Clicker Quiz B-F/Dijkstra – Nov 3

1. One characteristic of the shortest paths problem is that a shortest path between 2 nodes contains other shortest paths within it. What does this property sound like that we’ve studied before?

A. Matching sub-problems
B. Interval scheduling
C. Optimal sub-problem structure
D. Building a min-heap priority queue
E. Rank analysis
2. Therefore what method/approach that we’ve studied seems most applicable? (Hint: we end up solving sub-problems multiple times.)

A. Divide & conquer
B. Proof by contradiction
C. Greedy techniques
D. Proving correctness
E. Dynamic programming
Answers

1. C: Optimal sub-problem structure
2. E: Dynamic programming – we have optimal subproblems and they overlap