UNIVERSITY OF SWAZILAND
## FINAL EXAMINATION, MAY 2008

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) (6 marks). Explain and write at least two examples of each of the following

       (i). Devices that can only be used as Input
       (ii). Devices that can be used as Input as well as Output
       (iii). Contents of a bit and a byte

Q1(b) (4 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.
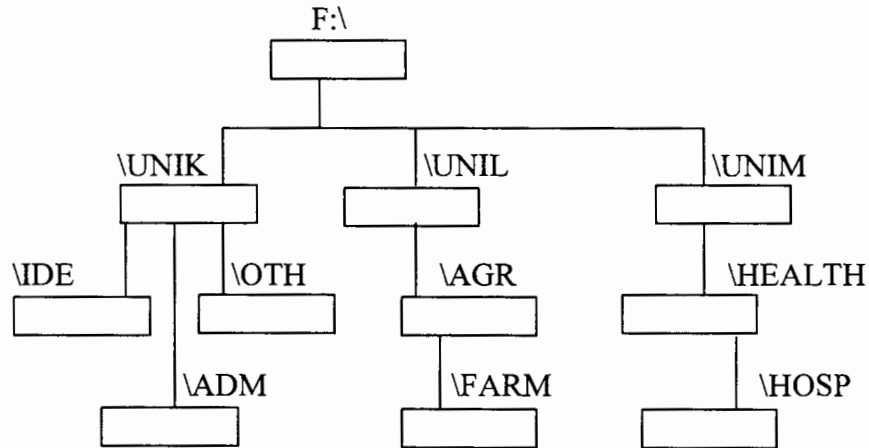
Q1(c) (4 marks). Write a **single** MSDOS command along with the correct system prompt to perform each of the following tasks independently. Assume that at the start of each task, the system prompt is F:\>. The context is the directory structure in question 1(a). Answer **any four** of the following. Assume that the display is always on the screen.

(i). Display the contents of the file ROAD.TXT which is in the subdirectory \ADM.

(ii). Display the contents of the subdirectory \FARM.

(iii). Copy the file EXAM.DOC in \UNIL subdirectory to the file TEST.DOC in \HOSP subdirectory.

(iv). Show the directory information in \UNIM whose names start with the letter R.

(v). Change the name of the file MINE.COM to YOURS.COM. Assume MINE.COM is in \HEALTH subdirectory.

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

(i). Strikeout text, when text has already been typed.

(ii). Bold and underline, when the text has not been typed.

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

(i). Copying text into clip board from the document screen.
(ii). Making the line spacing to double in a paragraph on the document screen.
(iii). Joining two paragraphs to make them as one paragraph.

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

(i).   =A2*C2 (is copied from B1 to D4, What is copied in D4 ?).
(ii).   =B1*C1 (is copied from A1 to B4, What is copied in B4 ?).
(iii).   =A$3+$C3 (is copied from D1 to E4, What is copied in E4 ?).
(iv).   =$A4-C$4 (is copied from B1 to 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	28	40		
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 C1are -

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

Q4. (4+2+4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. During a students' survey, the following information was collected from several participating students.

1. Student id   6 digits, same as UNISWA student id
2. Student name   25 characters,
3. Student age   2 digits (in years)
4. Student weight   number (in 3 digits for Kg 1 digit for grams format xxx.x)
5. Student gender   1 character (M - for male, F - for female)
6. Student height   3 digit integer (in cms.)

(a). Write the design / structure of a simple relational database table that can be used to store data of the above survey. Write names of your table and primary key. Give reasons about your primary key choice.

(b). Write three records of students using suitable data of your choice, exactly in Data Sheet View.

(c). Now write query command/s in SQL View to do the following tasks independently. Answer **any four** of the following -

(i). Retrieve Student id, Student age and Student names so that Student id's are in descending order.

(ii). Retrieve the whole data with Student names ordered in ascending order.

(iii). Retrieve id's, age and height only of female Students whose height is less than 150 cms.

(iv). Retrieve id's and gender of the male Students who are above 30 years of age.

(v). Retrieve the names and age of all Students whose weight is greater than 190 Kg. Student names should be sorted in descending order.

Q5(a) (5 marks). Draw the shape produced when the following screen effecting direct LOGO command is given. Also write the position and direction of the turtle after the command is executed independently. Assume that CLEAR command has already been given.
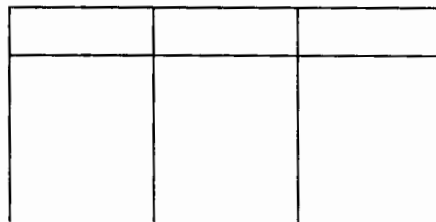
(i)   REPEAT 3 (FORWARD 20 TURN 60 TURN 30 forward 10)
(ii)   REPEAT 4 (FORWARD 40 TURN 90 FORWARD 20 TURN -90)

Q5(b) (6 marks). Write a LOGO program named FLAG to draw a flag at CX, CY point having a pole of length P and flag dimensions as L and W as follows.
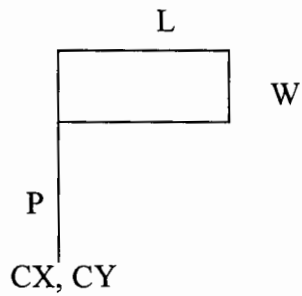
The drawing should start at CX, CY with zero direction and terminate at the same point and direction.

Q5(c) (4 marks). Using the FLAG program of Q5(b), write screen effecting direct LOGO command/s to draw the following. Use your own dimensions.

(End of Examination Paper)