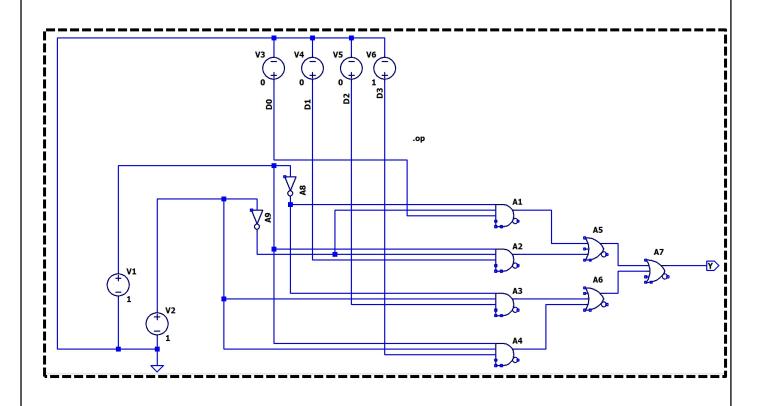
NAME- ASHUTOSH ARDU REG NO.- 20BRS1262 DATE- 26-04-2021

CSE1003-LAB7

MULTIPLEXER

DIAGRAM



OUTPUT

V1=1, V2=1 THEN Y=1

WHICH MEANS Y=D3

		ac.in\Documents\LTspiceXVII\CSE1003-Lab7\multiplexer.asc	
0	perating Poi	nt	,
7(n003):	0	voltage	
7(n004):	0	voltage	
7(d0):	0	voltage	
7(n005):	0	voltage	
7(n001):	1	voltage	
7(d1):	0	voltage	
7(n007):	0	voltage	
7(n002):	1	voltage	
7(d2):	0	voltage	
7(n009):	0	voltage	
7(d3):	1	voltage	
7(n010):	1	voltage	
7(n006):	0	voltage	
7(n008):	1	voltage	
7(y):	1	voltage	
(V6):	0	device current	
(V5):	0	device current	
(V4):	0	device_current	
(V3):	0	device_current	
(V2):	0	device_current	
(V1):	0	device_current	
[8 (A9):	-0	device_current	
[6(A9):	0	device_current	
18 (A8) :	-0	device_current	
[6(A8):	0	device_current	
[8(A7):	-0	device_current	
7(A7):	0	device current	

V1=0, V2=0 THEN Y=0

WHICH MEANS Y=D0

* C:\Users\Gh	ost\OneDrive - vi	t.ac.in\Documents\LTspiceXVII\CSE1003-Lab7\multiplexer.asc	>
0	perating Po	int	
7(n003):	1	voltage	
(n004):	1	voltage	
7(d0):	0	voltage	
(n005):	0	voltage	
(n001):	0	voltage	
7(d1):	0	voltage	
7(n007):	0	voltage	
7(n002):	0	voltage	
7(d2):	0	voltage	
7(n009):	0	voltage	
(d3):	1	voltage	
7(n010):	0	voltage	
(n006):	0	voltage	
(n008):	0	voltage	
7(y):	0	voltage	
(V6):	0	device current	
(V5):	0	device current	
(V4):	0	device_current	
(V3):	0	device_current	
(V2):	0	device_current	
(V1):	0	device_current	
8 (A9):	-0	device_current	
6(A9):	0	device_current	
8(A8):	-0	device_current	
6(A8):	0	device_current	
8 (A7):	-0	device current	
7(A7):	0	device current	

V1=1, V2=0 Y=0 WHICH MEANS Y=D2

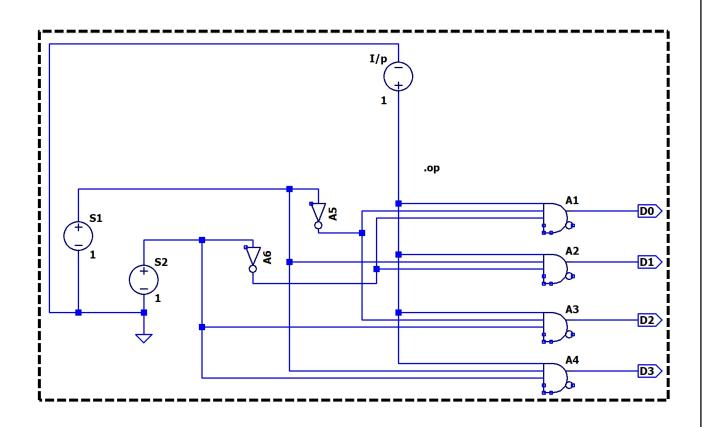
```
{\cal Y} * C:\Users\Ghost\OneDrive - vit.ac.in\Documents\LTspiceXVII\CSE1003-Lab7\multiplexer.asc
        --- Operating Point ---
V(n003):
                                 voltage
V(n004):
                1
0
                                 voltage
V(d0):
                                 voltage
V(n005):
                                 voltage
V(n001):
V(d1):
V(n007):
                1
0
                                 voltage
                                 voltage
                                 voltage
V(n002):
V(d2):
                0
                                 voltage
                                 voltage
V(n009):
                0
                                 voltage
V(d3):
V(n010):
                1
                                 voltage
                                 voltage
V(n010):
V(n006):
V(n008):
V(y):
I(V6):
I(V5):
I(V4):
I(V3):
                0
                                 voltage
                                 voltage
                0
                                 voltage
                0
                                device_current
                                 device_current
                                device_current
I (V3):
                0
                                device_current
I(V2):
I(V1):
                                 device_current
                                device_current
I8 (A9):
                 -0
                                 device_current
I6(A9):
                0
                                 device_current
I8(A8):
                 -0
                                  device_current
I6(A8):
                 0
                                  device_current
I8(A7):
                 -0
                                  {\tt device\_current}
                  0
I7(A7):
                                  device_current
```

