

NAME -SHIVAM KUMAR
COMPUTER SCIENCE AND ENGINEERING
REG.NO -20223246
GROUP D1

QUESTION 1

CODE:-1

```
#include<stdio.h>

int main()
{
    printf("\n25 jan 2023,\nshivam kumar 20223246,\nto find maximum between two numbers using
switch case.");

    int num1,num2;
    printf("Enter two numbers to find maximum: ");
    scanf("%d%d", &num1, &num2);

    switch(num1 > num2)
    {

        case 0:
            printf("%d is maximum", num2);
            break;

        case 1:
            printf("%d is maximum", num1);
            break;
    }
```

```
    return 0;
}
```

OUT PUT :-

```
PS C:\Users\Shivam Kumar\Desktop\C TUTORIAL\New folder (2)\c language> gcc shivam7a.c
PS C:\Users\Shivam Kumar\Desktop\C TUTORIAL\New folder (2)\c language> ./a.exe

25 jan 2023,
shivam kumar 20223246,
to find maximum between two numbers using switch case.Enter two numbers to find maximum: 20 25
25 is maximum
```

QUESTION 2

CODE:-

```
#include<stdio.h>

int main()
{
    printf("\n25 jan 2023,\nshivam kumar 20223246,\nto check whether a number is positive, negative
or zero using switch case.");

    int num;

    printf("Enter any number: ");
    scanf("%d", &num);

    switch (num > 0)
    {

        case 1:
            printf("%d is positive.", num);
            break;
        case 0:
            switch (num < 0)
            {
                case 1:
```

```

        printf("%d is negative.", num);

        break;

    case 0:

        printf("%d is zero.", num);

        break;

    }

    break;

}

return 0;

}

```

OUT PUT:-

```

25 jan 2023,
shivam kumar 20223246,
to check whether a number is positive, negative or zero using switch case.Enter any number: -5
-5 is negative.
PS C:\Users\Shivam Kumar\Desktop\C TUTORIAL\New folder (2)\c language> ./a.exe

25 jan 2023,
shivam kumar 20223246,
to check whether a number is positive, negative or zero using switch case.Enter any number: 5
5 is positive.

```

QUESTION 3

CODE:-

```

#include<stdio.h>

#include<math.h>

int main()

{

    printf("\n25 jan 2023,\nshivam kumar 20223246,\nto find all roots of a quadratic equation using
switch case.");

    float a, b, c;

    float root1, root2, imaginary, discriminant;

    printf("Enter value of 'a' of quadratic equation (aX^2 + bX + c): ");

```

```

scanf("%f", &a);

printf("Enter value of 'b' of quadratic equation (aX^2 + bX + c): ");

scanf("%f",&b);

printf("Enter values of 'c' of quadratic equation (aX^2 + bX + c): ");

scanf("%f",&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:
    //if discriminant is positive
    switch(discriminant < 0)
    {
case 1:
        // If discriminant is negative
        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:
        // If discriminant is zero
        root1 = root2 = -b / (2 * a);
        printf("Two equal and real roots exists: %.2f and %.2f", root1, root2);

```

```

        break;
    }
}
return 0;
}

```

OUT PUT :-

```

25 jan 2023,
shivam kumar 20223246,
to find all roots of a quadratic equation using switch case.Enter value of 'a' of quadratic equation (aX^2 + bX + c): 25
Enter value of 'b' of quadratic equation (aX^2 + bX + c): 25
Enter values of 'c' of quadratic equation (aX^2 + bX + c): 25
Two distinct complex roots exists: -0.50 + i0.87 and -0.50 - i0.87

```

QUESTION 4

CODE:-

```

#include<stdio.h>

void main()
{
    printf("\n25 jan 2023,\nshivam kumar 20223246\nto accept id from user to confirm department
using switch-case.");
    int id;

    printf("Enter your ID: ");
    scanf("%d",&id);
    switch(id)
    {
        case 10:
        case 11:
        case 12:
            printf("computer science department");
            break;

        case 21:
        case 22:
        case 23:
    }
}

```

```

printf("Developer department");

break;

default:

printf("Invalid ID");

return 0;

}

```

OUTPUT:-

```

25 jan 2023,
shivam kumar 20223246
to accept id from user to confirm department using switch-case.Enter your ID: 10
computer science department

```

QUESTION 5

CODE:-

```

#include<stdio.h>

int main()
{
printf("\n25 jan 2023,\nshivam kumar 20223246,\nto check whether the password is correct or
incorrect using switch-case.");

int password;

printf("Enter your password: ");

scanf("%d",&password);

switch(password)
{
case 123:

printf("WELCOME");

break;

default:

printf("INCORRECT PASSWORD");

}

```

```
return 0;  
}
```

OUTPUT:-

```
25 jan 2023,  
shivam kumar 20223246,  
to check whether the password is correct or incorrect using switch-case.Enter your password: 123  
WELCOME  
PS C:\Users\Shivam_Kumar\Desktop\VC_TUTORIAL\New folder (2)\c++ language>
```