**HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN**

## Department of Computer Science

# M. Sc. (CA & IT) SEMESTER – IV

| Sub. Code | Subject Name | Teaching Scheme | | | Examination Scheme | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total Credit | Theory | Practical | Internal Marks | | External Marks | | Total Marks | |
| | | | Lectures Hours / Week | Per Batch * Hours / Week | Theory (IT) | Practical (IP) | Theory (ET) | Practical (EP) | Theory (IT+ET) | Practical (IP+EP) |
| 401 | Statistical Methods | 4 | 4 | -- | 30 | | 70 | -- | 100 | -- |
| 402 | Digital Electronics | 4 | 4 | -- | 30 | -- | 70 | -- | 100 | -- |
| 403 | Object Oriented Programming with JAVA | 4 | 2 | 2 | 30 | 20 | 70 | 30 | 100 | 50 |
| 404 | Operating System & UNIX | 4 | 2 | 2 | 30 | 20 | 70 | 30 | 100 | 50 |
| 405 | Advance Database Architecture | 4 | 2 | 2 | 30 | 20 | 70 | 30 | 100 | 50 |
| | **Total** | **20** | **14** | **6** | **--** | **--** | **--** | **--** | **500** | **150** |

Note: **\*** Indicates 80 student's batch per practical.

   **IT** – Internal Theory   **IP** – Internal Practical
   **ET** – External Theory   **EP** – External Practical

**Unit: 1**                                                                                  **[18 Marks]**

**Measure of Central Tendency: -**
**Arithmetic Mean:**
- Arithmetic Mean for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Properties of Arithmetic Mean
- Merits & Demerits of A.M.

**Median:**
- Median for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Merits & Demerits of Median

**Mode:**
- Mode for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Merits & Demerits of Mode

**Measure of Dispersion:-**
- Introduction
- Range & its Co-efficient
- Quartile deviation & its Co- efficient
- Mean deviation & its Co-efficient
- Standard deviation & its Co-efficient

**Unit: 2**                                                                                  **[17 Marks]**

**Correlation Co-efficient: -**
- Definition of Correlation
- Types of Correlation
- Scatter Diagram Method
- Karl Pearson's Correlation Co-efficient
- Correlation Co-efficient for Bivariate frequency distribution
- Probable error for correlation

**Unit: 3**                                                                                  **[18 Marks]**

**Regression Analysis:-**
- Definition of Regression
- Regression Lines
- Regression Co-efficient
- Properties of Regression Co-efficient
- Least square fit linear regression curve fitting

**Unit: 4**                                                                                  **[17 Marks]**

**Time Series and Business forecasting:-**
- Utility of Time series Analysis
- Components of Time series
  -Secular Trend      -Seasonal Variation    -Cyclic Variation      -Irregular Variation
- Method of Measurement of components : Moving averages method
- Forecasting Model and Method : Exponential Smoothing Method

**Text Books:-**          1. Fundamental of statistics – Sixth Edition (S.C.Gupta)
**Reference Book: -**    1. Statistical Methods (S.P.Gupta)
                          2. Business Statistica (R.S.Bhardwarj)
                          3. Statistics(R.S.N.Pillai and V.Bagavati)

**Unit: 1** [18 MARKS]

**Data Representation, Number System**

**Representation of number System** Decimal, Binary ,Binary to octal, Binary to Hexadecimal, Binary to Decimal, Decimal to Binary, Binary Operation (Addition, Subtraction, Multiplication, Division), Hexadecimal, Hexadecimal to Binary, Hexadecimal to Octal, Hexadecimal to Decimal Hexadecimal Operation (Addition, Subtraction, Multiplication, Division), Octal, Octal to Binary, Octal to Decimal, Octal to Hexadecimal, Octal Operation(Addition, Subtraction, Multiplication, Division)

**Arithmetic:** Addition, Subtraction Using 1's and 2's Complement, BCD Code, Addition, Subtraction Using 8421 BCD Code, XS-3 Code, Addition, Subtraction Using XS-3 Code, Error Detection & Error Correction Code, Floating Point Representation of Number