V1=0, V2=1 THEN Y=0 WHICH MEANS Y=D1

* C:\Users\Gh	ost\OneDrive - v	it.ac.in\Documents\LTspiceXVII\CSE1003-Lab7\multiplexer.asc	×
0	perating Po	int	,
V(n003):	1	voltage	
V(n004):	0	voltage	
V(d0):	0	voltage	
V(n005):	0	voltage	
V(n001):	0	voltage	
V(d1):	0	voltage	
V(n007):	0	voltage	
V(n002):	1	voltage	
V(d2):	0	voltage	
V(n009):	0	voltage	
7(d3):	1	voltage	
7(n010):	0	voltage	
7(n006):	0	voltage	
7(n008):	0	voltage	
7(y):	0	voltage	
(V6):	0	device_current	
(V5):	0	device current	
I (V4):	0	device_current	
(V3):	0	device_current	
(V2):	0	device_current	
(V1):	0	device_current	
[8 (A9) :	-0	device_current	
[6(A9):	0	device_current	
[8 (A8) :	-0	device_current	
[6(A8):	0	device_current	
I8(A7):	-0	device_current	
[7(A7):	0	device_current	
FO /3 C) .			

DEMULTIPLEXER

DIAGRAM



OUTPUT S1(S1)=1, S2(S0)=1 THEN Y(OUTPUT LINE)=D3

0	perating Po	int	
V(n002):	1	voltage	
V(n003):	0	voltage	
V(n004):	0	voltage	
V(d0):	0	voltage	
V(n001):	1	voltage	
V(d1):	0	voltage	
V(n005):	1	voltage	
V(d2):	0	voltage	
V(d3):	1	voltage	
I(S1):	0	device_current	
I(S2):	0	device_current	
I(I/p):	0	device_current	
I8(A6):	-0	device_current	
I6(A6):	0	device_current	
I8(A5):	-0	device_current	
I6(A5):	0	device_current	
I8(A4):	-0	device_current	
I7(A4):	0	device_current	
I8(A3):	-0	device_current	
I7(A3):	0	device_current	
I8(A2):	-0	device_current	
I7(A2):	0	device_current	
I8(A1):	-0	device_current	
I7(A1):	0	device_current	
	·		

S1=0, S2=0 THEN Y=D0

```
{\cal Y} * C:\Users\Ghost\OneDrive - vit.ac.in\Documents\LTspiceXVII\CSE1003-Lab7\demultiplexer.asc
       --- Operating Point ---
V(n002):
                              voltage
V(n003):
                1
                              voltage
V(n004):
                              voltage
V(d0):
                              voltage
V(n001):
              0
                              voltage
V(d1):
               0
                              voltage
V(n005):
                              voltage
              0
V(d2):
                              voltage
V(d3):
                              voltage
I(S1):
               0
                              device_current
I(S2):
               0
                              device_current
              0
I(I/p):
                              device current
               -0
                             device_current
I8 (A6):
I6(A6):
                             device_current
I8 (A5):
                             device_current
device_current
               -0
I6(A5):
               0
I8(A4):
               -0
                             device current
I7(A4):
              0
                             device_current
I8(A3):
               -0
                              device current
I7 (A3):
              0
                             device_current
I8(A2):
               -0
                             device_current
I7(A2):
                              device current
I8(A1):
               -0
                              device_current
10 (A1):
17 (A1):
              0
                              device_current
```

S1=0, S2=1 THEN Y=D2

```
* C:\Users\Ghost\OneDrive - vit.ac.in\Documents\LTspiceXVII\CSE1003-Lab7\demultiplexer.asc
        --- Operating Point ---
V(n002):
                1
                               voltage
V(n003):
                1
                               voltage
V(n004):
                               voltage
V(d0):
V(n001):
                               voltage
                               voltage
V(d1):
V(n005):
                0
                               voltage
                               voltage
                1
V (d2):
V (d3):
                1
                               voltage
                0
                               voltage
I(S1):
                0
                               device_current
I(S2):
                0
                               device_current
I(I/p):
                              device_current
I8 (A6):
                -0
                              device current
I6(A6):
                0
                              device current
I8(A5):
                -0
                              device_current
I6(A5):
               0
                              device_current
I8 (A4):
                -0
                             device_current
I7(A4):
                0
                              device_current
I8 (A3):
                -0
                              device_current
I7(A3):
                0
                              device current
I8 (A2):
                -0
                              device_current
I7(A2):
               0
                               device_current
I8 (A1):
                -0
                               device_current
I7(A1):
                               device_current
```

S1=1, S2=0 THEN Y=D1

```
--- Operating Point ---
V(n002):
                         voltage
V(n003):
                         voltage
V(n004):
                         voltage
V(d0):
             0
                         voltage
V(n001):
                         voltage
V(d1):
V(n005):
                         voltage
                         voltage
V(d2):
             0
                         voltage
V(d3):
             0
                         voltage
                         device_current
I(S1):
I(S2):
             0
                         device_current
I(I/p):
            0
                         device_current
I8 (A6):
             -0
                         device_current
I6 (A6):
                         device current
I8 (A5):
             -0
                         device_current
I6 (A5):
             0
                         device_current
I8 (A4):
             -0
                         device_current
I7(A4):
                         device_current
I8 (A3):
             -0
                         device_current
I7(A3):
             0
                         device_current
             -0
I8(A2):
                         device_current
I7(A2):
             0
                         device_current
I8(A1):
             -0
                         device_current
                         device_current
I7(A1):
```