**CMSC132 Fall 2015 Quiz #5 Key**

**TOTAL POINTS: 38 pts**

**Graphs (38 pts)**

1. (5 pts) BFS Traversal

**Answer:** CABDEF or any other valid BFS

**Grading:** All or nothing (5 pts or 0)

1. (5 pts) DFS Traversal

**Answer:** CADFEB or any other valid DFS

**Grading:** All or nothing (5 pts or 0)

If they provide a BFS for a DFS or vice versa, do not penalize but make a note.

1. (28 pts) Dijkstra’s

**Answer:**

After processing 1 node:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Node** | A | B | C | D | E | F | G |
| **Cost** | 8 | 1 | 0 | ∞ | ∞ | ∞ | ∞ |
| **Predecessor** | C | C | - | - | - | - | - |

After processing 2 nodes:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Node** | A | B | C | D | E | F | G |
| **Cost** | 3 | 1 | 0 | 4 | ∞ | ∞ | ∞ |
| **Predecessor** | B | C | - | B | - | - | - |