1. Write a function to take a numbers as input and return its factorial
2. Write a function to take a numbers as input and return its square and cube
3. Write a function which takes a string as parameter and returns the reverse of the string
4. A palindrome is a word that is spelled the same forward and backward, such as level, radar, etc. Write a program to read in five letter words from the user and determine whether they are palindromes. Display the above results on the screen.
5. Write a function which takes two strings as a parameters and prints whether the two strings are palindrome or not.
6. Write a program to read in a number and print it out digit by digit, as a series of words. For example, the number 523 would be printed as "five two three". Display the above results on the screen.
7. Convert a given number of days to a measure of time given in years, weeks, and days. For example, 375 days equals 1 year, 1 week and 3 days. (Ignore leap years). Display the above output on the screen. Data has to be input by the user.
8. Write a function which takes two numbers as parameters and return whether those 2 numbers are co-prime or not.
9. Create a stored function by the name of Age\_calc. Your stored function should accept the date of birth of a person as a parameter. The stored function should calculate the age of the person in years, months and days e.g. 35 years, 3 months, 17 days. The stored function should return the age in years directly (with the help of Return statement). The months and days are to be returned in the form of OUT parameters. Write a mysql program to accept the date of birth of an employee from the user, call the stored function, and display the age of the employee on the screen. Display the above results on the screen.
10. Create a stored function by the name of Age\_calc. Your stored function should accept the date of birth of a person as a parameter. The stored function should calculate the age of the person in years, months and days e.g. 35 years, 3 months, 17 days. The stored function should return the age in years directly (with the help of Return statement). The months and days are to be returned in the form of OUT parameters. Write a mysql program to accept the date of birth of an employee from the user, call the stored function, and display the age of the employee on the screen. Display the above results on the screen.
11. Create a stored function by the name of F2C to convert a temperature in Fahrenheit (F) to its equivalent in Celsius (C). The temperature in Fahrenheit is to be passed to the stored function as a parameter. The stored function should return the temperature in Celsius. The required formula is:-

C= (F-32)\*5/9

Calling program for the stored function need not be written.

1. Write a trigger to insert a row in a emp\_audit whenever an update occurs on the emp table. Insert old and new values for all the columns along with user and update timestamp
2. Write a procedure to take a sentence as an input and display all the words in the sentences (one word per line)
3. Write a procedure to copy data from emp table to another table emp2 using a cursor. The procedure should also truncate all the records in the emp2 table before it copies the data to emp2 table.
4. Create a table EMPLOYEE with the following columns:- (10 marks)

Employee No. Varchar2 4

Employee Name Varchar2 30

Designation Varchar2 10

Category Character 1

Basic Salary Number 4

Category may be ‘J’, ‘S’, or ‘W’ for Jr. Officers, Sr. officers or Worker category.

Formulae:-

DA = 35% of Basic Salary correct up to paise.

HRA = 15% of Basic Salary subject to a maximum of Rs. 250/1000/30000 for categories W/J/S respectively.

Gross = Basic Salary +DA +HRA

Output the Employee Number and the Gross for each employee in a separate table.

1. The CUSTOMER table of a state electricity board consists of the following fields:-

Meter Number Varchar2 4

Meter Type Character 1

Previous Reading Number 5

Current Reading Number 5

Customer Type Character 1

Last Bill payment Character 1 (values could be ‘Y’ or ‘N’)

There are two types of meters viz. 3- phase or 1-phase coded as ‘T’ or ‘S’ respectively. There are 4 types of customers viz. Agricultural Industrial, Commercial and Residential with coeds ‘A’ , ‘I’, ‘C’ and ‘R’ respectively.

Formulae:-

Units used = Current Reading – Previous Reading

Rate =Rs.1/ 1.25/ 1.50/ 1.30 for A/I/C/R respectively.

Amount = rate\*units used

Surcharge = 5% for single phase

10% for 3 phase

Excise = 30% of (amount +Surcharge)

Net = Amount +Surcharge + Excise

Write a function to calculate the bill for each customer. The program should insert the Meter no., Units used, Rate, Amount, Surcharge, Excise duty and Net for each customer into some other suitable table. Also, at the end, it should insert the total Amount, Surcharge, Excise and Net into some other table.

1. Write a stored procedure by the name of Simp\_intr to calculate the amount of interest on a bank account. The formulae are:-

Intr = p\*t\*r/100

Amt = p + Intr

where:-

Intr is the total interest earned.

p is the principal,

t is the number of years the money is earning interest, and

r is the rate of interest.

Your stored procedure should accept the values of p, t and r as parameters and display the Interest and Total amount on the screen. Display the results on the screen using dbms\_output.put\_line. Calling program for the stored procedure need not be written.

1. Write a stored procedure by the name of RECT\_PROC that computes the perimeter and the area of a rectangle. The length and width are to be passed as parameters. (Assuming that L and W are the length and width of the rectangle, Perimeter = 2\*(L+W) and Area = L\*W). The stored procedure should display the perimeter and the area on the screen using dbms\_output.put\_line. Calling program for the stored procedure need not be written.
2. Write a stored function by the name of DIST\_FUNC to convert a number of inches into yards. For example, 36 inches equals 1 yard. The number of inches is to be passed to the stored function as a parameter. The stored function should return the truncated number of yards with the help of return statement. Calling program for the stored function need not be written.
3. Write a stored function by the name of Years between. The stored function should accept ‘D1’ and ‘D2’ as date parameters. The stored function should return the truncated number of years between the two dates. Calling program for the stored function need not be written
4. Write a stored procedure by the name of NUM\_200 to tell whether the product of two numbers is less than, equal to or greater than 200. The two numbers are to be passed to the stored procedure as parameters. The stored procedure should display the appropriate message on the screen using dbms\_output.put\_line.

Calling program for the stored procedure need not be written.