UNIVERSITY OF MINES AND TECHNOLOGY, TARKWA

FIRST SEMESTER EXAMINATIONS, DEC 2014

COURSE NO : **PE 351**
COURSE NAME: **COMPUTER APPLICATIONS**
CLASS : **PE III** TIME: **2 HOURS**

Name**:** _____ Index Number: _____

Section A The questions in this section are to be answered directly on this examination paper. Answer all the questions in section A. [50 Marks]

Indicate whether the following statements are TRUE or FALSE.

1. Primary keys always require a value, and are therefore implicitly *NULL*.	
2. By default, SQL transactions are rolled back. You should always explicitly commit or roll back a transaction to indicate what you want to do.	
3. Deleting a field in a table will not require you to delete all references to it.	
4. Each record in Microsoft Access datasheet occupies a single line.	
5. Not every formula in Excel starts with an equal sign.	
6. A vector is a series of data that only occupies one row or column.	
7. The primary purpose of a *relationship* is to **enforce referential integrity** stopping reference being made to a nonexistent object.	
8. The SQL COUNTIF counts the number of rows in a table based on a given criteria.	
9. If there are no cells that meet all the criteria, AVERAGEIFS returns the #DIV/0! error value.	
10. NOT checks to see if the argument is TRUE. If so, the value "TRUE" is returned.	

11 Which of the following statements restrict the group of rows returned to those that have more than 4 rows in each group?

A. SELECT SupplierID, COUNT(*) FROM Products GROUP BY SupplierID WHERE COUNT(*) > 4;
B. SELECT SupplierID, COUNT() FROM Products GROUP BY SupplierID HAVING COUNT(*) > 4;
C. SELECT SupplierID, COUNT(*) FROM Products ORDER BY SupplierID HAVING COUNT(*) > 4;
D. SELECT SupplierID, COUNT(*) FROM Products GROUP BY SupplierID HAVING COUNT(*) > 4;

12. Which of the following statements about transactions is correct?
    A. Permanently recording the results of SQL statements is known as a rollback. Undoing the results of SQL statements is known as a *commit*.
    B. Permanently recording the results of SQL statements is known as a *commit*. Undoing the results of SQL statements is known as a *rollback*.
    C. Permanently recording the results of SQL statements is known as a *savepoint*. Undoing the results of SQL statements is known as a *rollback*.
    D. Permanently recording the results of SQL statements is known as a *saving*. Undoing the results of SQL statements is known as a *rollback*.

13. How would you check for errors in a transaction before deciding to perform a COMMIT?
    A. By using the @@ERROR function.
    B. By using the @ERROR function.
    C. By using the @NONZERO function.
    D. By using the @@NONZERO function.

14. How would you select the TOP 10 students in a class according to marks?
    A. SELECT TOP 10 * studentName FROM Students ACCORDING TO marks
    B. SELECT TOP 10 studentName FROM Students WHEREBY marks=10
    C. SELECT TOP 10 studentName FROM Students BY marks
    D. SELECT TOP 10 studentName FROM Students ORDER BY marks

Use Figure 1.0 below to answer Questions 15 to 17. Identify the results of the formulae.

	A	B	C	D	E
1		Rutherford	Russel	Lett	
2	Mechanics	80	82	90	
3	Maths	82	85	79	
4	Statistics	65	60	80	
5	Aeronautics	80	89	90	
6					

Fig. 1.0

15. =IF (B2>C2,"Greater","Smaller")
    A. Greater
    B. Smaller
    C. Error

16. =IF (AND (B3<=C3, B4>=C4),"Correct", "Wrong")
    A. Wrong B. Correct C. Error

