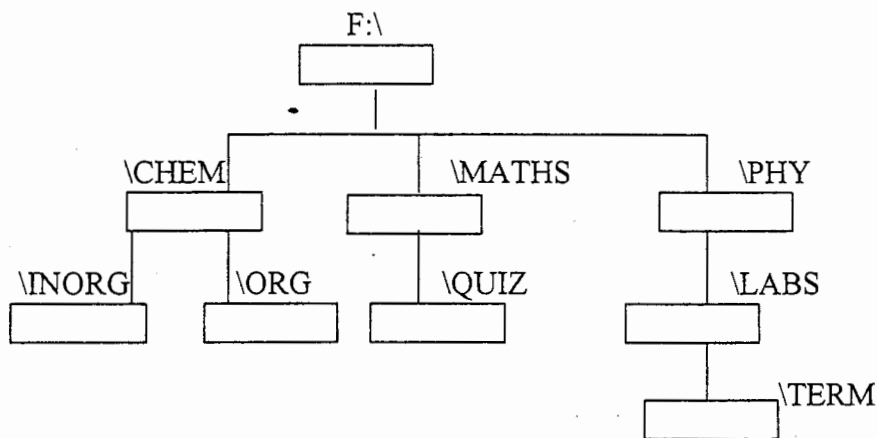


UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION, MAY 2005

Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE  
Course number : CSF 100  
Time allowed : Three (3) hours.  
Instructions : Answer all the questions choosing options as given with  
the 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) (5 marks).** In the context of the figure of Q1(a) above, write the names of all

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

**Q1(c) (5 marks).** Write MSDOS command/s along with the correct system prompts to perform the following tasks independently. Assume that at the start of each task, the system prompt is F:\>. The context is the above figure as shown in question 1(a). Answer **any five** of the following.

- (i). Display on VDU the contents of the file TEST.TXT which is in the subdirectory \ORG.
- (ii). Show on the VDU the contents of the subdirectory \TERM.
- (iii). Copy the file TEST.TXT in the \ORG subdirectory to the file TEST.PRN in \MATHS subdirectory.
- (iv). Show the directory information of all files with extensions .TXT .
- (v). Change the name of the file NEW.COM to OLD.COM. Assume NEW.COM is in \PHY subdirectory.
- (vi). Remove everything from the \CHEM subdirectory. Assume that \ORG and \INORG are not empty.

**Q2 (a) (6 marks).** The context is MS Word as implemented in the Computer Centre Lab. Explain with examples each of the following. Answer **any two** of the following -

- (i). Text justifications
- (ii). Indentation
- (iii). Font types, styles and sizes

**Q2(b) (4 marks).** Explain the distinctions / purpose of the following in MS Word. Answer **any two** of the following -

- (i). 'Copy' and 'cut' .
- (ii). 'Print' and 'Print Preview'.
- (iii). 'Close' and 'Exit'.

**Q3(a) (3 marks).** A formula in B4 is copied to D5. Write the copied formula in D5. Answer **any three** of the following. Assume that the contents of B4 are -

- (i).     =AS1\*CS1
- (ii).    =A1\*C1
- (iii).   =A\$1+\$C1
- (iv).    =\$A1-C\$1

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

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

	A	B	C	D	E	F
1	8	12	400	20	4	4
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, C1, E1, E2 and F1 are -

$D1 = +B1+A1$  ,  $C1 = +D1*D1$  ,  $E1 = $F$1+0$  ,  $E2 = +E1+D2$  ,  $F1 = 4$

The contents of C1..D1 are copied at C2..D5 and contents of E2 are copied at E3..E5.

Write the values stored in C2..E5 when F1 contains 4.

**Q4. (10 marks).** The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. During a student survey, the following information was collected from several participating students.

- 1. Student id                    4 digit integer
- 2. Student name                25 characters, Text
- 3. Student age                 2 digit integer
- 4. Student weight             Real number (Kg in the format xxx.x)
- 5. Student gender             1 character Text (M - for male, F - for female)
- 6. Faculty                      3 character Text (AGR, COM, EDU, HSC, HUM, SCI, SOC)

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

Now write select query command/s in SQL to do the following tasks independently. Answer any five of the following -

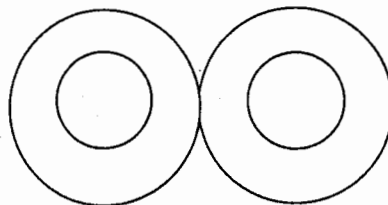
- (i). Retrieve Student id, Student age and Student names so that Student id's are in descending order.
- (ii). Retrieve the whole data with Students names, sorted in ascending order.
- (iii). Retrieve id's and names only of female Students enrolled in the Education faculty.
- (iv). Retrieve id's of the male Students who are not enrolled in the Science faculty.
- (v). Retrieve the names and age of male Students above 25 years of age. Student names should be sorted in descending order.
- (vi). Retrieve the id's and weight of Students whose weight is above 100 Kg.

**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 4 (FORWARD 40 TURN 45 FORWARD 20 TURN -45)
- (ii) REPEAT 3 (FORWARD 20 TURN 120 )

**Q5(b) (6 marks).** Write a LOGO program CIRCLE to draw a circle with centre CX, CY and radius as RADIUS.

**Q5(c) (4 marks).** Using the CIRCLE program of Q5(b), write screen effecting direct LOGO commands to draw the following shape on the LOGO display screen. Use your own dimensions. The centres of all the circles lie on one horizontal line.



(End of Examination Paper)