

19 CSE 102 – Computer Programming

LAB 2 - PART 2 - OPERATORS AND DECISION MAKING

1. Find the output of the following program and explain the reason leading to the output

```
1  #include <stdio.h>
2  int main()
3  {
4      int a = 10, b = 20, c = 30;
5      if (c > b > a)
6          printf("TRUE");
7      else
8          printf("FALSE");
9      return 0;
10 }
```

2. Find the output of the following program and explain the reason leading to the output

```
1  #include <stdio.h>
2  int main()
3  {
4      printf("%d\n", sizeof(char));
5      printf("%d\n", sizeof(int));
6      printf("%d\n", sizeof(float));
7      printf("%d", sizeof(double));
8      return 0;
9  }
```

3. Find the output of the following program and explain the reason leading to the output

```
1  #include "stdio.h"
2  int main()
3  {
4      int i;
5      if(i=(2,1,0))
6          printf("Chandragupta\n");
7      else
8          printf("Samudragupta\n");
9      printf("%d\n", i);
10     return 0;
11 }
```

4. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int i;
5      if(i=0,2,3)
6          printf("Rani Lakshmi Bai\n");
7      else
8          printf("Nivedita\n");
9      printf("%d\n",i);
10 }
```

5. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      if(-5)
5          printf("a");
6          printf("b");
7      else
8          printf("c");
9          printf("d");
10     return 0;
11 }
```

6. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      if(-5)
5          printf("a\n");
6          printf("b\n");
7      return 0;
8  }
```

7. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 0, b = 1, c = 2;
5      if (a<b>c)
6      {
7          printf("Tennis\n");
8      }
9      else if (a<b>c || c++ > 2)
10     {
11         printf("Cricket\n");
12     }
13     else
14     {
15         printf("Football");
16     }
17 }
```

8. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 0, b = 1, c = 2, z;
5      if (z=a|b|c)
6      {
7          printf("Tennis\n");
8      }
9      else
10     {
11         printf("Football\n");
12     }
13     printf("%d", z);
14     return 0;
15 }
```

9. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 0, b = 1, c = 2, d = 4, z;
5      if (z=a|b|c&d)
6      {
7          printf("Tennis\n");
8      }
9      else
10     {
11         printf("Football\n");
12     }
13     printf("%d", z);
14     return 0;
15 }
```

10. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 0, b = 1, c = 2, d = 4, z;
5      int x = 3 && 4;
6      printf("%d\n", x);
7      if (z=a|b|c&&d)
8      {
9          printf("Tennis\n");
10     }
11     else
12     {
13         printf("Football\n");
14     }
15     printf("%d", z);
16     return 0;
17 }
```

11. Find the output of the following program and explain the reason leading to the output

```
1 #include <stdio.h>
2 int main()
3 {
4     int m = 5, n = 4;
5
6     (m > n) ? printf("m is greater than n that is %d > %d",
7                    m, n)
8             : printf("n is greater than m that is %d > %d",
9                    n, m);
10
11     return 0;
12 }
```

12. Find the output of the following program and explain the reason leading to the output

```
1 #include <stdio.h>
2 int main()
3 {
4     int num = 2;
5     switch (num + 2)
6     {
7         case 1:
8             printf("Case 1: ");
9         case 2:
10            printf("Case 2: ");
11        case 3:
12            printf("Case 3: ");
13        default:
14            printf("Default: ");
15    }
16    return 0;
17 }
```

13. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 1;
5      switch (a << (2 + a))
6      {
7          default:
8              printf("1");
9          case 4:
10             printf("2");
11          case 5:
12             printf("3");
13          case 8:
14             printf("4");
15      }
16      return 0;
17 }
```

14. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  #define L 10
3  int main()
4  {
5      int a = 10;
6      switch (a, a*2)
7      {
8          case L:
9              printf("ABC");
10             break;
11
12          case L*2:
13              printf("XYZ");
14              break;
15
16          case L*3:
17              printf("PQR");
18              break;
19
20          default:
21              printf("MNO");
22      }
23      return 0;
24 }
```

15. Find the output of the following program and explain the reason leading to the output

```
1  #include<stdio.h>
2  int main()
3  {
4      int a = 20;
5      if(a%2==0 && a>20)
6      {
7          printf("Good");
8      }
9      else if (a%2==0 && a%8==0)
10     {
11         printf("Forest");
12     }
13     else if (a%2==0 && a>10)
14     {
15         printf("Space");
16     }
17     return 0;
18 }
```