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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
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

```c
1    #include<stdio.h>
2    int main()
3    {
4        switch(2)
5        {
6        case 1:
7            printf("Namaste");
8
9        case 2:
10            printf("Brahmaputra");
11            goto River;
12
13        case 3:
14            printf("Moskwa");
15
16        case 4:River:
17            printf("Ganga");
18        }
19        return 0;
20    }
```

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

```c
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    }
```