

University of Fort Hare
Together in Excellence

SUPPLEMENTARY EXAMINATIONS: Jan 2019

CSC 121F

INTRODUCTION PROGRAMMING CONCEPTS

Time: 2HOURS, 30 MINUTES

Marks: 100

Internal Examiner

Mr. M.P Mgadi

Internal Moderator

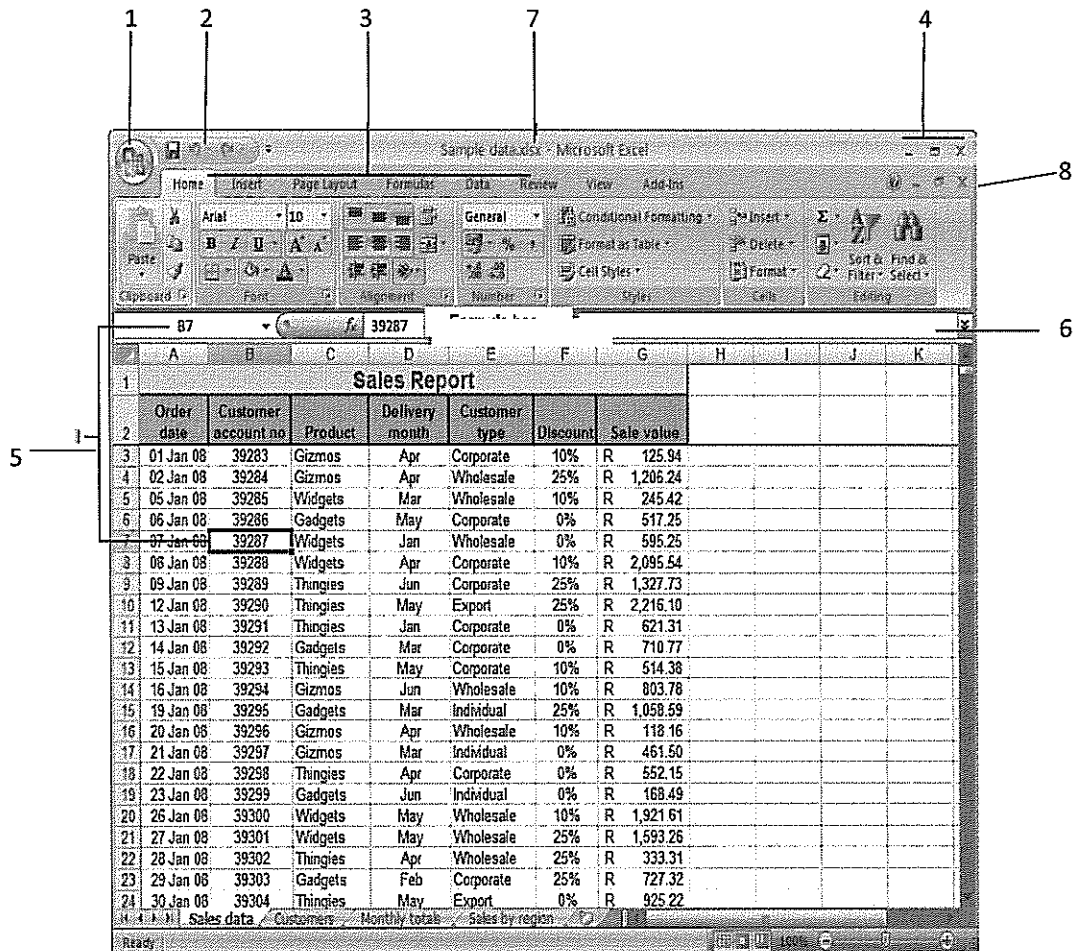
Mr. S.R. Mbombela

Instructions

- This paper consists of 7 pages including cover page
- There are THREE(3) questions ,you have to answer all
- No calculators may be used to answer questions.
- Use the numbering system used in the question paper for your answers

QUESTION 1

1.1. Study the following spreadsheet and questions that follow.



- 1.1.1. In the above window what is labelled 1, 4, 7 and 5? (4)
- 1.1.2. Why do we have controls labelled 8, while there are controls labelled 4, differentiate between these controls. (2)
- 1.2. Which column comes after column BZ? (2)
- 1.3. To go to a new line within the cell, what do you do? (2)
- 1.4. How many default work sheets does MS Excel have? (2)
- 1.5. Explain in no more than four sentences how can this be done: If we want to scroll down this sheet, while keeping headings in view and all the columns on the left hand side of column G (note headings are in row 2). (4)

1.6. The following spreadsheet shows the weekly wage calculation for 01 Sept 2011

Weekly wages for September 2011					
Surname and Initials	Worked hours	Rate	Normal wage	Rate	Wages
Klerk B	20	20	R 400.00	21	505
Botha A.	54	20	R 1 080.00	15	1155
Lee A	65	20	R 1 300.00	5	1375
Fihla B.	62	20	R 1 240.00	15	1315
David M	24	20	R 480.00	6	555
No. Of people with normal wage less than R1000					

1.6.1. To move an active cell one space to the left you can use the left arrow key or a combination of + keys from the keyboard. (2)

