Sample Maze:

"XXXXXXXXXX",

"X.X..X...X",

"X....XXX.X",

"X.XXXX.X.X",

"X......XXX",

"X.XX.X...X",

"X.X..X.X.X",

"X.X.XXXX.X",

"X.X...X..X",

"XXXXXXXXXX"

Question 2:

1. (4, 6)

2. (3, 6)

3. (5, 6)

4. (5, 7)

5. (5, 8)

6. (6, 8)

7. (7, 8)

8. (8, 8)

9. (8, 7)

10.(6, 6)

11.(4, 5)

12.(4, 4)

Question 4:

1. (4, 6)

2. (4, 5)

3. (5, 6)

4. (3, 6)

5. (4, 4)

6. (6, 6)

7. (5, 7)

8. (4, 3)

9. (5, 4)

10.(5, 8)

11.(4, 2)

12.(6, 4)

Difference:

By definition, stack is LIFO, i.e., the element inserted at the last is the first element to come out. For example, if we push A, B, C, D, E into a stack, the order of pop will be E, D, C, B, A. In contrast, queue is FIFO, i.e. the element inserted at fist is the first element to come out. For example, if we push A, B, C, D, E into a queue, the order of pop will be A, B, C, D, E.