Q1:-

```
#include<stdio.h>
int main(){
	int i,n;
	for(i=1;i!=0;i++)
	{
		printf("Enter the month number:-\n");
		scanf("%d",&n);
		switch(n)
		{
			case 1:
				printf("Month is january and number of days in that month is 31\n");
				break;
			case 2:
				printf("Month is february and number of days in that month is 30\n");
				break;
			case 3:
				printf("Month is march and number of days in that month is 31\n");
				break;
			case 4:
				printf("Month is april and number of days in that month is 30\n");
				break;
```

```
                case 5:
                        printf("Month is may and number of days in that month
is 31\n");
                        break;
                case 6:
                        printf("Month is june and number of days in that month
is 30\n");
                        break;
                case 7:
                        printf("Month is july and number of days in that month
is 31\n");
                        break;
                case 8:
                        printf("Month is august and number of days in that
month is 31\n");
                        break;
                case 9:
                        printf("Month is september and number of days in that
month is 30\n");
                        break;
                case 10:
                        printf("Month is october and number of days in that
month is 31\n");
                        break;
                case 11:
```

```
                printf("Month is november and number of days in that
month is 30\n");
                break;
            case 12:
                printf("Month is december and number of days in that
month is 31\n");
                break;
            default:
                printf("Invalid input\n");
        }
        if(i==13)
        break;
    }
    return 0;
}
```

Q2:-

```
#include<stdio.h>
#include<stdlib.h>
int main(){
    int i,x,a,b;
    for(i=1;i!=0;i++)
    {

    printf("\n1-Addition\n2-Subtraction\n3-Multiplication\n4-Division\n5-Exit\
n");
        printf("Enter the number:-\n");
```

```
scanf("%d",&x);
switch (x)
{
        case 1:
                printf("Enter two numbers:\n");
                scanf("%d %d",&a,&b);
                printf("Answer is %d",a+b);
                break;
        case 2:
                printf("Enter two numbers:\n");
                scanf("%d %d",&a,&b);
                printf("Answer is %d",a-b);
                break;
        case 3:
                printf("Enter two numbers:\n");
                scanf("%d %d",&a,&b);
                printf("Answer is %d",a*b);
                break;
        case 4:
                printf("Enter two numbers:\n");
                scanf("%d %d",&a,&b);
                printf("Answer is %d",a/b);
                break;
        case 5:
```

```
                exit(0);
            default:
                printf("Invalid input\n");
        }
        if(i==6)
        break;
    }
    return 0;
}
```

Q3:-

```
#include<stdio.h>
int main(){
    int n;
    printf("Enter a number of a week:\n");
    scanf("%d",&n);
    switch (n)
    {
        case 1:
            printf("\"When you have a dream, you've got to grab it and never let go.\"");
            break;
        case 2:
            printf("\"There is nothing impossible to they who will try.\"");
            break;
        case 3:
```

```
                printf("\"Keep your face always toward the sunshine, and shadows will fall behind you.\"");
                break;
        case 4:
                printf("\"The bad news is time flies. The good news is you're the pilot.\"");
                break;
        case 5:
                printf("\"Life has got all those twists and turns. You've got to hold on tight and off you go.\"");
                break;
        case 6:
                printf("\"You make a choice: continue living your life feeling muddled in this abyss of self-misunderstanding, or you find your identity independent of it. You draw your own box\"");
                break;
        case 7:
                printf("\"Success is not final, failure is not fatal: it is the courage to continue that counts\"");
                break;
        default:
                printf("invalid");
        }
        return 0;
}
```