**Unit: 2** [17 MARKS]

**Basic of Digital Computers:**

**Digital Logic Circuits, Digital Computers :** Logic Gates, Logic Circuit , Boolean Algebra, Simplification using Boolean Algebra, K' Map, Simplification using K'map, **Combinational logic circuit :**Half Adder, Full Adder, Binary Adder, 2's Complement Adder-Subtract or, **Sequential Circuit, Types of Sequential Circuit**, Latch: R-S Latch, D-Latch Flip Flop: R-S FF, D-FF,J-K FF, Master Slave J-K FF-Integrated Circuits, Decoders, Multiplexer, Demultiplexer

**Unit: 3** [18 MARKS]

**Memory:**

**Types of Memory**, RAM, Types of RAM, ROM, Types of ROM Operations – Arithmetic Micro Operations, Logical Micro Operations, Shift Micro Operations, Arithmetic Logical Shift Unit, Addressing Techniques, Types of Addressing Techniques, Instruction Format.

**Unit: 4** [17 MARKS]

**8085 Microprocessor:**

Microprocessor Overview, Types of Microprocessor 8085 Microprocessor Architecture, Flags, Types of Flags Types of instruction(1-Byte,2-Byte,3-Byte),Arithmetic instruction, Logical Instruction, Data transfer instruction, Stack instruction, Branch Instruction, I/0 instruction.

**Text Books:**

1. Digital Electronics by Anand Kumar, 3<sup>rd</sup> Edition , PHI
2. Computer System Architecture by M. Morris Mano - 3<sup>rd</sup> Edition - PHI
3. Digital Computer Electronics by Malvino & Brown – 2<sup>nd</sup> Edition.
4. Microprocessor Architecture Programming and Application by Ramesh S. Gaonkar

**Unit: 1**                                            **[18 MARKS]**

### Java's Magic:
The Byte-code, Features of Java, IDE for Java, Object-Oriented Programming in Java, Java Program Structure and Java's Class Library.

### Data Types, Variables, and Operators:
The Simple Data Types, Literals, Variables, Type Conversion and Casting, Automatic Type Promotion in expressions, Java Operators, Operator Precedence.

### Selection Statements:
Control Statements – if and switch, Scope of Variable, Iterative Statements – for, while, do…. While, Jump Statements.

### Defining Classes:
Definition of a Class, Definition of Methods, Constructors, Creating Objects of a Class, Assigning Object Reference Variables, The Variable this, Defining and Using a Class, Automatic Garbage Collection.

**Unit: 2**                                            **[17 MARKS]**

### Arrays and Strings:
Arrays, Arrays of Characters, String Handling Using String Class, Operations on String Handling Using String Buffer Class.

### Extending Classes and Inheritance:
Using Existing Classes, Class Inheritance, Choosing Base Class, Access Attributes, Polymorphism, Multiple Levels of Inheritance, Abstraction through Abstract Classes, Using Final Modifier, The Universal Super class-Object Class.

### Packages & Interfaces:
Understanding Packages, Defining a Package, Packaging up Your Classes, Adding Classes from a Package to Your Program, Understanding CLASSPATH, Standard Packages, Access Protection in Packages, Concept of Interface.

### Exception Handling:
The Idea behind Exceptions, Types of Exceptions, Dealing with Exceptions, Exception Objects, Defining Your Own Exceptions

### Multithreading Programming:
The Java Thread Model, Understanding Threads, The Main Thread, Creating a Thread, Creating Multiple Threads, Thread Priorities, Synchronization, Inter-thread communication, Deadlocks

**Unit: 3**                                            **[18 MARKS]**

### Input/Output in Java :
I/O Basic, Byte and Character Structures, I/O Classes, Reading Console Input Writing Console Output, Reading and Writing on Files, Random Access Files, Storing and Retrieving Objects from File, Stream Benefits.

### Creating Applets in Java:
Applet Basics, Applet Architecture, Applet Life Cycle, Simple Applet Display Methods, Requesting Repainting, Using the Status Window, The HTML APPLET Tag Passing Parameters to Applets.

### Working with Windows:
AWT Classes, Window Fundamentals, Working with Frame, Creating a Frame Window in an Applet, Displaying Information Within a Window.

**Unit: 4**                                            **[17 MARKS]**

### Working with Graphics and Texts :

Working with Graphics, Working with Color, Setting the Paint Mode, Working with Fonts, Managing Text Output Using Font Metrics, Exploring Text and Graphics.

