

Question 1.

0: E E E T O

1: N I S

2: C C R M C

3:

4: U P

Question 3.

```
int getDiameter(Graph g) {
    int d = 0;

    foreach Vertex v in g {
        foreach Vertex u in g {
            u.checked = false;
        }

        Queue q = new Queue();
        v.depth = 0;
        v.check = true;
        q.enqueue(v);

        do {
            Vertex u = q.dequeue();
            d = max(d, u.depth);
            foreach Vertex t in the adjacency list of u {
                if (t.check) continue;
                t.check = true;
                t.depth = u.depth + 1;
            }
        } while(q.isEmpty() != false);

        return d;
    }
}
```

Question 4.

(a) Kruskal's algorithm sequence: 1, 2, 4, 5, 6, 8, 10, 12, 15

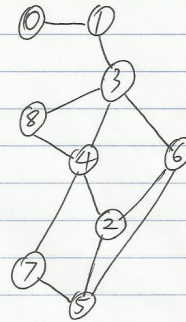
(b) Prim's algorithm sequence: 4, 5, 6, 1, 2, 8, 10, 12, 15

Question 2 and 5 are on the second page.

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Question 2.

0	1
1	3
2	4 5 6
3	4 6 8
4	2 3 7 8
5	2 6 7
6	2 3 5
7	4 5
8	3 4



Order in which they are visited: 0, 1, 3, 4, 2, 5, 6, 7, 8

Question 5.

