

अंतरी पेटव् शानज्योत
उत्तर महाराष्ट्र विद्यापीठ, जळगाव

जा.क्र.उमवि/12/Newsyll/7107/97

दिनांक :- 14.10.1997

प्रति,

उत्तर महाराष्ट्र विद्यापीठाच्या मान्यताप्राप्त संस्थांचे
मा. संचालक,

यांसी-

विषय :- एम.सी.एम. प्रॅक्टिकल कोर्सचा सुधारित अभ्यासक्रम पाठविणेबाबत.
संदर्भ :- विद्यापीठाचे परिपत्रक क्र.48/97, दिनांक 27.5.1997.

महोदय,

उत्तर महाराष्ट्र विद्यापीठाच्या मान्यताप्राप्त संस्थांचे मा. संचालक यांना विदितच आहे की, एम.सी.एम. कोर्ससाठी जून, 1997 पासून नविन सुधारित अभ्यासक्रम लागू झालेला असून, सदरचा सुधारित अभ्यासक्रम विद्यापीठाचे वरील संदर्भिय परिपत्रकान्वये आपणास पाठविण्यात आलेला आहे. तथापी सदर अभ्यासक्रमासोबत प्रॅक्टिकल कोर्सचा अभ्यासक्रम पाठविण्यात आलेला नसल्यामुळे यापत्रासोबत एम.सी.एम. प्रॅक्टिकल कोर्सचा नविन सुधारित अभ्यासक्रम पाठविलेला आहे.

करिता, मा. संचालक यांना किंतीपूर्वक कळविण्यात येते की, सदरचा अभ्यासक्रम व या पत्राचा आशय सदर कोर्सला प्रवेशित झालेले विद्यार्थी व संबंधित प्राध्यापकांच्या नजरेस आणावा.

कळावे,

सोबत :- वरीलप्रमाणे.

आपला विश्वासू,

उपकुलसचिव

प्रत माहितीसाठी रवाना :-

- 1) मा.परीक्षा निबंधक, उमवि, जळगाव.
- 2) मा.उपकुलसचिव, परीक्षा-पूर्व विभाग, उमवि, जळगाव.

dbs/syll/us/letter1

MCM SYLLABUS (Practical)
with effect from July 1997.

1. Write a program to calculate the sum of the digits of an integer number.
Ex: :- 1234 = 1+2+3+4 = 10
2. Write a program to find the compound interest and print the table which would give the value of compound interest for
P = 1000, 2000, 3000, 4000, 5000,.....10,000
Compound interest = $P \times (1 + R/100)^N$
where P = Principal amount
R = rate of interest,
N = Number of years.
3. Write a program to find the number and sum of numbers greater than 100 and less than 200 that are divisible by 7.
4. A manufacturing company has classified its executives into four levels for the benefit of certain perks. The levels and corresponding perks are shown below.

Level	Perks		
	Conveyance Allowance	Entertainment Allowance	
1	1000	500	
2	750	200	
3	500	100	
4	250	Nil	

An executives gross salary includes basic pay, house rent allowance at 25 % of basic pay and other perks. Income tax is withheld from the salary on a percentage basis as follows.

Tax Rate	Tax Rate
No Tax Deduction	Gross <= 2000
3 %	2000 < Gross <= 4000
9 %	4000 < Gross <= 5000
8 %	Gross > 5000

Write a program that will read an executive's job number, level number, and basic pay and then compute the net salary after withholding income tax.

$$\text{Gross Salary} = \text{basic pay} + \text{HRA} + \text{Perks}$$

$$\text{Net Salary} = \text{Gross Salary} - \text{Income Tax}$$

5. Determine the day of date (using function).

Here

$$N = 1461 * ((year, month) / 4 + 153 * g(month) / 5 + day)$$

Where

$$f(year, month) = \begin{cases} year - 1 & \text{if month } \leq 2 \\ year & \text{Otherwise,} \end{cases}$$

$$g(month) = \begin{cases} month + 13 & \text{if month } \leq 2 \\ month + 1 & \text{Otherwise,} \end{cases}$$

Using this formula calculate the value of N and subtract the constant 621049 from the value of N (say $N = N - 621049$) and take the modulus 7 ($i = N \% 7$) the number. We get number 0 to 6 that represents the day of the week. (Sunday through Saturday respectively).

6. Tower of Hanu.

Tower of Hanu is a well known children's game, played with three poles and a number of different sized disks. Each disk has a hole in the center, allowing it to be stacked around any of the poles. Initially, the disks are stacked on the leftmost pole in order of decreasing size that is the largest disks on the bottom and the smallest disks on the top.