1.6.2. What formula would you type in the active cell to get the highest number of worked hours (2)

1.6.3 From the active cell, if the following set of keys is used which cell(s) will be active? :

1.6.3.1. shift+Tab, shift+Tab, shift+Tab, tab, shift+ Enter (1)

1.6.3.2. shift+Tab, tab, shift+ Enter, Enter (1)

1.6.3.3 Up arrow, Shift + Enter, Tab, Shift + Enter, Shift + Enter, Shift + Enter, Shift + Enter, Up arrow, Up arrow, Up arrow, Up arrow (2)

1.7. How will the following be evaluated in excel if it is typed in cell H11? = 2^4/2 +4

(write only the answer that will be there in cell 11 after Enter key is pressed) (2)

1.8. What formula would you place in cell D5, to calculate the normal wage?

If normal wage= worked hours × rate (in column C) (2)

1.9. What formula would you place in cell D11, to calculate the number of people that have normal wage less than R1000? (2)

1.10. What is the general formula for the **round function**? (2)

1.11. If the following formula is typed in cell H10, and Enter is pressed. What will appear in cell H10? (2)

= IF (B5>50, "THIS" , "THAT")

1.12. Assume that the area with corners at A5 and F8 is highlighted, and sorted in descending order according to column B. What values will appear in the following cells after the sort is completed?

1.12.1. A5

1.12.2. A9

1.12.3. C6

1.12.4. F6

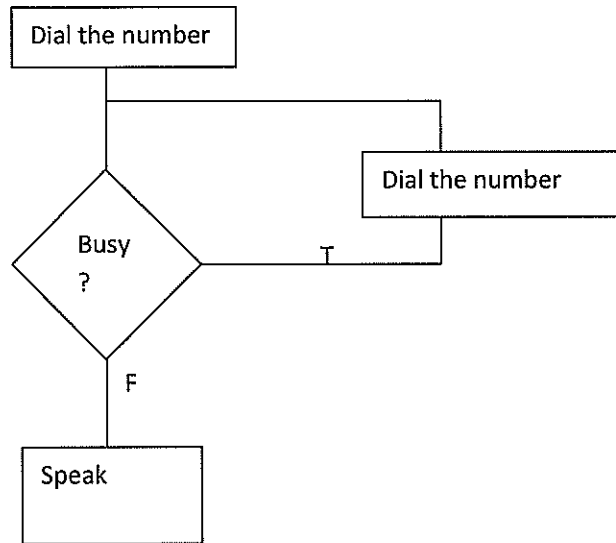
(4)

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QUESTION2

2.1. Why does one need a macro? (1)

2.2. Study the following flowchart which resemble a situation of making a phone call, and write an algorithm presented below (5)



2.3. Study the following algorithm, and answer questions that follow.

Put sum =0

While the end of file has not been reached

Put count=0

Read the next number from file

Add the number to sum

Add one to count

Put average= sum divided by count

Output average to the screen

2.3.1. Draw a flowchart representing the above algorithm. (8)

2.3.2. Suppose the numbers in the file are 2, 4 and 6, what will be displayed on the screen by the above algorithm (2)

2.4. Study the following procedure and answer questions that follow:

```
Public sub Macro1()  
' one decimal  
' Macro recorded 2006/09/10  
'Keyboard Shortcut: Ctrl+Shift+K  
Selection.Numberformat = "0.00"  
End Sub
```

2.4.1. What is the macro name? (1)

2.4.2. What does the single quote tell us in the above procedure? (2)

2.4.3. Briefly explain what the above procedure does. (2)

2.5. Write a procedure that format cells as follows

Macro name to be forte, Font style Bold, courier, size 10,colour 4 and must have a comment "My first procedure". (8)

2.6. What are the values of the three variables x, y and z after the following instruction have been carried out?

Dim X as Variant

Dim y as variant

Dim z as variant

X=2

Y=6

Z= y/x

X= y-x

Y=z + x

(6)

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QUESTION 3

3.1 For each of the following, write one instruction that will what is required:

- 3.1.1. Make F8 the active cell (1)
- 3.1.2. Add a new workbook to our application (1)
- 3.1.3. Add a new work sheet to our application (1)
- 3.1.4. Print out the name of workbook number 4 (1)
- 3.1.5. Move the active cell one step to the left. (1)
- 3.1.6. Place a comment containing the words" Dis lekker" in cell d4 (1)
- 3.1.7. Close all your workbooks (1)
- 3.1.8. Set the font of the selected cells to red(colour index 3) (1)

3.2. What are the values of three variables x, y and z after the following instruction have been carried out

```
Dim x As variant
Dim y As variant
Dim z As variant
x = 2
y = 5
Z = x* y
X = y-z
y = z + x (6)
```

3.3. Write a procedure that multiplies two numbers. The numbers are read in from the cells B3 and B4 and the result in stored in cell B5. (4)

3.4. A persons Tax is calculated as follows: If they earn 5000 or less then Tax is 5% of the Salary. If they earn more than 5000 but less than 10000, Tax is 10% of their salary. Otherwise their tax is 15% of their salary. Write a sub routine that read the salary from cell C1 and returns the tax in cell c2. (5)

3.5. What is printed when the following code runs in the immediate window?

```
Set mycell= Range ("b3:d5,f6:g7")
? mycell.Count
Range("b5").Active
?ActiveCell.Row
?Columns.Count (2,1,1)(4)
```

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