**Working with AWT Controls, Layout Managers and Menus:**
Control Fundamentals, Labels, Buttons, Check Boxes and Check, Box Groups, Choice Controls, Lists, Scroll Bars, Text Field and Text Area Controls, Understanding Layout Managers, Flow Layout Manager, Border Layout Manager, Grid Layout Manager, Using Insets Manager, Card Layout Manager, Menu Bars and Menus, Dialog Boxes, File Dialog

**Handling Events in Java :**
Two Event Handling Mechanisms, The Delegation Event Model, The Event Handling Process, Event Classes, Sources of Events, Event Listener Interfaces, Using the Delegation Event Model, Adapter Classes

**Text Book:**
1. The Complete Reference JAVA 2, 4th Edition, TMH Publication.
2. Beginning JAVA 2 (JDK1.3 Edition), Ivor Horton, WROX Public.

**Reference Book: -**
1. Teach Yourself JAVA, Josheph O'Neil & Herb Schildt, Tata McGrow Hill
2. JAVA 2 UNLEASHED, Tech Media Publications.
3. JAVA 2(1.3) API Documentations.
4. Programming with JAVA: A printer, Balagurusamy,2nd Edition, Tata McGrow Hill

**Unit: 1** [18 Marks]
**Operating System Overview**:
Introduction to Operating System, Types of Operating system, Operating System Services
**Process Management:**
Process, Process Control Block (PCB), Process States, Scheduling – Types of Schedulers, Scheduling & Performance Criteria, Scheduling Algorithms – FCFS, SJF, Priority & Round Robin (RR) Scheduling. Interprocess Synchronization: Mutual exclusion, Semaphore, Classical Problems in Synchronization, Intraprocess Synchronization: Critical Region, Deadlocks.

**Unit: 2** [17 marks]
**Memory Management :**
Static Memory Allocation, Dynamic Memory Allocation, Segmentation, Virtual memory – Paging, Demand Paging , Page Replacement, Fragmentation & Defragmentation, Cache memory.

**Unit: 3** [18 Marks]
**I/O Management:**
Program Controlled I/O, Interrupt Driven I/O, USART, PIT File Management: File concept, Access method, Directory structure, Disk Space Management - Continuous allocation, Non continuous allocation, File related system services

**Unit: 4** [17 Marks]
**Distributed Systems:**
Protocol Architecture, TCP/IP Architecture, Client/Server Computing, Message Passing, Remote Procedure Calls.
**UNIX Overview:**
Features of Unix, Types of shell, Unix file system, Editors of Unix: (VI)


**Text Books:**
1. Silberschatz & Galvin: Operating System Concept, Wiley, Sixth Edition
2. Milan Milenkovi'c : Operating Systems, Tata McGraw – Hill, Second Edition.
3. William Stallings : Operating Systems, PHI, Fourth Edition
4. Yashavant Kanetkar : Unix Shell Programming, BPB.

**Unit: 1** [18 MARKS]

**The Oracle Instance Architecture**
Introduction
Defining the Instance
Creating the Instance
**The Oracle Database Architecture**
Defining the Database
The SYS and SYSTEM Schemas
Understanding the Components of the Database
Understanding  Database Segments
Oracle Data Dictionary
Other Database Objects
**Exploring  the oracle Environment**
Creating the Oracle Environment
Designing an Optimal Flexible Architecture
Creating Your First Database

**Unit: 2** [17 MARKS]

**SQL Plus for Administrators**
Administering SQL Plus
Using the SQL Plus COPY Command
Using SQL to Create SQL
Tracing SQL Statements
**Oracle Enterprise Manager**
Understanding the Enterprise Manager Architecture
Using the Database Administration Tools
**PL/SQL**
Index, View, Sequence, Trigger, Procedure, Function, Package, Cursor, Exception Handling

**Unit: 3** [18 MARKS]

**IMPORT/EXPORT**
Understanding Import/Export
Controlling & Configuring Import/Export
Walkthrough of Import/Export Sessions
Using SHOW & INDEXFILE Options
**SQL*Loader**
Components of SQL Loader
Looking at SQL Loader Examples
Conventional and Direct Path Loading

**Unit: 4** [17 MARKS]

**Managing Database Storage**
Administering Database Objects
Understanding Database Fragmentation
Managing Rollback Segments
Identifying Storage Problems
Administering Growing Database
**Integrity Management**
Introduction
Implementing Locks
Analyzing v$lock
Monitoring Locks on the System
Avoiding Locks: Possible Solutions
Implementing Locks with Latches

