

Q1. 40

Q2 (20,30)

(20,30)

jump()

Q3 a = 14 b=14

Q4 a = 5 b = 3

Q5 q = 3 p = 3

Q6 prints the smaller of a and b

Q7 eax = 6 ebx = 6

Q8 B

Q9 red = 13, green = 12

Lights blink. Both on together for 1 sec then off together for 1 sec

Q10 B

X 2

Q11

A	B	C	o/p
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

Q12 moves in the positive y-direction with speed 10

when it reaches y = 50

vX=0;

vY = -10

if(y <= 10)

state = STATE\_1;

Q13

A	B	o/p
0	0	0
0	0	0
1	1	0
1	1	1

Q14 (a)  $L = A.B + \sim A.B$

$$= (A + \sim A).B$$

$$= 1.B$$

$$= B$$

(b)  $L = A.\sim B + A.B + \sim B.B + A.A$

$$= A.(\sim B + B) + A.B + \sim B.B + A.A$$

$$= A + A.B + \sim B.B + A.A$$

$$= A + A.B + 0 + A$$

$$= A + A.B$$

$$= A + A.\sim B + A.B$$

$$= A + A.(\sim B + B)$$

$$= A + A$$

$$= A$$

(c)  $L = A + A.\sim B$

$$= A + A.B + A.\sim B$$

$$= A + A.(B + \sim B)$$

$$= A + A$$

$$= A$$

Q15 (a)  $\begin{bmatrix} 2 \\ 0 \end{bmatrix}$

(b)  $\begin{bmatrix} -1 \\ 2 \end{bmatrix}$

(c)  $\begin{bmatrix} 0 & -1 \\ -1 & 0 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \end{bmatrix} = \begin{bmatrix} -1 \\ -1 \end{bmatrix}$  Looks like rotation 90-degrees anti-clockwise.