

**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION, MAY 2009**

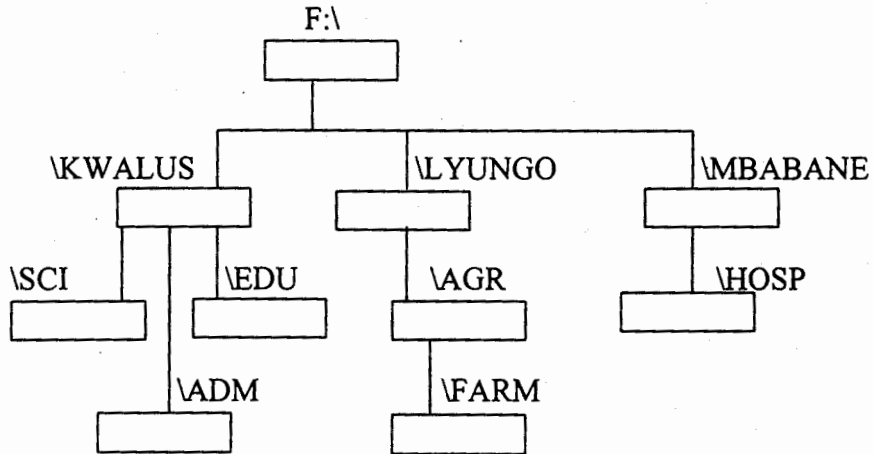
Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE
Course number : CSF 100
Time allowed : Three (3) hours.
Instructions : Answer all the questions. Choose options as written within questions.

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). Internal and external MSDOS commands
- (ii). Wild card file specifications
- (iii). Data in a bit and data in 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 \HOSP subdirectory to the file TEST.DOC in \FARM subdirectory.
- (iv). Show the directory information in \EDU whose names start with the letter A.
- (v). Change the name of the file EXAM.DOC to SUPLEXAM.DOC. Assume EXAM.DOC is in \HEALTH subdirectory.

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

- (i). Toggle already typed text (capital to small and small to capital), without retyping.
- (ii). Insert the text UNISWA between two words when OVR is on.

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

- (i). Creating a bulleted list of at least five items.
- (ii). High light and delete text from the current cursor position to the end of line.
- (iii). Inserting a picture from a file at the end of current 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). =A4*\$C4 (is copied from B4 to D4, What is copied in D4 ?).
- (ii). =B2*C2 (is copied from A2 to B5, What is copied in B5 ?).
- (iii). =A\$3+\$C3 (is copied from D1 to E1, What is copied in E1 ?).
- (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	12	25		
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 -

$C1 = A1+B1-B2$, $D1 = B1+ C1+1$, 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 hospital patients' survey, the following information was collected from several participating Patients.

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

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

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

(c). Write SQL query View for the following tasks independently. Answer **any four** of the following -

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

(ii). Retrieve all the survey data with Patient names ordered in ascending order.

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

(iv). Retrieve id's and gender of the male Patients who are above 50 years of age.

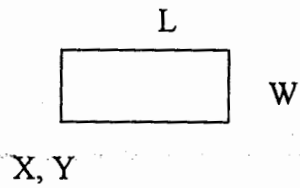
(v). Retrieve the names and age of all Patients whose weight is greater than 190 Kg. Patient names should be sorted in descending order.

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 (in degrees) after the command is executed independently. Assume that CLEAR command has already been given.

(i) REPEAT 3 (FORWARD 20 TURN 90)

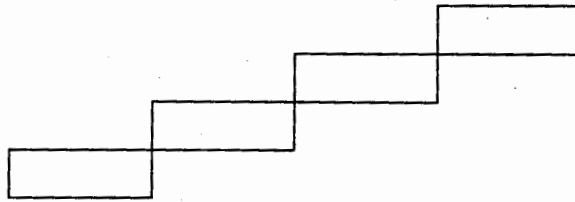
(ii) REPEAT 4 (FORWARD 40 TURN 90 FORWARD 20 TURN -90)

Q5(b) (6 marks). Write a LOGO program named RECTANGLE to draw a horizontal rectangle at X, Y point with dimensions as L and W as follows.



The drawing should start at X, Y with zero direction and terminate at the same point and direction.

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



(End of Examination Paper)