASI PERNIAGAAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
<td>: 13TH JANUARY 2012 (FRIDAY)</td>
</tr>
<tr>
<td>TIME</td>
<td>: 3.00 – 5.30 P.M (2 ½ HOURS)</td>
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<tr>
<td>VENUE</td>
<td>: DMS</td>
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</tbody>
</table>

**INSTRUCTIONS:**

1. This exam paper contains TWELVE (12) questions in FOURTEEN (14) printed pages excluding the cover page.
2. Answer ALL questions in the space provided.
3. All workings must be shown clearly.

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**MATRIC NO:** ____________________________  

(with word)  

(with number)

**IDENTIFICATION CARD NO.:**

**LECTURER:** ____________________________

**GROUP:**  

**TABLE NO.:**

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DO NOT OPEN THIS EXAMINATION PAPER UNTIL INSTRUCTED

CONFIDENTIAL
QUESTION 1 (5 MARKS)

State whether the following statement is TRUE or FALSE.

a. Mainframes are ultra-fast computers that are designed to process huge amounts of scientific data and require immense amounts of mathematical calculations. _____________

b. There are mainly three main categories of computer software which are system software, operating software and application software. _____________

c. Secondary storage unit in computer organization is the long term storage in which unused program or data are normally retained. _____________

d. The third generation language is required to be translated into machine language by a compiler or interpreter. _____________

e. The highest-level language that is understood by computers which consists of binary numbers that directly corresponds to the computer's electrical states is called Machine language. _____________

QUESTION 2 (4 MARKS)

Name and explain the function of the following objects in Visual Basic environment.

a. _____________ (1 MARK)
SQIT1013 PENGATURCARAAN DALAM APLIKASI PERNIAGAAN

b. (1 MARK)

c. (1 MARK)

d. (1 MARK)
QUESTION 3 (6 MARKS)

Draw a flowchart to represent the system that will display the output in a listbox control named lstNumber using a looping method as described in Figure 1.

![Figure 1](image_url)
QUESTION 4 (14 MARKS)

Table 2 below depicts the electricity pricing and tariff for Residential Consumer that is placed by Malaysian Natural Energy (MNE). In addition, Malaysian Government has offered RM20 subsidy on monthly electric bill to eligible MNE residential consumers. However, the minimum monthly charge is RM3.00 and this minimum charge applies to all their domestic consumers despite of the given subsidy.

Based on the given information, answer question 4(a) and 4(b) with the assumption that the bill produced is based on two categories of consumers; Subsidy Consumer and Standard Consumer.

<table>
<thead>
<tr>
<th>TARIFF CATEGORY</th>
<th>UNIT</th>
<th>RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariff A - Domestic Tariff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For the first 200 kWh (1-200 kWh) per month</td>
<td>sen/kWh</td>
<td>0.218</td>
</tr>
<tr>
<td>For the next 100 kWh (201-300 kWh) per month</td>
<td>sen/kWh</td>
<td>0.334</td>
</tr>
<tr>
<td>For the next kWh (301 kWh onwards) per month</td>
<td>sen/kWh</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Table 2
a. Design an appropriate interface and label all the controls. (4 MARKS)
b. Write a complete program based on question 4[a]. (10 MARKS)
QUESTION 5 (15MARKS)

a. Declare a variable for each of the following input using the correct VB syntax:

   i. A brand of car that can hold up to 15 characters.  (1 MARK)

   ii. A temperature such as 15°C.  (1 MARK)

   iii. Quantity of items purchased at a mini shop.  (1 MARK)

b. Declare suitable array variables for the following input:

   i. 100 integer numbers  (1 MARK)

   ii. 50 student names  (1 MARK)

   iii. 5 interest rates  (1 MARK)

   iv. 9 product code  (1 MARK)
c. Based on the following codes, answer question c(i) and c(ii):

```vba
Private Sub cmdpress_Click()
    Dim strInitial, strMiddle, strEnd As String
    strInitial = "my passion"
    strMiddle = "is learning"
    strEnd = "Visual Basic"
    Label1.Caption = strInitial + strMiddle + strEnd
End Sub
```

i. Fill in the missing line of code so that the displayed output on Label1 is exactly

"Visual Basic is my passion" when it is run (You must manipulate strInitial, strMiddle, strEnd and built-in function for string manipulation in order to produce such output).

