

**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION, JULY 2013**

Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE

Course Number : CSF 100

Time Allowed : Three (3) hours.

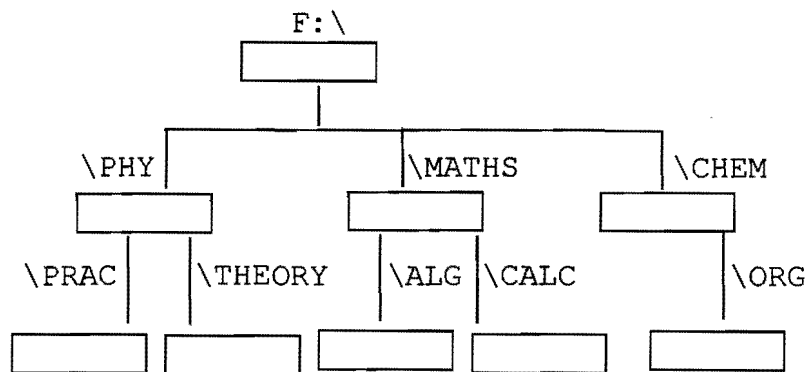
Instructions : Answer all the five questions from page one to five.
Choose options as written with the questions.

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

Q1(a) (5 marks). Show all your work steps, write the following -

- (i). Binary number equivalent of the integer decimal numbers $(122)_{10}$ & $(179)_{10}$.
- (ii). Integer decimal number equivalent of the binary numbers $(1100011)_2$ and $(01011110)_2$.

Q1(b) (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(c) (5 marks). Write single MSDOS command and 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 Q1(b). Answer **any five** of the following.

- (i). Display on VDU the contents of the file PAPER.TXT which is in the subdirectory \THEORY
- (ii). Show on the VDU the contents of the subdirectory \ALG.
- (iii). Copy the file LAB2.TXT in the \PRAC subdirectory to the file LAB2NEW.PRN in \ORG subdirectory.
- (iv). Assuming \CALC has no subdirectory, remove all the files in \CALC.
- (v). Change the name of the file OLD.COM to NEW.COM. Assume OLD.COM is in \THEORY subdirectory.
- (vi). Display directory information of all the files whose extension is .DOC in the \MATH subdirectory.

Q2 (a) (6 marks). The context is MS Word as implemented in the Computer Centre Lab. Explain the method and give examples of each of the following -

- (i). Change text as Subscript. Give examples of Subscript, superscript and strikethrough
- (ii). Change font styles. Give examples of names of four font styles.

Q2(b) (4 marks). Explain the distinction/s, meaning and usefulness of the following in MS Word.

- (i). 'Save' and 'Save As'
- (ii). 'Undo' and 'Redo'.

Q3(a) (3 marks). A formula in A4 is copied to E5. Write the copied formula in E5. Answer **any three** of the following. Assume that the contents of A4 are -

- (i). $=\$B\$1*\$D\1
- (ii). $=B1*D1$
- (iii). $=B\$1+\$D1$
- (iv). $=\$A1-D\1

Q3(b) (3 marks). Write the mode of each cell address in Q3(a).

Q3(c) (4 marks). A clipped spreadsheet contents are shown below.

	A	B	C	D	E	F
1	7	12			4	
2	8	9				
3	4	5				
4	3	6				
5	2	1				

Assume that A1..B5 has numbers as shown above and contents of C1, D1 and E1 and are : $C1 = B1-A1$, $D1 = A1+B1+C1+\$E\1 , $E1 = 4$

The contents of C1..D1 are copied at C2..D5 and contents of E1 are copied at E2..E5.

Write the formula and values displayed in C2..E5.

Q4. (4 + 2 + 4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. The UNISWA library wants to keep information about its book collections in its stock. The information consists of the following -

1. Title of the book	60 characters
2. First author surname	20 characters
3. First author other names	50 characters
3. Book ISBN number	10 digit integer
4. Year of acquisition	4 digits
5. Price of the book	4 digits for Emlangeni, 2 for cents (---- . --)

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

(b). Write five records of your table in data sheet view such that none of the queries of Q4(c) are empty. Also write the form view.

(c). Now write the command view and data sheet view of the following tasks. Answer **any four** -

(i). Create a list displaying the ISBN, title and First Author surname of every book. The First Author surname of books should be sorted in the order of your choice.

(ii). Create a list displaying the title, ISBN and price of every book acquired in the year 1997.

(iii). Create a list displaying the ISBN number and price of every book whose price is above E100.00. ISBN numbers should be sorted in ascending order.

(iv). Create a list of titles of the books whose first author surname is 'DLAMINI'. No sorting is to be done.

(v). Create a list displaying the ISBN number and price of every book acquired between the years 2009 and 2010 (both inclusive). ISBN numbers should be sorted in descending order.

Q5(a) (5 marks). Draw the shape produced when the following screen effecting direct LOGO command is given. Assume that CLEAR command has already been given. Write the position coordinates and direction of the turtle at the end of the command

(i) REPEAT 3 (FORWARD 10 TURN 360/6)

(ii) REPEAT 4 (FORWARD 20 TURN 90 FORWARD 10 TURN -90)

Q5(b) (6 marks). Write a LOGO program CIRCLE to draw a circle of radius R, and CENTRE at CX, CY.

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 approximate dimensions.



(End of Examination Paper)