Unit 4
Question Bank

From 2011-12

1. Write a program in 'C' to read a (5×4) matrix using array and to calculate the following:
   i) Sum of the elements of the third row of the matrix.
   ii) Sum of all the elements of the matrix.
2. Write algorithm and function program to sort an array of integer into descending order, where the size of array is input by user.
3. Define a structure called **cricket** that will describe the following information:
   player name
   team name
   batting average
   Using **cricket**, declare an array **player** with 50 elements and write a program to read the information about all the 50 players and print a team-wise list containing names of players with their batting average.
4. Write a program which will read a string and rewrite it in the alphabetical order. For example the word **STRING** should be written as **GINRST**.

From 2012-13

1. List the differences between structure and union.
2. Explain in detail about 1-Dimensional and 2-Dimensional array declaration, accessing elements, initialization with suitable examples. Write a program to multiply two N×N matrix.
3. Discuss String handling function.
4. Write a program in C that accepts the Rollno and name of 60 students in a class along with their marks in Physics, Chemistry and Mathematics. Print the roll no. and name of top 10 students on the sum of marks obtained in the three subjects.
5. Write a program to define a structure named employee having empid, name and designation. Use this structure to store the data in a file named "employee.dat". Once all the records are entered display the employee details stored in a file.
6. Write a program to create an integer array of n elements, pass this array as an argument to a function where it is sorted and displayed.
7. Two matrices of real numbers of size 4 × 4 is given. Write the functions sum_matrix() and multiply_matrix() for displaying the addition and multiplication of the given matrices in C language.
8. Create a suitable structure in C language for keeping the records of the employees of an organization about their Code, Name, Designation, Salary, Department, City of posting. Also write a program in C to enter the records of 200 employees and display the names of those who earn greater than Rs 50,000. (Make suitable assumptions for data types).
9. The marks of the N students in a given subject (Minimum mark 0 and Maximum mark 100) is awarded. Write a program in C language to store these marks in an array and calculate the average mark obtained by all the students and then display the deviation of mark for each student from average.
10. What do you mean by sorting. Write an algorithm to sort the given elements in ascending order.

From 2013-14

1. Declare and initialize three dimensional array.
2. Write different between structure and array. Write a program in 'C' to find the largest element of a 3 × 3 matrix.
3. Define Union. Write a program in C to find the record of student having maximum marks from the list of 10 records. Each record has roll no, name, class and marks fields.
4. Write a program in 'C' to multiply the two matrices of M × N.

From 2014-15

1. Write a C program to find the multiplication of two matrices.
2. How to declare an array? Explain about various operations of an array.
3. What is enumerated data type? Write a C program to display months in the year using union.
4. Differentiate structure and union in C. Write a C program to store the student's details using union.

15-16(Even)

1. What are the principles of recursion? Explain in detail. - 5 Marks
2. What are the enumerated data types? Explain in detail. -5 Marks

15-16(Odd)

1. Write difference between structure and union. -2
2. Explain dot(.) operator in c language with proper example. -2
3. Write a program in C to sort a list of names in ascending order.-5

16-17(Odd)

1. Write short notes on Union and enumerated data type. -2
2. Write a program to multiply two matrices of dimension 3x3 and store the result in another matrix. -5
3. What is sorting? Write a program to sort a list of n positive integers.-5