**BackUp and Recovery**
Types of Backup
Database Backup in offline and online mode
Database recovery

**Performance Tuning fundamentals**
Understanding Why You Tune
Knowing the Tuning Principles
Tuning Goals
Using the Return on Investment Strategy

**Text Books:**
1. William Page & Nathan Hughes : Using Oracle8/8i Special Edition, Prentice Hall India.

**Reference Books:**
1. Oracle Unleased,
2. Oracle10g Complete Reference, Kevin Loney, Tata McGraw-Hill,2004.
3. Oracle Bible,
4. Oracle Architecture, Oracle Press.
5. Oracle Database 10g DBA Handbook, Kevin Loney & Bob Bryla, Tata McGraw-Hill,2005

1. Write a Java Program to print "Java is better than c++".
2. Write a Java Program find the Area of circle.
3. Write a Java Program that will display Factorial of the given number.
4. Write a Java Program that will display the sum of 1+1/2+1/3…..+1/n.
5. Write a Java Program that will display 25 Fibonacci nos.
6. Write a Java Program to display following kind of output on screen.

   | 1 | * |
   |---|---|
   | 22 | ** |
   | 333 | *** |
   | 4444 | **** |
   | 55555 | ***** |

7. Write a Java Program that will accept command-line arguments and display the same.
8. Write a Java Program which will read a text and count all occurrences of a particular word.
9. Write a Java Program which will read a string and rewrite it in the alphabetical order eg. The word "STRING" should be written a "GINRST".
10. Make an Applet that create two buttons named "Red" and "Blue" when a button is pressed the background color of the applets is set to the color named by the button's label.
11. Write a Java Applet that create some text fields and text areas to demonstrate features of each..
12. Use a Grid layout class to arrange a few instance of circle canvas.
13. Write a Program to create a List Box and a Text Area. Fill up the List Box with some file names. When user clicks on any filename of the list box, the file should be opened and its contents should be displayed in the text Area.
14. Create an applet with three text Fields and two buttons add and subtract. User will enter two values in the Text Fields. When the button add is pressed, the addition of the two values should be displayed in the third Text Fields. Same the Subtract button should perform the subtraction operation.
15. Create an applet to display the scrolling text. The text should move from right to left. When it reaches to start of the applet border, it should stop moving and restart from the left. When the applet is deactivated, it should stop moving. It should restart moving from the previous location when again activated.
16. Write a program to create three scrollbar and a label. The background color of the lable should be changed according to the values of the scrollbars (The combination of the values RGB)
17. Create user entry form for student data. User will enter roll no, name, dept and semester. Use combo box for dept. When user clicks on the Insert button all the values should be inserted in the Text Area in a row format for each record.
18. Write a program that accepts five strings from the user and stored them in a vector. The program should also be able to perform following operations.
    * Delete an item from the list
    * Add an item at the specified location of the list.
    * Add an item at the end of the list.
    * Print the contents of the vector.
19. Write a program to return the specified number with its digits reserved. Create a class in the user created package and use it in another program.
20. Create an application with a Text Field, a Text Area and button show. User has to enter the name of the file in the Text Field. When the button show is pressed, the contents of the file should be displayed in the Text Area.
21. Create a Text Field, a button and a list box, User has to enter a number in the Text Field. When user clicks on the button, the arithmetic table for that number should be displayed in the list box. If the user repeats this process the list box should be cleared and refilled by the latest values.

22. Develop a program to write the text "Hello, how are you" to a file "Hello.txt". Also develop a program to read this file and to display the contents of this file using suitable GUI.
23. Develop and application/applet with a Menu File and two menu items color and font. The submenu of the menu item color will contain different colors which when selected should change the background of the applet. The submenu of the menu item font should contain the list of fonts. Create a Text Field in the center of the container. When the font is selected from the font list of menu, the Text Field text should be appeared in that font.
24. Develop a Program to create a Text Field, a List Box and two buttons add and delete. User will enter values in the Text Field. When user clicks on the add button the value should be added in the List Box. When user clicks on the delete button, the selected item from the list should be removed.
25. Create an applet to display the co-ordinates of the mouse pointer. The co-ordinates should be changed as and when the mouse pointer change its location.
26. Write a program that have two textboxes and one command button. When user click on button the sum of two textboxes value should be displayed in a dialogbox.
27. Write a program to store information like rollno, name, address, result into a file and display it in the Text Area with the use of FileWriter and FileReader class.
28. Write a program to demonstrate the concept of FileInputStream and FileOutputStream.
29. Write a program to demonstrate the concept of RandomAccessFile with different mode of files.
30. Write a program to create a deadlock with the use of Thread class.
31. Write an applet program to display a counter in its center. Counter begins with 0 and is incremented by 1 after every second. Infinite loop invokes paint method to display counter.
32. Write an applet program to display circle at different places on the screen.