(3 MARKS)

ii. Based on question 4(i), determine the value of Output if:

   a. Output = InStr(Label1.Caption, "passion")

(2 MARKS)

   b. Output = Sqr(Len(Mid(Label1.Caption, 4, 9)))

(2 MARKS)
QUESTION 6 (10 MARKS)

a. Convert the mathematical expression below into Visual Basic expression. Assume that each alphabet is a variable.
   
i. $b^2 - 4ac$ (1 MARK)
   
   ii. $(a+b)(a-b)$ (1 MARK)
   
   iii. $21(3a+7b)$ (1 MARK)
   
   iv. $ab(3+14pbc)$ (1 MARK)
   
   v. $\frac{(e^x-e^{-x})}{2}$ (1 MARK)
   
   
   b. Determine the output if:
   
   i. $X = 7 \times (9 / 3) - 8 \times (4^2 + 1)$ (1 MARK)
   
   ii. $X = (\text{Sqr}(225))/(1 + 1) \text{ Mod } 8$ (2 MARKS)
   
   iii. txtname.Text = UCase("We" + "Love" & Peace & "&" + " Harmony") (2 MARKS)
QUESTION 7 (12 MARKS)

Danial PC Accessories Store sells computer accessories to their customers. They offer 20% discount if customer buy more than 5 units of all types of item. Based on the sample application as shown in Figure 3, answer question 7(a) and 7(b).

![Computer Accessories Application](image)

**Figure 3**

a. Write a complete Visual Basic code for **CALCULATE** button. Change the output format into currency (Note: Use the control names as given in Figure 3).  (9 MARKS)
b. Write a segment of code for RESET button which empties all the textbox in the form. (3 MARKS)

QUESTION 8 (6 MARKS)

Write a program for the following problem using Do-Until repetition control structure.

A factory stores the products it produces on pallets. Management wishes to know the total weight of each pallet. As the number of products on each pallet varies, your program will use a repetition control structure to keep an accumulative total weight of a pallet as each item is added. The loop will finish when a zero is keyed-in for an item weight, at which point your program is to display the total weight of the pallet on a label.
QUESTION 9 (7 MARKS)

Correct the error(s) that occur in the following code segments:

a. This program should print out the numbers from 100 backwards to 0 in steps of 10.

(4 MARKS)

min = 100
max = 0
jump = -5
For count = max To min Step jump
Print max

b. This program should determine whether a number keyed-in by the user is positive, negative or zero.

(3 MARKS)

number = Text1.Text
Select Case number
Case Is <= 0
status = "Negative"
Case Is > 0
status = "Positive"
Else
status = "Zero"
End Case
Label1.Caption = status
QUESTION 10 (4 MARKS)

State TWO(2) differences between a subroutine and a function.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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QUESTION 11 (5 MARKS)

a) What is the advantage of Control Array? (2 MARKS)

b) Declare an array with the size of nine and named it as strCustName. (1 MARK)

c) Draw a table that can show the array declaration in 11(b). (2 MARKS)
QUESTION 12 (12 MARKS)

a) Name the object that is required to link the database and the form in Visual Basic. (2 MARKS)

b) You are required to write a programming code for:
   (Note: Assume the name of Data control is Data1)

   i. add the current information to the database. (2 MARKS)

   ii. update the current information from the database. (2 MARKS)

   iii. delete the current information from the database. (2 MARKS)

   iv. traverse to the next record, display the message "LAST RECORD" if the record pointer points to the end of the record. (4 MARKS)

— END OF QUESTIONS —