Answer ALL the questions.

1) Declare this matrix in array forms

i) $\begin{pmatrix} 2 & 4 & 1 \\ 5 & 7 & 2 \\ 9 & 3 & 6 \end{pmatrix}$ ii) $\begin{pmatrix} 1 \\ 2 \\ 3 \\ 4 \end{pmatrix}$ iii) $\begin{pmatrix} 3 & 2 \\ 4 & 1 \\ 2 & 5 \end{pmatrix}$

2) Declare this list of data in array forms

i) score1 = 82, 93, 73, 65, 78, 100.

ii) $M_0 = 23.13$, $M_1 = 12.4$, $M_2 = 32.5$, $M_3 = 54.3$

3) Given

int matrix1[3][3] int matrix2[3][3]

$\begin{pmatrix} 2 & 4 & 1 \\ 5 & 7 & 2 \\ 9 & 3 & 6 \end{pmatrix}$ $\begin{pmatrix} 5 & 4 & 7 \\ 4 & 2 & 1 \\ 2 & 0 & 8 \end{pmatrix}$

i) matrix1[0][0] + matrix2[1][2] = ?

ii) matrix2[1][0] – matrix1[2][2] = ?

iii) matrix1[2][0] –(matrix1[2][1] + matrix2[2][0]) = ?

iv) matrix2[2][1] x matrix1[1][2] = ?

4) Which is valid/invalid declaration?

a)int natsu[2][2] = {1, 2, 3 ,4 }

b)float gaban[][2] = {0.1, 2.34 , -31.3 ,4.002 }

c)int daimyo[][] = {1, 2, 3 ,4 }

d) double sharingan[2][] = {1.3456, 2.000, 3.12 ,4.0 }

5) Which is invalid code in the program below and give your reason?

```
 #include<stdio.h>
int main(){

   int disp[2][3];
   int first[][]={1,2,3,4};
   int second[][2]={1,2,3,4};
   int i, j;

   for(i=0; i<2; i++) {
          printf("Enter value for disp[%d][%d]:", i, j);
         scanf("%d", &disp[i][j]);
    }

   printf("Two Dimensional array elements:\n");
   for(j=0;j<3;j++) {
         printf("%d ", disp[i][j]);
         if(j==2){
            printf("\n");
         }
    }
   printf("Elements of second:\n");
   for(i=0; i<2; i++) {
      for(j=0;j<3;j++) {
         printf("%d \n", second[i][j]);
      }
   }
   return 0;
}
```

6) Write a program to read a double dimensional array integer of order 3×4. Find out the sum of element and then display entered array as well as sum of these elements on the screen.

7) Write a program in C to read an array of the integer of order 4×4. Find out the sum of only those elements which is either divisible by 3 or 7. Display sum of these elements and entered array in tabular format on the screen.