**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 Metric Cost |
| Park & Keum | 1-> 6-> 13-> 18 -> 22 -> 21 -> 35 -> 36 -> 37 -> 39 | **3973** |
| Park & Choi | 1-> 6-> 13-> 18 -> 22 -> 21 -> 35 -> 36 -> 37 -> 39 | **3973** |
| Ahn & Ramakrishna | 1-> 6-> 13-> 18 -> 22 -> 21 -> 32 -> 35 -> 36 -> 37 -> 39 | **4386** |
| Ali & Kamoun | No Convergence | **−** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 1 -> 13 | 1237 | 1237 | 1237 |
| 13 -> 22 | 287 | 287 | 287 |
| 22 -> 36 | 1106 | 1587 | 1106 |
| 36 ->39 | 471 | 471 | 471 |
| Total Cost For Multiple Destination | **3101** | **3582** | **3101** |

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dijkstra | Bellman Ford | Floyd Warshall | Park & Keum | Park & Choi | Ahn & Ramakrishna | Ali & Kamoun |
| Total Metric Cost For Multiple Destination | **3101** | **3582** | **3101** | **3973** | **3973** | **4386** | **−** |