**Data Analysis** - Sample Date for a **20 Node Network - Single Source to Multiple Destinations**

Hopfield Neural Networks Convergent Algorithms

|  |  |  |
| --- | --- | --- |
| Hopfield Neural Networks | Source to Multiple Destinations | Total Cost |
| Park & Keum | 16-> 15-> 6-> 5-> 11 -> 20 -> 19 -> 18 -> 17 | **214** |
| Park & Choi | 16-> 15-> 6-> 5-> 11 -> 20 -> 19 -> 18 -> 17 | **214** |
| Ahn & Ramakrishna | 16-> 15-> 6-> 5-> 11 -> 20 -> 19 -> 18 -> 17 | **214** |
| Ali & Kamoun | 16-> 15-> 6-> 5-> 11 -> 20 -> 19 -> 18 -> 17 | **214** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 16 -> 5 | 110 | 110 | 110 |
| 5 -> 1 | 78 | 181 | 78 |
| 1 -> 20 | 57 | 64 | 57 |
| 20 -> 17 | 86 | 127 | 86 |
| Total Cost For Multiple Destination | **331** | **482** | **331** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dijkstra | Bellman Ford | Floyd Warshall | Park & Keum | Ali & Kamoun | Park & Choi | Ahn & Ramakrishna |
| Total Cost For Multiple Destination | **331** | 482 | **331** | **214** | **214** | **214** | **214** |

Total Results for 40 Node Network - Single Source to Single Destination