Q4:-

```
#include<stdio.h>
#include<stdlib.h>
int main(){
	int i,n,l1,l2,l3;
	for(i=1;i!=0;i++)
	{
		printf("\nEnter the following numbers\n");
		printf("\n1-Check whether a given set of three numbers are lengths of an isosceles triangle or not\n");
		printf("2-Check whether a given set of three numbers are lengths of an right angled triangle or not\n");
		printf("3-Check whether a given set of three numbers are equilateral triangle or not\n");
		printf("4-Exit\n");
		scanf("%d",&n);
	switch (n)
	{
		case 1:
			printf("Enter the lengths of a triangle\n");
			scanf("%d %d %d",&l1,&l2,&l3);
			if(l1==l2||l1==l3)
			printf("Isosceles triangle");
			else
			printf("Not a Isosceles triangle");
			break;
```

```
case 2:
        printf("Enter the lengths of a triangle\n");
        scanf("%d %d %d",&l1,&l2,&l3);
        l1=l1*l1;
        l2=l2*l2;
        l3=l3*l3;
        if(l1+l2==l3)
        printf("Right angled triangle");
        else if(l1+l3==l2)
        printf("Right angled triangle");
        else if(l2+l3==l1)
        printf("Right angled triangle");
        else
        printf("Not a right angled triangle");
        break;
case 3:
        printf("Enter the lengths of a triangle\n");
        scanf("%d %d %d",&l1,&l2,&l3);
        if(l1==l2&&l1==l3)
        printf("Equilateral triangle");
        else
        printf("Not a equilateral triangle");
        break;
case 4:
```

```
                exit(0);
            }
            if(i==4)
            break;
        }
        return 0;
}
```

Q5:-

```
#include<stdio.h>
int main(){
        int i,n;
        for(i=1;i!=0;i++)
        {
            printf("\nEnter a number from 1 to 3:-\n");
            scanf("%d",&n);
            switch (n)
            {
                case 1:
                    printf("Good");
                    break;
                case 2:
                    printf("Better");
                    break;
                case 3:
```

```
                printf("Best");
                break;
            default :
                printf("Invalid");
        }
        if(n==4)
        break;
    }
    return 0;
}
```

Q6:-

```
#include<stdio.h>
int main(){
    int n;
    printf("Enter a year:\n");
    scanf("%d",&n);
    switch (n%400==0||n%4==0)
    {
        case 1:
            printf("leap year");
            break;
        case 0:
            printf("Not a leap year");
            break;
```

```
        }
        return 0;
}
```

Q7:-

```
#include<stdio.h>
int main(){
        int n;
        float per;
        printf("Enter a electricity unit:\n");
        scanf("%d",&n);
        switch (n)
        {
                case 1 ... 50:
                        n=n*0.50;
                          printf("The electricity bill is Rs %d/unit\n",n);
                          break;
                case 51 ... 150:
                        n=n*0.75;
                          printf("The electricity bill is Rs %d/unit\n",n);
                          break;
                case 151 ... 250:
                        n=n*1.20;
                          printf("The electricity bill is Rs %d/unit\n",n);
                          break;
```

```
            default :
                n=n*1.50;
                  printf("The electricity bill is Rs %d/unit\n",n);
                  break;
            }
            per=n/100.00*20.00;
            printf("An additional surcharge of 20%% is %.2f Rs",per);
            return 0;
}
```

Q8:-

```
#include<stdio.h>
int main(){
      int n;
      printf("Enter a number:\n");
      scanf("%d",&n);
      switch (n>=0)
      {
            case 1:
            printf("%d",-n);
            break;
            case 0:
            printf("%d",-n);
            break;
      }
```

```
        return 0;
}
```

Q9:-

```
#include<stdio.h>
int main(){
    int n;
    printf("Enter a even number:\n");
    scanf("%d",&n);
    switch (n%2==0)
    {
        case 1:
        printf("%d",n+1);
        break;
        case 0:
        printf("%d",n);
        break;
    }
        return 0;
}
```

Q10:-

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

```
float a, b, c;
float root1, root2, imaginary;
float discriminant;

printf("Enter values of a, b, c of quadratic equation (aX^2 + bX + c): ");
scanf("%f%f%f", &a, &b, &c);
discriminant = (b * b) - (4 * a * c);
switch(discriminant > 0)
{
	case 1:
		root1 = (-b + sqrt(discriminant)) / (2 * a);
		root2 = (-b - sqrt(discriminant)) / (2 * a);

		printf("Two distinct and real roots exists: %.2f and %.2f",
			root1, root2);
		break;

	case 0:
		switch(discriminant < 0)
		{
			case 1:
				root1 = root2 = -b / (2 * a);
				imaginary = sqrt(-discriminant) / (2 * a);
				printf("Two distinct complex roots exists: %.2f + i%.2f
and %.2f - i%.2f",
```

```
                                root1, imaginary, root2, imaginary);
                        break;
                    case 0:
                        root1 = root2 = -b / (2 * a);
                        printf("Two equal and real roots exists: %.2f and %.2f",
root1, root2);
                        break;
                }
        }

        return 0;
}
```