**CLASS XII**

**COMPUTER SCIENCE**

**ARRAYS**

Q1. Write a Function in C++ to print the sum of all four corners of a two

dimensional array.

[Assuming the 2D Array to be a square matrix with odd dimension

i.e. 3×3, 5×5, 7×7 etc...]  
Example, if the array content is  
3 5 4 4

6 9 2 8

2 1 3 5

2 5 1 8

Output through the function should be :

The sum of corner is 3+4+2+8= 17

Q2. An Array MAT[30][10] is to stored in memory column wise with each elements occupying 8bytes of memory. Find out the base address and the address of element MAT[20][5], if the location of MAT[5][7] is stored at address 1000.

Q 3. Write a Function in UPPER HALF() which takes a two dimensional array A with size N rows

and N columns as argument and point the upper half of the array.

The Array is

342552

234212

334212

112471

245316

367421

The output is

34255

2342

334

11

2

Q4. Write a function in C++ which accepts an integer array and its size as arguments and replaces elements having odd values with thrice its value and elements having even values with twice its value.

Example: if an array of five elements initially contains the elements as

3, 4, 5, 16, 9

Then the function should rearrange the content of the array as

9, 8, 15, 32, 27

Q5. Write a function in C++ to print the product of each column of a two dimensional integer array passed as the argument of the function.

Explain: if the two dimensional arrays contains

|  |  |  |
| --- | --- | --- |
| 1 | 2 | 4 |
| 3 | 5 | 6 |
| 4 | 3 | 2 |
| 2 | 1 | 5 |

Then the output should appear as:

Product of Column 1=24

Product of Column 2=30

Product of Column 3=240

Q6. Write a function in C++ which accepts an integer array and size as arguments and assign values into a 2D array of integers in the following format:

If the array is 1, 2, 3, 4, 5, 6

The resultant 2D array is given below

0 1 1 1 1 0

2 0 2 2 0 2

3 3 0 0 3 3

4 4 0 0 4 4

5 0 5 5 0 5

0 6 6 6 6 0

Q7.Write a function in C++ which accepts an integer array and its size as arguments / parameters and arrange all the odd numbers in the first row and even numbers in the second row of a two dimensional array as follows. The unused cells of two dimensional array must be filled with 0.

If the array is 1, 2, 3, 4, 5, 6

The resultant 2-D array is given below

1 3 5 0 0 0

0 0 0 6 4 2

Q8.Write a PROGRAM in C++ which accepts a 2D array of integers and its size as arguments and displays elements which are clubbed between two even numbers vertically

If 2D array is 

Output is

25 45 327

Q9. An array Arr[25][20] is stored in the memory along with the row and each element occupying 4 bytes. Find out the Base Address and address of the element Arr[13][12], if the element Arr[5][2] is stored at the address 5000.

Q10. Write a program in c++ which accepts an integer array from the user, and presents a menu to the user to insert element in any position element and also Delete element from the Array.

**Note:All questions to be done on computer and softcopy to be maintained for the same. Also all the questions to be done in Register.**