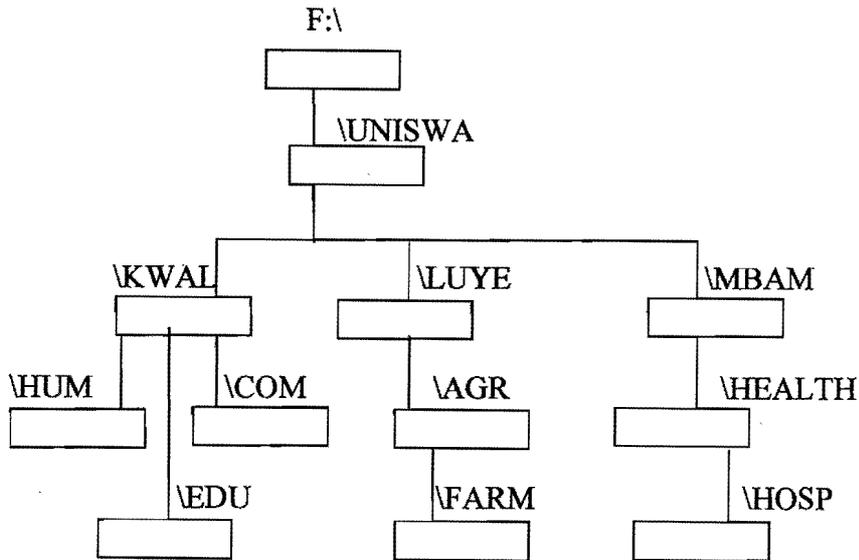


**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION, MAY 2013**

- Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE
- Course number : CSF 100
- Time allowed : Three (3) hours.
- Instructions : Answer all the questions. Choose options as written with the questions. This examination has five questions and five pages.

This paper should not be opened until permission has been granted by the invigilator.

Q1(a) (5 marks). Starting from the system prompt F:\> , write a sequence of MSDOS commands and system prompts to create the following directory tree structure in the root of network disk F: . Assume that the root of F: is empty at the start.



Q1(b) (5 marks). In the context of the directory structure of Q1(a) above, write the names of all

- (i). Directories that are both parent directories and also subdirectories
- (ii). Directories that are only sub directories, but not parent directories
- (ii). Directories that are parent directories but are not subdirectories

Q1(c) (5 marks). Write a **single** MSDOS command along with the correct system prompt to perform each of the following tasks independently. Assume that at the start of each task, the system prompt is F:\>. The context is the directory structure in question 1(a). Answer **any five** of the following. Assume that the display is always on the screen

- (i). Display the contents of the file NOTE.TXT which is in the subdirectory \FARM.
- (ii). Display the contents of the subdirectory \HUM.
- (iii). Copy the file TEMP.DOC in \LUYE subdirectory to the file TMP.DOC in \EDU subdirectory.
- (iv). Show the directory information in \HOSP whose names start with the letter R.
- (v). Change the name of the file TEST.COM to REST.COM. Assume TEST.COM is in \HEALTH subdirectory.
- (vi). Erase \HUM subdirectory. Assume \HUM is empty.

Q2 (a) (6 marks). The context is MS Word as implemented in the Computer Centre Lab. Show examples and explain the steps to create the following -

(i). Bulleted lists, when list items have not already been typed.

(ii). Indentations, when the text has already been typed.

Q2(b) (4 marks). Write clear steps of doing the following. Answer **any two** of the following –

(i). Centering the text, when text has not been typed.

(ii). Exchanging the positions of two text lines on a page.

(iii). Making an already typed text bold, italic and underlined.

Q3(a) (3 marks). Following formulas are copied from one source cell to another destination cell. Write the copied formula in the destination cell. Answer **any three** of the following.

(i). =A\$2*\$C\$2 (source B3 to destination D4, What is copied in D4 ?).

(ii). =B1*C1 (source A1 to destination B4, What is copied in B4 ?)..