The object of the game is to transfer the disks from the leftmost pole to the rightmost pole, without never placing a larger disk on the top of a smaller disk. Only one disk may be moved at a time, and each disk must be always be placed around one of the pole.

Write a "C" Language program for the above problem.

7. Encoding the message .

Write us write a simple C Language program that will read in a sequence of ASCII characters and write out a sequence of encoded characters in its place. If a character is a letter or a digit, we will replace with its next character in the character set, except z will be replaced by a, Z by A, and 9 by 0. Thus l becomes 2, c becomes d and so on. any other letters otherthan a letter and digit will be replaced by a symbol #.

8. Write a program, using function wordlength() which compute the word length of the host machine that is the number of bit in a. int and mamint

9. Sort the number using any sorting methods.

10. Conversion of decimal number to any base number (2 to 16)



function of the program . The program will arbitrarily be restricted to 10 clients. The last name of each client will be the maximum of 19 characters plus a null terminator, which is a 20 character total field length. There will be five procedures in the operation of the program. They are :

1. Enter a client.
2. Find and display a client.
3. Update a client.
4. Delete a client.
5. Exit the program.

12. Using a top-down approach , you will first write the main() function of the program . The program will arbitrarily be restricted to 100 addresses of the clients. The structure of the record is as follows :

1. Name
2. Address
3. Pin code of the City.

There will be five procedures in the operation of the program. They are :

1. Enter a Record.
2. Display a Record.
3. Save the data file.
4. Load the data file.
5. Exit the program.

LIST OF PRACTICALS FOR FOXPRO

(M. C. M. I)

102.

N.B.:- First seven (7) practicals are for sem. I and remaining for sem. II.


Use of command window is expected.

- (1) Create the structure of a database file (minimum 5 fields must be included), add the records in it and display the selected fields (minimum 3 fields) for the records satisfying given conditions. Copy the file to another specified file, copy the selected records to another file.
- (2) Add the records in a database file whose structure is given. Sort the all the records in a specified order, sort the records satisfying given conditions.
- (3) Create the index files for a given database file, add the records in the indexed database file and display the records from original and indexed database file.
- (4) Edit and delete the records stisfying the given conditions for a given database file.
- (5) Create the report with suitable titles for a given database file. The report should display only the field values of database file without any condition and grouping.
- (6) Create the report for a given database file with suitable titles to display the records satisfying given conditions (without grouping).
- (7) Create the report for a given database file with data grouping.

End of sem. I.

- (8) Write a program to group a given set of observations into given classes. (At least 5 classes and at least 25 observations must be given)
- (9) Write a program to prepare and display a table with suitable titles, giving interest and amount on a given fixed principal, fixed time and varying rates of interest.
- (10) Write a program using procedure/function to convert a given amount in figure into the amount in words.
- (11) Write a program to add the records in a database file whose structure is given, using custom screen. The program should give the facility to add as many records as needed. At least 5 fields must be given.
- (12) Write a program to display the records of a given database file either on screen or printer depending upon the request of the user. (Use of record creating facility is not expected.)
- (13) Write a program to edit and delete the records from a given database file, using custom screens.

P. T.



Write a program to create a simple menu to (1) display all the records from a selected file, (2) copy all the records from one specified file to another specified file, (3) delete all the records of a specified file.

- (15) Write a program to create a pull-down menu (1) to display the records satisfying given conditions, (2) to copy the records satisfying given conditions.
- (16) Write a program to add the new records in one database file and at the same time update the corresponding records in another related database file.
- (17) Write a program to print the formatted report either on the screen or printer (depending upon the request of the user) by making use of more than two database files.
- (18) Use of Foxgraph utility to draw business diagrams.

of Programs for Windows.

✓ Final

- (1) Introduction to windows.
- (2) Accessories :- File Manager, Calculator, Time, Date, Sound recorder, etc.
- (3) Hands Creating document using word.
- (4) Creating, editing, saving, formatting document using MS-Word.
- (5) Mail merge using MS-Word.
- (6) Creating a worksheet.
- (Entering data, calculating formulas, saving & closing the sheet).
- (7) Editing & Formatting the worksheet.
 - (a) Inserting & deleting columns & rows.
 - (b) Copy & Paste commands.
 - (c) Printing a worksheet.
- (8) Creating charts (graphs).
- (9) Working with Database in Excel.
 - Sorting data
 - Auto filter.
 - Query.
- (10) Creating picture in paintbrush & copy it into word, write & excel.

To,

Prof. Shankar Deshpande
Director.