1. Write a shell script to calculate the percentage and class of the student according to the marks obtained in five different subjects as per the following criteria.

    percentage above or equal to 60   - first class
    between 50 to 59                  - second class
    between 40 to 49                  - pass class
    less than 40                      - Fail

2. Write a shell script simulates a simple calculation. The script should accept two integers and a operator from the user depending on the operator provide for addition, multiplication, division & subtraction.

3. Write a unix shell script to generate the following series.
    1,3,2,4,3,5, 4,6 ......10

4. Write a shell script that examine all the numbers from 1 to 999,displaying all those for which the sum of the cubes of the digits equals the number itself     Ex.
    $3^3+7^3+1^3=27+343+1=371$

5. Write a shell script which will use the shell default parameters.

6. Write a Unix shell script to display the file contains of the file accepted as command line arguments only if the file is an ordinary file and it is readable. If the file is a directory print an appropriate message.

7. Write a shell script to create following menu.
    1. copy first file to second file
    2. concatenate the files
    3. rename the first file as second file
    4. display the number of lines in both the files
    5. exit

8. Give two variables as command line arguments print the table of the first variable starting multiplication from 1 till the second variable. The third argument is the step value. Make necessary validation.
    1. all arguments should be positive
    2. step value should be less than the ending value.
        e.g. table 10  20  2
        output  10 * 1   =  10
                         10 * 3   =   30 (3 because step value is 2)
                         10 * 19 = 190

9. Write a unix shell script to accept the positive numbers from the users and generate the following series like if user enter five then output will be 1,8,27,64,125

10. How to write shell script that will add two no, which are supplied as command line argument, and in this two no.are not given show error and its usage.

11. Write script to find out biggest no.from given three nos. no. are supplied as command line argument. Print error if sufficient arguments are not supplied.

12. Write script to print no. as 5,4,3,2,1 using while loop.

13. Write script to print given no.in reverse order, for
    e.g. if no is 123 it must print as 321.

14. Write script to print given nos.sum of all digit for e.g.
    if no. is 123 it's sum of all digit will be 1+2+3=6.

15. Write script to determine whether diven file exist or not, file name is supplied as command line argument, also check for sufficient no.of command line argument.

16. Write script to print contents of file from given line no. to next given no. of lines for e.g. if we call this script as Q13 and run as & Q13 5 5 my f , here print contents of 'my f' file from line number 5 to next 5 line of that file.

17. Write  script called  say hello, to  print  anyone  following message using echo statement.
            Good Morning
            Good Afternoon
            Good evening according to my system time.
18. Write    script    to  implement    background    process    that    will  continually  print
    current  time  in  upper  right  corner  of    the  screen  ,  while  user  can  do  his/her
    normal job at  & prompt.
19. Write shell script to show various system configuration like
    1) currently logged user and his log name
    2) your current shell
    3) your home directory
    4) your current path setting
    5) your current working directory
    6) show currently logged no. of users
20. Write  a  shell script  to print the  following  pattern  on screen
            1
            22
            333
            4444
            55555
21. Write  a  shell  script to print the  following  pattern  on screen
            1
            12
            123
            1234
            12345


22. Write  a  shell script to print the  following  pattern  on screen
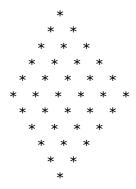            | _
            |   | _
            |   |   | _
            |   |   |   | _


23. Write  a  shell  script to print the  following  pattern  on screen
            *
            *    *
            *    *    *
            *    *    *    *
            *    *    *    *    *


24. Write  a  shell script to print the  following  pattern  on screen

            *
            *    *
            *    *    *
            *    *    *    *
            *    *    *    *    *
            *    *    *    *
            *    *    *
            *    *
            *


25. Write  a  shell script to print the  following  pattern  on screen
                1

```
      2   2
    3   3   3
  4   4   4   4
5   5   5   5   5
6   6   6   6   6   6
7   7   7   7   7   7   7
```