(iii). =A\$3+\$C3 (source D3 to destination E4, What is copied in E4 ?).

(iv). =\$A4-C\$4 (source D4 to destination F4, What is copied in F4 ?).

Q3(b) (3 marks). Write clearly which cell addresses appearing in Q3(a) (i) to (iv) are absolute, relative and partially relative.

Q3(c) (4 marks). The contents of a clipped spreadsheet file are shown below.

	A	B	C	D	E	F
1	8	12	31	62		
2	3	8				
3	6	12				
4	4	11				
5	2	10				

Assume that A1..B5 has numbers as shown above and contents of D1 and C1 are -

$C1 = +B1+A1 + B2 + A2$, $D1 = +C1+ C1$, The contents of C1..D1 are copied at C2..D4. Write the values and formula stored in C2..D4.

Q4. (4+2+4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. A small social club in a village wants to store demographic data in a database table for its population which has the following information of several participating families.

- | | |
|----------------------------------|--|
| 1. Surname of Family Head | 25 characters |
| 2. Other names of Family Head | 30 characters |
| 3. Day of Birth of Family Head | (in 2 digits) |
| 4. Month of Birth of Family Head | (in 2 digits) |
| 5. Year of Birth of Family Head | (in 4 digits) |
| 6. Gender of Family Head | 1 character (M-Male, F-Female) |
| 7. Size of Family | (in 2 digits, count of family members) |
| 8. PIN of Family Head | (in 13 digits) |

(a). Write the exact design view of a simple relational database table that can be used to store data for the above. Write the name of your table and primary key. Give reasons about your primary key choice.

(b). Write in data sheet view four records of your table using suitable data of your choice, ensuring that none of the following queries in Q4(c) are empty. Write form view also.

(c). Write SQL query (Command View) and the data sheet view of the results produced by your query for the following independently. Answer **any four** of the following -

(i). Retrieve all the data from the table so that PIN's of Family Head's are in descending order.

(ii). Retrieve PIN's of Family Head and surnames of all the survey data with Family Head surnames ordered in ascending order.

(iii). Retrieve PIN's and surnames of female Family Heads whose family size is 5 or less.

(iv). Retrieve PIN's , surnames and other names of male Family Heads who are born in the month of January.

(v). Retrieve PIN's , surnames and other names of all Family Heads who were born after the year 1950. PIN's should be in descending order.

Q5(a) (5 marks). Draw the shape produced when the following screen effecting direct action LOGO command is given. Also write the position and direction of the turtle (in degrees) after the command is executed independently. Assume that CLEAR command has already been given.

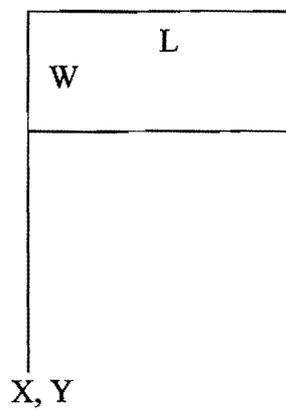
(i) REPEAT 3 (FORWARD 20 FORWARD 20 TURN 60 TURN 60)

(ii) REPEAT 3 (FORWARD 40 TURN 90)

Q5(b) (6 marks). Assuming the turtle direction to be initially zero, write a LOGO program named FLAG to draw a flag at X, Y point as –

0 HOWTO FLAG X, Y, L, W

The length of the flag should be L and width W. The stick (pole) size is L+W as follows. Please ensure that the initial direction and position of the flag before and after the drawing remains same.



Q5(c) (4 marks). Using the FLAG program of Q1(b), the following screen effecting direct action LOGO commands are given sequentially.

```
CLEAR  
FLAG 50 50 20 10  
TURN 90  
FLAG 50 50 20 10  
TURN 90  
FLAG 50 50 20 10
```

Draw the shape drawn on the LOGO screen. What are the direction and turtle coordinates after the above is drawn ?

(End of Examination Paper)