17. =NOT (SUM (B5:B5)>AVERAGE (C2:C5))
    A. True B. False C. Error

18. What will be the result according to this formula: =vlookup (B1;A4:B8;2) ?

	A	B
1	Grade	74
2		
3	Grade	Note
4	0	E
5	60	D
6	70	C
7	80	B
8	90	A

Fig. 1.1

A. A B. B **C. C** D. D

19. What will be the result from this vlookup() function?

	A	B
1	Landry Transport	=VLOOKUP(A1,A4:B7,2,FALSE)
2		
3	Company	Rebate
4	Anjou electronic	0.03
5	Carpenter construction	0.01
6	Termite exterminator	0.05
7	Bookshelf library	0.02

Fig 1.2

A. 1%
B. 2%
C. 3%
D. 5%
E. **None of the above**

Use Table 1.0 to answer Questions 20 to 24. In each case, select the correct result from the formula.

	A	**B**
1	**Fruits**	**Quantity**
2	Apples	32
3	Oranges	54
4	Peaches	75
5	Apples	86
6	Pomegranates	68
7	Melons	70
8	Pomegranates	57
9	Oranges	20
10	Melons	78

Table. 1.0

20. = COUNTIF (A2:A10,"Apples")

A. 1
B. 2
C. 3
D. 4

21. = COUNTIF (A2:A10,">55")
    A. 3
    B. 4
    C. 5
    D. 6

22. = COUNTIF (A2:A7,"*es")
    A. 3
    B. 4
    C. 5
    D. 6

23. = IF (B2<=100,"Within budget", "Over budget")
    A. Within budget
    B. Over Budget
    C. Error
    D. 100

24. = MIN (B2:B10)
    A. 20
    B. 32
    C. 54
    D. 75

When working with formulae and cell references in Excel, error messages can appear in the cell instead of the formula result. The following is a list of the most common errors.
Use the options below (A to E) to answer Questions 25 to 29. Enter the Alphabet corresponding to the correct answer into the third column of Table 1.1.

A. **#DIV/0!**
B. **#Name!**
C. **#N/A**
D. **####**
E. **#Value!**

25	The column is not wide enough to display the number.	
26	The formula is trying to divide by zero, which is not possible.	
27	Text has been entered when the formula expects a number.	
28	Text has been entered in a formula, which is not allowed.	
29	The value is not available.	

Table 1.1

30. To enter the Input Mask Wizard
    A) Click on the three dots to the right of the Caption entry field
    B) Click on the three dots to the right of the Format entry field
    C) Click on the Input Mask toolbar
    D) Click on the three dots to the right of the Input Mask entry field

31. Which of these statements on Vlookup() is false?
    A. The Vlookup function can be used to compare a value that's between two values or for an exact value.
    B. When this function is used to find a value between, you must always place the smallest possible value first in the first column.
    C. The values of the first column must be in descending order.
    D. With this function, the comparison table is always read vertically.

32. The result of a query is displayed in a
    A. Record
    B. Query datasheet
    C. Query table
    D. Form
33. What is the first rule of math operator precedence?
    A. Take care of exponents (roots and powers) first.
    B. Divide before you add.
    C. Take care of anything in parentheses or brackets first.

34. Which part of this math problem will Excel calculate first: =30/5*3?
    A. Divide 30/5.
    B. Multiply 5*3.

35. Formatting a cell in Currency, you can specify
    A. Decimal Places
    B. Currency Symbol
    C. Both of above
    D. None of above

36. How can you remove borders applied in cells?
    A. Choose None on Border tab of Format cells
    B. Open the list on Border tool in Formatting toolbar then choose first tool (no border)
    C. Both of above
    D. None of above

37. What will be the result when you format the cell containing 5436.8 as #, ##0.00?
    A. 5,436.90
    B. 54,369.00
    C. 543,690.00
    D. 5000.00

38. Which Access object is best for data presentation?
    A. Form
    B. Query

C. Report
D. Table

39. What is the correct way to refer to the cell A10 on sheet3 from sheet1?
A. !Sheet3!A10
B. Sheet3!A10
C. Sheet1!A10
D. !Sheet1!A10

