**Data Analysis** - Sample Date for a **40 Node Network - Single Source to Multiple Destinations**

Hopfield Neural Networks Convergent Algorithms

|  |  |  |
| --- | --- | --- |
| Hopfield Neural Networks | Source to Multiple Destinations | Total Cost |
| Park & Keum | 5-> 6-> 7-> 14-> 13-> 11 -> 20 -> 19 -> 18 -> 17 | **228** |
| Park & Choi | 5-> 6-> 7-> 14-> 13-> 11 -> 20 -> 19 -> 18 -> 17 | **228** |
| Ahn & Ramakrishna | 5-> 6-> 15-> 17-> 18-> 13-> 11 -> 20 -> 19 -> 18 -> 17 | **262** |
| Ali & Kamoun | 5-> 6-> 7-> 14-> 13-> 11 -> 20 -> 19 -> 18 -> 17 | **228** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 5 -> 13 | 80 | 121 | 80 |
| 13-> 1 | 96 | 204 | 96 |
| 1-> 20 | 57 | 64 | 57 |
| 20 -> 17 | 86 | 127 | 86 |
| Total Cost For Multiple Destination | **319** | **516** | **319** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dijkstra | Bellman Ford | Floyd Warshall | Park & Keum | Ali & Kamoun | Park & Choi | Ahn & Ramakrishna |
| Total Cost For Multiple Destination | **319** | **516** | **319** | **228** | **228** | **228** | **262** |

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