**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**-> 7-> **10**-> 6 -> **14** -> 19 -> 18 -> **23 -> 27** | **4870** |
| Park & Choi | **1**-> 7-> **10**-> 6 -> **14** -> 19 -> 18 **-> 23 -> 27** | **4870** |
| Ahn & Ramakrishna | **1**-> 7-> **10**-> 6 -> **14** -> 19 -> 18 -> **23 -> 27** | **4870** |
| Ali & Kamoun | No Convergence | **−** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 1 -> 10 | 366 | 366 | 366 |
| 10 -> 14 | 1145 | 1466 | 1145 |
| 14 -> 23 | 1962 | 2156 | 1962 |
| 23 ->27 | 782 | 882 | 782 |
| Total Cost For Multiple Destination | **4255** | **4870** | **4255** |

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 | **4255** | **4870** | **4255** | **4870** | **4870** | **−** | **4870** |