

**UNIVERSITY OF SWAZILAND  
SUPPLEMENTARY EXAMINATION, JULY 2007**

Title of Paper : COMPUTER SCIENCE FOUNDATION COURSE

Course Number : CSF 100

Time Allowed : Three (3) hours.

Instructions : Answer all the five questions. Choose options as  
written with the questions.

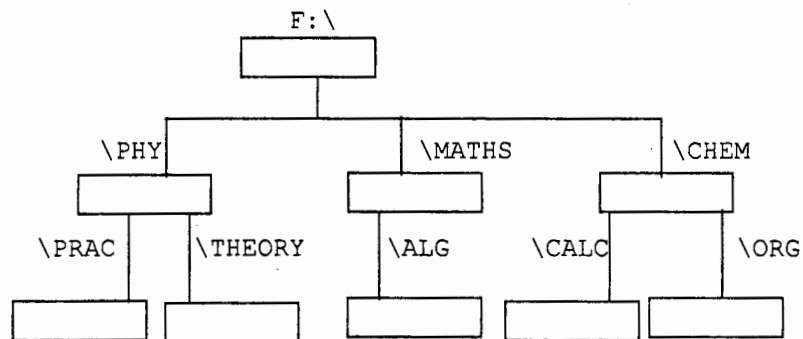
This paper should not be opened until permission has been granted by the invigilator.

**Q1(a) (5 marks).** Give examples of each, explain the meaning and distinction/s between the following –

(i). System Program and Application Program

(ii). Bit and Byte

**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 `NOTES.TXT` which is in the subdirectory `\THEORY`

(ii). Show on the VDU the contents of the subdirectory `\CALC`.

(iii). Copy the file `LAB2.TXT` in the `\PRAC` subdirectory to the file `LAB2NEW.PRN` in `\ALG` subdirectory.

(iv). Assuming `\CALC` has no subdirectory, remove the contents of `\CALC`.

(v). Change the name of the file `OLD.COM` to `NEW.COM`. Assume `NEW.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 at least three examples of each of the following. Answer **any two** of the following -

- (i). Subscript, superscript and strikethrough
- (ii). Increasing and decreasing indentation
- (iii). Font names and sizes

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

- (i). 'redo' and 'undo' .
- (ii). 'Find' and 'Replace'.
- (iii). 'Paste' and 'Paste Special'.

**Q3(a) (3 marks).** Explain all the addressing modes of cell reference in MS Excel.

**Q3(b) (3 marks).** A formula in A2 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(c) (4 marks).** A clipped spreadsheet contents are shown below.

|   | A | B  | C | D | E | F |
|---|---|----|---|---|---|---|
| 1 | 7 | 12 |   |   | 6 |   |
| 2 | 8 | 5  |   |   |   |   |
| 3 | 4 | 9  |   |   |   |   |
| 4 | 3 | 11 |   |   |   |   |
| 5 | 2 | 10 |   |   |   |   |

Assume that A1..B5 has numbers as shown above and contents of C1, D1 and E1 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 values stored 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 structure or design 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 three records of your table in data sheet view.

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

(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 'LIZEL'. No sorting is to be done.

(v). Create a list displaying the ISBN number and price of every book acquired between the years 1990 and 2000 (both inclusive). ISBN numbers should be sorted in descending order.

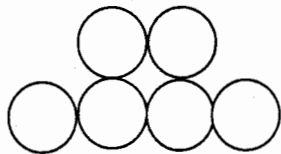
**Q5(a) (5 marks).** Draw the shape produced when the following screen effecting direct LOGO command is given. Assume that CLEAR command has already been given. Write the position coordinates and direction of the turtle at the end of the command

(i) REPEAT 5 (FORWARD 10 TURN 72)

(ii) REPEAT 3 (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 dimensions.



(End of Examination Paper)