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Com S 311 Exam 2

Exam 2

1. Diagram

   Description automatically generated

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 |
| Kruskal’s | (a, c) | (e, f) | (b, d) | (a, e) | (d, e) |
| Prim’s | (a, c) | (a, e) | (e, f) | (d, e) | (b, d) |

* 1. I could show that G has a unique minimum spanning tree by calculating G’s minimum cost.

Minimum cost = 1 + 2 + 3 + 4 + 6 = 16

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| iter. | d[] | | | | | | Selected Nodes |
| s | a | b | c | d | e |
| 0 | 0 | ∞ | ∞ | ∞ | ∞ | ∞ | s |
| 1 | 0 | 3 | 2 | 6 | ∞ | ∞ | sb |
| 2 | 0 | 3 | 2 | 5 | ∞ | 11 | sba |
| 3 | 0 | 3 | 2 | 4 | 10 | 11 | sbac |
| 4 | 0 | 3 | 2 | 4 | 7 | 11 | sbacd |
| 5 | 0 | 3 | 2 | 4 | 7 | 8 | sbacde |
| 6 | ─ | ─ | ─ | ─ | ─ | ─ | sbacde |

* 1. Diagram

     Description automatically generated
  2. I do not know how to solve this question.

1. I do not know how to solve this problem.
2. I do not know how to solve this problem.
3. I do not know how to solve this problem.