Question 1:

```c
 #include <stdio.h>
#include <math.h>
int main()
{
float  a ,b;
     int x;
     printf("Enter any two number\n");
     scanf("%d %d",&a,&b);
     printf("For division enter 1,for multiplication enter 2,for addition
enter 3,and for subtration enter 4 ");
     scanf("%d",&x);
     switch (x)
     {
     case 1:
         printf("The division of the numbers is %f", a/b);
         break;
    case 2:
         printf("The multiplication of the numbers is %f", a*b);
         break;
         case 3:
         printf("The addition of the numbers is %f", a+b);
         break;

     case 4:
         printf("The subtration of the numbers is %f", a-b);
         break;}
    return 0;
}
```

Question 2:

```c
 #include <stdio.h>
#include <math.h>
int main()
{
int marks;
     printf("Enter your marks\n");
     scanf("%d",&marks);
     if (marks>=90)
     {
         printf("Your grade is A\n");
     }
```

```
     else if (marks>=50 && marks<70)
     {
         printf("Your grade is C\n");
     }
     else if (marks>=70 && marks<90 )
     {
         printf("Your grade is B\n");
     }
     else
     {
         printf("Your grade is F\n");
     }
    return 0;
}
```

Question 3:

```
 #include <stdio.h>
#include <math.h>
int main()
{
int y;
         printf("Enter any number to check odd or even\n");
         scanf("%d",&y);
         int z= y%2;
         if (z==1)
         {
             printf("The number is odd\n");
         }
         else printf("The number is even");
    return 0;
}
```

Question 4:

```
 #include <stdio.h>
#include <math.h>
int main()
{
     float a, b, c, discriminant, root1, root2, realPart, imagPart;
    printf("Enter coefficients a, b and c: ");
    scanf("%f %f %f", &a, &b, &c);
```

```
    discriminant = b * b - 4 * a * c;


    if (discriminant > 0) {
        root1 = (-b + sqrt(discriminant)) / (2 * a);
        root2 = (-b - sqrt(discriminant)) / (2 * a);
        printf("root1 = %f and root2 = %f",root1, root2);
    }
    else if (discriminant == 0) {
        root1 = root2 = -b / (2 * a);
        printf("root1 = root2 = %f;", root1);
    }
    else {
        realPart = -b / (2 * a);
        imagPart = sqrt(-discriminant) / (2 * a);
        printf("root1 = %f+%fi and root2 = %f-%fi", realPart, imagPart,
realPart, imagPart);
    }
    return 0;
}
```

Question 5:

```
 #include <stdio.h>
#include <math.h>
int main()
{
  int z;
          printf("Enter any number to check its modulus\n");
          scanf("%d",&z);
          if (z<0)
          {    z= -z;
              printf("The mod of the number is %d",z);
          }
          else printf("The mod of the number is %d",z);

    return 0;
}
```

Question 6:

```c
 #include <stdio.h>
#include <math.h>
int main()
{
float x,y,z;
          printf("Enter the sides of the triangle\n");
          printf("x=\n");
          scanf("%f",&x);
          printf("y=\n");
           scanf("%f",&y);
          printf("z=\n");
           scanf("%f",&z);
           if (x+y>=z && y+z>=x && x+z>=y)
           {
               printf("The triangle is possible");
           }
           else printf("The triangle is not possible");
    return 0;
}
```

Question7:

```c
 #include <stdio.h>
#include <math.h>
int main()
{
 int x;
          printf("Enter the month number\n");

          scanf("%d",&x);
          if (x>=1 && x<=12)
          {
               switch (x)
          {
          case 1:
              printf("January");
              break;
               case 2:
              printf("February");
              break;
               case 3:
              printf("March");
              break;
               case 4:
              printf("April");
```

```
                break;
                 case 5:
                printf("May");
                break;
                 case 6:
                printf("June");
                break;
                 case 7:
                printf("July");
                break;
                 case 8:
                printf("August");
                break;
                 case 9:
                printf("September");
                break;
                 case 10:
                printf("October");
                break;
                 case 11:
                printf("November");
                break;
                 case 12:
                printf("December");
                break;
            }
            }
            else printf("Error");
    return 0;
}
```

Question 8:

```
 #include <stdio.h>
#include <math.h>
int main()
{
    int year;
          printf("Enter any year");
          int z=year%4;
          int y=year%400;
          int x=year%100;
          if (z==0 && y==0 || x==0)
          {
              printf("The year is a leap year");
```

```
          }
          else  printf("The year is not a leap year");
    return 0;
}
```

Question 9:

```
#include <stdio.h>
#include <math.h>
int main()
{
int x;
          float deg;
          printf("Enter the angle\n");
          scanf("%f",&deg);
          printf("Enter 1 for sine or Enter 2 for cosine or any other number
for tan\n");
          scanf("%d",&x);
          double b=deg/180;
         if (x==1)
         {
             printf("The sine of the angle is %f",sin(b));
         }
         else if (x==2)
         {
             printf("The cosine value of the angle is %f",cos(b));
         }
         else printf("The tan of teh angle is %f",tan(b));

    return 0;
}
```