Title of the Paper : STRUCTURED PROGRAMMING - II

Course Number : CS244
Time Allowed : Three (3) Hours

Instructions: Submit pseudo code on the answer script and files of program and results on the disk. Include the contents of your disk (all file names) on the top page of the answer script.

Use the last 10 minutes to check the disk with files of your program and results. Read the paper completely before starting to work on the problem.

Write your details (Id number, examination place, seat number, date, course code) and sign on the disk provided. The names of program and report files on the disk should be –

```
A:\------.PAS (Program file)and
A:\------.TXT (Result file)
```

The dashes in file names are six digits of your id.

Special requirements: For each student

1. **A networked / stand alone PC with working Turbo Pascal system.**
2. **An accessible floppy drive & disk.**

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

MARKING SCHEME: Pseudo code (30 %), Results (20 %), Program (50 %)

PROBLEM: Information about monthly sales of agents of DLAMINI ASSOCIATES is given in a text file 'EXAM2008.TXT'. Each record of this file has the following -

Agent Name	15 characters
Agent Id	6 digits - long integer
Count of orders	2 digits - integer
Sales Amount	Floating (6 digits before decimal, 2 digits after decimal)

Each field has been separated by a space character and Id in sentinel record is zero. Example of a record -

```
BENNET L.A.      120786 35 182270.00

            1          2          3            4 {ARE COLUMN NOS}
12345678901234567890123456789012345678901
```

Write pseudo code and a corresponding well documented and properly indented Pascal program that does the following –

1. Reads in all the data from 'A:\EXAM2008.TXT'.
2. Computes the Commission for each agent and displays the information on a report file (`'A:\------.TXT'`).
3. The six dashes in the report file name are six digits of your id number.

NOTES:

1. Commission is computed by adding the base and performance commissions.
2. The base commission (BC) is 10 times the count of orders.
3. The performance commission (PC) is computed as follows -

   - PC is 15% of the sales amount if sales amount is 10000 or more,
   - PC is 10% of the sales amount if sales amount is below 10000, but above 5000,
   - PC is 5% of the sales amount if sales amount is 5000 or below and
   - PC is zero if sales amount is 1000 or below.

4. The tax is 33 % of the commission.
5. A subprogram (function or procedure) should be declared to find the commission using count of orders and sales amount as parameters.

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6. The contents of 'A:\EXAM2008.TXT' are -

```
Shongwe L.A.     120785 05 18227.00
BENNET L.A.      120786 37 50601.50
THWALA D.M.      120251 04 14321.50
BEATRIC S.P.     120786 14 26500.00
DVUBA M.         120197 25 60059.00
SIBISI J.N.      120630 18 18560.00
VILAKATI K.      120246 10 15410.00
SISA D.M.        120240 16 80800.00
SENTINEL DATA    000000 00 00000.00
```

The report lay out should be −

```
REPORT PRODUCED BY THE PROGRAM OF

<YOUR ID>


              DLAMINI ASSOCIATES, MBABANE
        SALES AGENTS COMMISSION REPORT, MAY 2008

=============================================================
ID     NAME              ORDER SALES      COMMISSION TAX
                         COUNT AMOUNT
=============================================================
------ --------------- --    -------.-- -------.-- ----.-
------ --------------- --    -------.-- -------.-- ----.-
------ --------------- --    -------.-- -------.-- ----.-


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SUMMARY
=======


COUNT OF ALL ORDERS   =   ----

COUNT OF AGENTS       =   ----

TOTAL SALES AMOUNT    =   --------.--

TOTAL COMMISSION      =   --------.--

TOTAL TAX             =   --------.--
```

<END OF EXAMINATION PAPER>