26. Write  a  shell script to print the  following  pattern  on screen

```
      *
    *   *
  *   *   *
*   *   *   *
*   *   *   *   *
*   *   *   *   *   *
```

27. Write  a  shell script to print the  following  pattern  on screen

```
      *
    *   *
  *   *   *
*   *   *   *
*   *   *   *   *
*   *   *   *   *   *
*   *   *   *   *
*   *   *   *
*   *   *
*   *
*
```

28. Write a shell script to display the option given below.
    i)   All  users
    ii)  Single users
   If the  potion is 1, the message should be broadcasted to all the users and if it 2, the user
   name and the message  should be accepted from the users and sent to the specified  users.
   print message for invalid input.

## GROUP I (SQL*PLUS)

1. Usage of various SQL*PLUS commands for

   | | | |
   |---|---|---|
   | SQLPLUS | @ | SPOOL |
   | / | @@ | CONECT |
   | RUN | EDIT | DISCONNECT |
   | TIMING | GET | PASSWORD |
   | HOST | RUN | LIST |
   | APPEND | PROMPT | START |
   | CHANGE | SAVE | CL BUFFER |
   | DEL | STORE SET DESC | |

   2. Different SET commands for administration of ORACLE like verify, spool, feedback, page size, line size etc.
   3. Defining your own editor as the default editor of SQLPLUS.
   4. Changing the default extension of your .sql file.
   5. Usage of LOGIN.sql and GLOGIN.sql files.
   6. SQL PLUS environment commands for administration of ORACLE
   7. Database access local and remote (Using COPY Command)

## GROUP-II (SUBPROGRAMS AND PACKAGES)

1. Create a procedure for preparing the result based on following tables.
   Stud (s_no, name, address, city)
   Marks (s_no, sub1, sub2, sub3, sub4)
   Result (s_no, total, perc, class)
   Note : give first dist, first, second, pass, fail  and fail
        A.T.K.T. (in one subject)
2. Create a procedure for preparing the net pay and pay slip for each month of the year based on following tables.
   Emp ( e_no, name, address, city)
   Salary (e_no, basic, ta, da, hra, oth_a, it, loan, pro_txt, oth_d)
   Net_pay (e_no, total_allowance , total_deduction, net_pay,
        month_of_pay)
3. Create a procedure to convert given decimal number in Binary, Octal and Hexadecimal number.
4. Create a procedure for getting index detail for any given table,
   Get table name from terminal.
5. Create a procedure for getting error and source line information for any procedure or function.
6. Create a procedure to display total number of Vowels in each table name of given user.
7. Prepare a function for getting tablespace name of any accepted table and its related owner.
8. Prepare a procedure for getting procedure name, status and last date of compilation.
9. Prepare one procedure through which one can restrict or allow any user for any SQL or PL/SQL command as per given argument.
10. Make one SQL script to delete all table for any supplied user.
11. Create a procedure to display all constraints details (e.g. Primary Key, Foreign Key, CHECK, Not Null, and Unique) of given table.
12. Create one package that includes
    a. Procedure to list out username for any accepted tablespace.
    b. Function to get status of any accepted subprogram and owner.

### GROUP III (TRIGGERS/SEQUENCE)

1. Create a trigger to restrict PINCODE field size of Customer table to SIX digits.
2. Create a trigger to keep track of database logon users time and date information in particular table.
3. Create a trigger to restrict INSERT/UPDATE/DELETE operation on particular table on SUNDAY.
4. Create a trigger to allow alphabetic only in CNAME field of customer table.
5. Create a sequence to be used with PRIMARY KEY of Student Table.

### GROUP IV (SECURITY MANAGEMENT)

1. Restricting commands for particular login and re-enable it.
2. Creating user with various clauses.(Create user command)
3. Alter and drop existing user (Alter user, Drop user command)
4. Providing grants and privileges to database objects with the help of commands and GUI base environment tool.
29. Performance on profile and Role.

### GROUP V (BACKUP MANAGEMENT)

1. Using export and import with various parameters.
2. Export many, Import less.
3. Exporting and importing total table space.
4. Export Import for decrementing the table space.
5. Export entire user and import objects according to user requirements.

### GROUP VI (SQL LOADER)

1. Loading non oracle format data into oracle format (table).
   a. Fix length data loading
   b. Variable length data loading
   c. Loading into table on certain conditions.
   d. Loading embedded data