Sub :- Unit assignments

Sir,

As per the discussion in Meeting, I am enclosing the Unit assignments.

Thanking You,

(Prof. G.N. Elumalai)

6) Write a shell script to count the number of words of each file in the current directory and to create a summary file with the following details

- First file containing words ≤ 100
 - Second file containing words >100 and ≤ 200
 - Third file containing words >200
- Enter the program and execute the same.

7) Write a shell script to send "Happy BirthDay" message to another user. If the user is not login then execute the same program in background & or every 15 seconds.
Enter the program and execute the same.
Note: Create necessary files.

8) Write a shell script to generate the N terms of following Series :
2, 4, 8, 16, 32, 64,
Enter the program and execute the same

9) Write a AWK program to print the contentwise population with country name and it's population from the input file "Country"
For Example:

Asia 1250
India 450
China 900

Given input file "Country" having following record layout.

Country Name Population - Continent Name

Enter the program and execute the same.

Note: Create necessary files and assume suitable restrictions.

10) Write a shell script to create output file with following format:

Item_No.	Description	Trans_code	Quantity
----------	-------------	------------	----------

File Master contains: Item_no, Description, qty
File Trans contains: Item_no, Trans_code, qty

- If Trans_code = 1 ; Material Is Sold
- If Trans_code = 2 ; Material Is Purchased

11) Write a AWK program which will create INP file containing 1 to 5, 11 to 15, records & LAST file containing records 6 to 10, 16 to 20, 26 to 30 from the input file.
Create input file INP & enter 15 records

Oracle.

Use of brackets

1. Design a database.
2. Querying it with SQL & SQL*PLUS
3. defining, using & querying one table views & Multiple table views.
4. data Manipulation thru views.
5. Working with SQL* Report Writer, SQL* Forms, SQL* Mail
6. Programming with ORACLE Using PL/SQL

3) Visual Basic.

- 1) Design an application to explain the use of all control classes.
- 2) Develop an application to
 - a. Manipulate objects on different forms.
 - b. event Model of visual BASIC
- 3) Develop a graphical editor
- 4) Manipulation of labels & query of objects.

4) Visual C++

1. Designing new classes using MFC
2. Drawing in the non-client area of a window.
3. creating popup menu
4. Develop an application which allows you
 - a. Move icons to various windows, system events, text buttons & window actions
 - b. Animate your icons
 - c. Create & edit your own icons, cursors & small bitmaps
 - d. provide a popup program launcher.

pass:

Review, Basic objects & operators, data def, Data manipulation, Data Retrieval op^{ns}, update op^{ns}, SQL, views, Security & authorization, integrity, Transaction processing, The Sybase tool set & app^s development, data workbench, SQL interfaces, APP^s programming: - DB library & open client, Embedded SQL,

Dynamic SQL, APT workbench overview, APT-edit, APT-SQL, APL-library,

book: A Guide to SYBASE & SQL Server.
D McGovern & C.J. Date, Narosa.

Informix

All basic topics mentioned in Sybase.

INFORMIX-SQL & databases:

creating database, using PERFORM - PERFORM screens, basic database queries, ACE reports, Multitable forms, Advanced RDSQL - Report formats & statistics: User menus, Advanced INFORMIX SQL - Advanced forms, table joins, unions & self joins, Adv. Reports, DBA: tables, indexes, partitions, Transactions, view constraints & triggers.

book: using INFORMIX SQL
Jonathan Leffler, Narosa

PRACTICAL FOR MCM SEM III
DATABASE MANAGEMENT SYSTEM
PAPER 306

1. Designing & Creating a database & adding data by using

CREATE TABLE command

2. Modifying Database & Data entry screen forms using

ALTER TABLE table name
ADD (new_colname datatype(size);

3. Modifying existing columns

ALTER TABLE tablename
MODIFY (columnname newdatatype(size)

3. Using SQL

- i) Nested queries using IN, EQUAL TO, etc
- ii) Aggregate function
AVG, MIN, MAX, COUNT, SQRT
- iii) Group by clause
- iv) Having Clause

4. Using DML

- i) INSERT clause
- ii) UPDATE clause
- iii) DELETE clause
- iv) DROP clause

5. Trigger concept

PRACTICAL FOR NCM SEM III
DATA STRUCTURE PAPER 306

1. Implement PUSH, POP operation of stack.
2. Program to convert INFIX TO POSTFIX expression.
3. Implement INSERT & DELETE operations on Queue.
4. Circular linked list using pointers.
5. Based on all Tree traversal methods.
6. Binary Search.
7. Quick Sort.