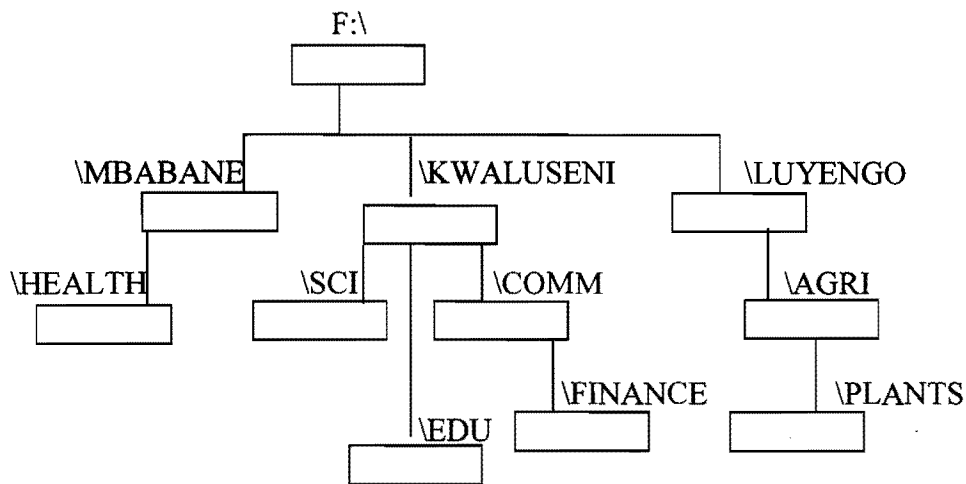


**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION, MAY 2012**

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 within questions.

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 `F:\`. Assume that the root of `F:` is empty at the start.



Q1(b) (3 marks). Explain the differences between the contents of a directory and the contents of a file.

Q1(c) (3 marks). In the context of the directory tree structure of Q1(a), write the names of

- All Root directories,
- All parent directories and
- All sub directories.

Q1(d). (4 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 four** of the following. Use the directory tree structure of Q1(a),

(i). Display the contents of `NOTE.TXT` which is in the subdirectory `\PLANTS`.

(ii). Display the contents of the subdirectory `\EDU`.

(iii). Copy `LAB.DOC` in `\COMM` subdirectory to `LABNEW.DOC` in `\AGRI` subdirectory.

(iv). Remove all the files with `.DOC` extension from `\SCI` subdirectory.

(v). Change the name of the file `HIS.DOC` to `HER.DOC`. Assume `HIS.DOC` is in `\FINANCE` subdirectory.

Q2 (a) (4 marks). Explain the steps to do the following in MS Word as implemented in the Computer Centre Lab.-

(i). Change the text of an already typed page to small case without retyping / deleting the text.

(ii). Create a table which has the information of at least 10 or more students. The information for each student consists of columns of ID number, Name, marks for test1, test2, assignment and EXAM.

Q2(b) (6 marks). Write clear steps of doing the following. Answer any two of the following –

(i). Insert an empty page at the current cursor position.

(ii). Insert ($\delta \neq \lambda$) at the start of the current line.

(iii). Join two paragraphs.

Q3(a) (4 marks). The following formulas are copied from one cell to another. Write clearly the rules applied and the formula in the destination cell.

(i). =A3*\$C5 (is copied from B1 to D5, What is copied in D5 ?).

(ii). =B2*C1 (is copied from B2 to C3, What is copied in C3 ?).

(iii). =A\$3+\$C3 (is copied from D1 to E10, What is copied in E10 ?).

(iv). =A4-C3 (is copied from F1 to G4, What is copied in G4 ?).

Q3(b) (6 marks). The contents of a clipped spreadsheet are –

1. Range A1:A6 has data values as: 5, 4, 3, 6, 4 and 2
2. Range B1:B6 has data values as - 2, 5, 4, 3, 1 and 0.
3. $C1 = A1*B1+A2$,
4. $D1 = B1-C1*2$,
5. The contents of C1:D1 are copied at C2:D5.

Draw the above spread sheet completely and clearly display the range A1:D5.

What are the values displayed in C1:D5 and what are the formula stored in C1:D5 ?

Q4. (4+2+4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. A small health clinic in a village wants to store Patient's data in a database for its patients which has the following information of several participating patients.

1. Patient's Surname	25 characters
2. Patient's Othernames	30 characters
3. Patient's Day of Birth	number (in 2 digits)
4. Patient's Month of Birth	number (in 2 digits)
5. Patient's Year of Birth	number (in 4 digits)
6. Patient's Gender	1 character (M-Male, F-Female)
7. Patient's Weight	number (in Kilo Grams)
8. Patient's IDnumber	unique number of each patient (in 6 digits)

(a). Give 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 five records of your table in data sheet view and form view using suitable data of your choice, ensuring that none of the following queries in Q4(c) are empty.

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

(i). Retrieve all the data from the table so that the Patient's IDnumbers are in descending order.

(ii). Retrieve all the survey data with Patient's surnames ordered in ascending order.

(iii). Retrieve Patient's IDnumbers and surnames of female patients.

(iv). Retrieve Patient's IDnumbers and surnames of male Patients who are born in the month of December.

(v). Retrieve Patient's IDnumbers and surnames who were born after the year 1950.

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 TURN 90 FORWARD 10 TURN -90)

(ii) REPEAT 3 (FORWARD 40 PEN UP FORWARD 10 PEN DOWN)

Q5(b) (6 marks). Assuming the turtle direction to be zero, write a LOGO program named SQUARE to draw a square with bottom left corner at X, Y and square side length as L –

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

```
CLEAR  
SQUARE 50 50 20  
SQUARE 70 70 20  
SQUARE 90 90 20  
SQUARE 110 110 20
```

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

(End of Examination Paper)