

Chapter:3

Variables and data types

1. Describe with example the different types of operators available in C.
2. What is ternary operator? Explain it with flowchart.
3. Why we need different data types in programming?
4. What are the final values of a,b,c and x after the execution of following expressions?

```
int x=10,a=10,b=11,z=12;
```

```
x+ = ++a - b++;
```

```
x- = ++z % --b;
```

```
x* = ++a + b++ * z--;
```

5. What is the output of the following code?

```
void main(){
```

```
int x,y,z;
```

```
x=3,y=4,z=5;
```

```
Clrscr();
```

```
Printf("given x=%d, y=%d and z=%d",x,y,z);
```

```
x= ++x+y ;
```

```
Printf("x=x+y assigns %d to x",x);
```

```
x=6;
```

```
x+=y;
```

```
Printf("x+=y assigns %d to x",x);
```

```
x=2;
```

```
z=z*x+y++;
```

```
Printf("values of z is %d",z);
```

```
z=10;
```

```
z*=x+y;
```

```
Printf("final value of z is %d",z);
```

```
getch();
```

}

6. Find the output of the following program.

```
void main(){  
    int m=100,n=50;  
    Printf("%d",10+m++);  
    Prijfntf("%d",10+n--);  
    Printf("%d",10+ --n);  
}
```

7. What are constants and variables?

8. What are the steps involving during the programming?Explain.

9. What are the rules of defining identifiers and variables?

10.Differentiate keywords and identifiers.

11.Define the following terms with suitable example:

- Tokens
- Format Specifiers

12.Mention the appropriate data type for storing following data.Also justify your answer in brief:

- Distance jumped by frog..
- A prime number between 5 and 555.
- Weight of your body.
- Examination symbol number of a student

13.Find the value of k.

```
Int i=4,j=6,k=7;  
k+ =(5+i*j%7)*6/(i+j)-3;
```

14.Find the value of x,y,z,w,p and q.

```
int x=10,y=5,z,w=9,p,q;  
x+=10;  
y=x++;
```

```
z = --x;  
w /= x;  
p = x + y;  
q = p + w;  
z = p++;
```