

QUESTION 1

```
#include <stdio.h>

int main()
{
    char ch;

    printf("enter a character\n");

    scanf("%c", &ch);

    if (ch=='a' || ch=='A' || ch=='e' || ch=='E' || ch=='i' || ch=='I' || ch=='o' || ch=='O' || ch=='u' ||
ch=='U')

        printf("%c is a vowel.\n", ch);

    else

        printf("%c is a consonant\n", ch);

    return 0;
}
```

QUESTION 2

```
#include <stdio.h>

#include <math.h> /* Used for sqrt() */

int main()
{
    float a, b, c ;

    float root1, root2, img;

    float discriminant;

    printf("Enter values of a, b, 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("Two distinct and real roots exists: %f and %f", root1, root2);
}
else if(discriminant == 0)
{
    root1 = root2 = -b / (2 * a);
    printf("Two equal and real roots exists: %f and %f", root1, root2);
}
else if(discriminant < 0)
{
    root1 = root2 = -b / (2 * a);
    img = sqrt(-discriminant) / (2 * a);
    printf("Two distinct complex roots exists: %f + i%f and %f - i%f",
        root1, img, root2, img);
}
return 0;
}

```

QUESTION 3

```

#include <stdio.h>

int main()
{
    int year;
    printf("Enter year : ");
    scanf("%d", &year);
    if(((year % 4 == 0) && (year % 100 != 0)) || (year % 400 == 0))
    {
        printf("LEAP YEAR");
    }
    else
    {
        printf("COMMON YEAR");
    }
}

```

```
}

return 0;

}
```

QUESTION 4

```
#include<stdio.h>

int main()

{

    int a,b,c,d;

    printf("enter two num");

    scanf("%d%d",&a,&b);

    c=100-a;

    d=100-b;

    if (c>d)

        printf("%d is near",b);

    else

        printf("%d is near",a);

    return 0;

}
```

QUESTION 6

```
#include <stdio.h>

int main()

{

    int x;

    float amt, tamt, sc;

    printf("Enter total units consumed: ");

    scanf("%d", &x);

    if(x <= 199)

    {

        amt = x * 1.20;

    }

}
```

```

else if(x>=200 && x<= 399)
{
    amt == x * 1.50 ;
}
else if(x>=400 && x<= 599)
{
    amt =x * 1.80 ;
}
else
{
    amt = x * 2.00;
    sc = amt * 0.20;
    tamt = amt + sc;
    amt=tamt;
}
printf("Electricity Bill = %f" , amt);

return 0;
}

```

QUESTION 7

```

#include <stdio.h>

int main()
{
    float x,y,z, average;

    printf("Enter marks secured in all 3 subject ");
    scanf("%f", &x,&y,&z);

    average = (x+ y + z)/3;
}

```

```
if (average >= 90)
{
    printf("Grade A");
}
else if (average >= 80)
{
    printf("Grade B");
}
else if (average >= 70)
{
    printf("Grade C");
}
else if (average >= 60)
{
    printf("Grade D");
}
else
{
    printf("Grade F");
}

return 0;
}
```

QUESTION 8

```
#include <stdio.h>
```

```
int main()
```

```
{
    int month;
```

```
printf("Enter month number: ");  
scanf("%d", &month);
```

```
switch(month)  
{  
    case 1:  
        printf("31 days");  
        break;  
    case 2:  
        printf ("28 days");  
        break;  
    case 3:  
        printf("31 days");  
        break;  
    case 4:  
        printf("30 days");  
        break;  
    case 5:  
        printf("31 days");  
        break;  
    case 6:  
        printf("30 days");  
        break;  
    case 7:  
        printf("31 days");  
        break;  
    case 8:  
        printf("31 days");  
        break;
```

```
case 9:
    printf("30 days");
    break;
case 10:
    printf("31 days");
    break;
case 11:
    printf("30 days");
    break;
case 12:
    printf("31 days");
    break;
default:
    printf("Invalid input");

}

return 0;
}
```

QUESTION 9

```
#include<stdio.h>

int main(void)
{
    int a, b, result;
    char op;
    printf("Enter operatin ");
```

```
scanf("%c",&op);  
printf("Enter two num ");  
scanf("%d%d", &a, &b);
```

```
switch(op)  
{  
    case '+':  
        result = a + b;  
        break;  
    case '-':  
        result = a - b;  
        break;  
    case '*':  
        result = a * b;  
        break;  
    case '/':  
        result = a / b;  
        break;  
}
```

```
printf("Result = %d", result);  
}  
Return 0;  
}
```

QUESTION 10

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



```
char ch;

printf("enter grade");

scanf("%c",&ch);

switch (ch)
{
    case 'a':
        printf("Excellent");
        break;
    case 'b':
        printf("Good");
        break;
    case 'c':
        printf("Average");
        break;
    case 'd':
        printf("Deficient");
    case 'f':
        printf("failing ");
        break;
    default:
        printf("invalid ");
}

return 0;
}
```