1.

```
#include <stdio.h>
#include <conio.h>
void main()
{
int i, j, row1, row2, col1, col2, row_sum=0, col_sum=0,
    mat1[3][3], mat2[3][3], sum[3][3];
clrscr();
printf("Enter rows and columns of first matrix\n");
scanf("%d%d", &row1, &col1);
printf("Enter rows and columns of second matrix\n");
scanf("%d%d", &row2, &col2);
if(row1!=row2 || col1!=col2)
{
printf("The sum cannot be computed\n");
getch();
exit();
}
printf("Enter the first matrix elements\n");
for(i=0; i<row1; i++)
{
for(j=0; j<col1; j++)
scanf("%d", &mat1[i][j]);
}
```

```
printf("\n Enter the second matrix elements:\n");
for(i=0; i<row2; i++)
{
    for(j=0; j<col2; j++)
    scanf("%d", &mat2[i][j]);
}
row_sum = row1;
col_sum = col1;
for(i=0; i<row_sum; i++)
{
  for(j=0; j<col_sum; j++)
  sum[i][j] = mat1[i][j] + mat2[i][j];
}
printf("\n The sum matrix is:\n");
 for(i=0; i<row_sum; i++)
{
  printf("\n");
  for(j=0; j<col_sum; j++)
   printf("%d ", sum[i][j];
}
getch();
}
```

2.

```
#include <stdio.h>
#include <conio.h>
void main()
{
int i, j, marks[4][3], max_mark=0;
clrscr();
for(i=0; i<4; i++)
{
  printf("The marks obtained by
                %d student is \n",i);
  for(j=0; j<3; j++)
  scanf("%d", &marks[i][j]);
}
printf("\n The array entered is \n");
for(i=0; i<4; i++)
{
  printf("\n");
  for(j=0; j<3; j++)
  printf("%d  ", marks[i][j]);
}
for(j=0; j<3; j++)
{
  max_marks = marks[0][j];
  for(i=0; i<4; i++)
  {  if(marks[i][j] > max_marks)
     max_marks = marks[i][j];
}
```

```
printf("The highest marks obtained in
        subject %d = %d", j, max_marks);
}
getch();
}
```

3.
```
#include <stdio.h>
#include <conio.h>
void main()
{
int i, j, row, col, mat[3][3], tra_mat
                                [3][3];
clrscr();
printf("Enter the no of rows\n");
scanf("%d", &row);
printf("Enter the no of columns\n");
scanf("%d", &col);
printf("Enter the elements\n");
for(i=0; i<row; i++)
{
  for(j=0; j<col; j++)
  print scanf("%d", &mat[i][j]);
}
printf("The matrix now is\n");
for(i=0; i<row; i++)
{
  printf("\n");
  for(j=0; j<col; j++)
  printf("%d ", mat[i][j]);
```

```
for (i=0; i<row; i++)
{
 for (j=0; j<col; j++)
 tra_mat[i][j] = mat[j][i];
}
printf("\nThe transpose of matrix is\n");
for(i=0; i<row; i++)
 {
  printf("\n");
 for(j=0; j<col; j++)
  printf("%d ", tra_mat[i][j]);
}
getch();
}
```