3. (a) Write an program to implement calculator with following operations :—   6
      (i)   Add two numbers   (iii) Division two numbers
      (ii) Subtract two numbers   (iv) Multiply two numbers

   (b) Write a program to fmd GCD and LCM of 2 nos.   6

   (c) Write a program to print the following pattern. (Note : Not only 4 lines, it should   8
print n lines taken from user)

$$A$$
$$B \quad B$$
$$C \quad C \quad C$$
$$D \quad D \quad D \quad D$$

4. (a) Write a program to find the biggest of given 3 no's using conditional operator.   5
   (b) Write a program to check whether entered string is palindrome or not.   5
   (c) Write a program in C to read and display elements of a square (2D) matrix and   10
check whether the entered matrix is symmetric or not.

5. (a) Evaluate following expression :—   3
      (i)   ! (5+5 > = 10)
      (ii) 5 + 5 = = 10 || 1 + 3 = = 5
      (iii) 5.10 || 10 < 20 && 3 < 5

   (b) An electric power distribution company charges its domestic consumer as follows :   7

Consumption Units	Rate of Charge
0-200	0·50 per unit
201-400	Rs. 100 plus Rs. 0·65 per unit excess of 200
401-600	Rs. 230 plus Rs. 0·85 per unit excess of 400
601-above	Rs. 390 plus Rs. 1·00 per unit excess of 600

Program should read the units consumed for a customer and calculate the total bill.

   (c) Four experiments are performed, each experiment consisting of six test results.   10
The result for each experiment follows. WAP to compute and display the average
of the test results for each experiment.

     1st Experiment results   23.2 31.5 16.9 28.0 26.3 28.2
     2nd Experiment results 34.8 45.2 20.8 39.4 33.4 36.8
     3rd Experiment results 19.4 50.6 45.1 20.8 50.6 13.4
     4th Experiment results 36.9 42.7 20.8 10.2 16.8 42.7

6. (a) Explain with example bitwise operators in C language.   5
   (b) Write a program using recursive function 'power' to compute x^n 8
      power(x,n) = 1   if n = 0
      power(x,n) = x   if n = 1
      power(x,n) = x*power(x, n − 1)   otherwise
   (c) Write a user defined function to copy one string to another.   4
   (d) What is a File ? What are the different mode in which we can open a file ? What   3
are the different functions to read and write to file ?

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