40. B7:B9 indicates
A. Cells B7 through B9 inclusive
B. Cells B7 and B9
C. Cells B7 or B9
D. Cells B7 through B9 exclusive

41 Which Access object is best for data entry?
A. Form
B. Table
C. Report
D. Query

42. To perform a calculation in a worksheet, you need a
A. Workbook
B. Value
C. Formula
D. Bracket

43. Using SQL, how do you add an address column to an existing blank table called Persons?
A. ALTER TABLE Persons ADD Address nvarchar(50);
B. MODIFY TABLE Persons ADD Address nvarchar(50);
C. ALTER TABLE Persons ADD Constraint Address nvarchar(50);
D. Modify TABLE Persons ADD Constraint Address nvarchar(50);

44 Using SQL, how do you delete the Address column from a blank table called Persons?
A. ALTER TABLE Persons DROP COLUMN Address;
B. ALTER TABLE Persons DELETE COLUMN Address;
C. ALTER TABLE Persons MODIFY COLUMN Address BY DELETE;
D. MODIFY TABLE Persons DROP COLUMN Address;

.45. You start a transaction using which T-SQL statement?
A. BEGIN TRANSACTION
B. BEGIN TRAN
C. BEGIN
D. START TRANS

Use the options below (A to E) to answer Questions 46 to 50. Enter the Alphabet corresponding to the correct answer into the third column of Table 1.2.

A. #
B. [ ]
C. [^]
D. _ (Underscore)
E. [-]

46	Matches any one character not in the brackets.	
47	Matches any one character in the brackets	
48	Matches any one number.	
49	Matches a range of characters	
50	Matches any one character	

Table 1.2

Section B Answer only One (1) question.
Answer the questions on this examination paper.

1. [10 Marks].

ProductID	ProductName	UnitPrice	UnitsInStock
1A	Apple Soup	18.0000	39
2A	Chang	19.0000	17
3A	Chicken Salad	10.0000	13
4A	Chef Anton's Cajun Seasoning	22.0000	53
5A	Chef Anton's Gumbo Mix	21.3500	0
6A	Grandma's Boysenberry Spread	25.0000	120
7A	Uncle Bob's Organic Dried Pears	30.0000	15
8A	Northwoods Cranberry Sauce	40.0000	6
9A	Fufu Powder	97.0000	29
10A	Ikura	31.0000	31
11A	Queso Cabrales	21.0000	22
12A	Queso Manchego La Pastora	38.0000	86
13A	Banana Juice	6.0000	24
14A	Tofu	23.2500	35
15A	Genen Shouyu	15.5000	39
16A	Pavlova	17.4500	29
17A	Alice Mutton	39.0000	0

Table 1.3: Products

Table 1.3 is a Products table. Using Structured Query Language (SQL), answer the following questions:

A. Retrieve all records of products with a name that starts with any of the letters A, B, or C, and ends with any number of characters.

B. Retrieve all records of products with names that don't start with any of the letters A, B, or C, and end with any number of characters.

C. Add a new record to the Products table using the following values:
ProductID**: 18A**
ProductName**: Goat Cake**
UnitPrice**: 35.000**

UnitsInStock**: 0**

D. Remove all rows from the Products table where the ProductID is 17A

E. Delete the Products table

2. [10 marks]

Use table 1.3 below to answer the questions in Table 1.4

	A	B
1	**Property Value**	**Commission**
2	100000	7000
3	200000	14000
4	300000	21000
5	400000	28000

Table 1.3

Based on Table 1.3, enter the results of the formulas in the Live Result column of Table 1.4 and explain the formulas in the Explanation column.

Formula	**Explanation**	**Live Result**
=AVERAGEIF(B2:B5, "<23000")		
=AVERAGEIF(A2:A5, "<250000")		
=AVERAGEIF(A2:A5, "<95000")		
=AVERAGEIF(A2:A5, ">250000",B2:B5)		
=MAX(A2:A5)		

Table 1.4

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