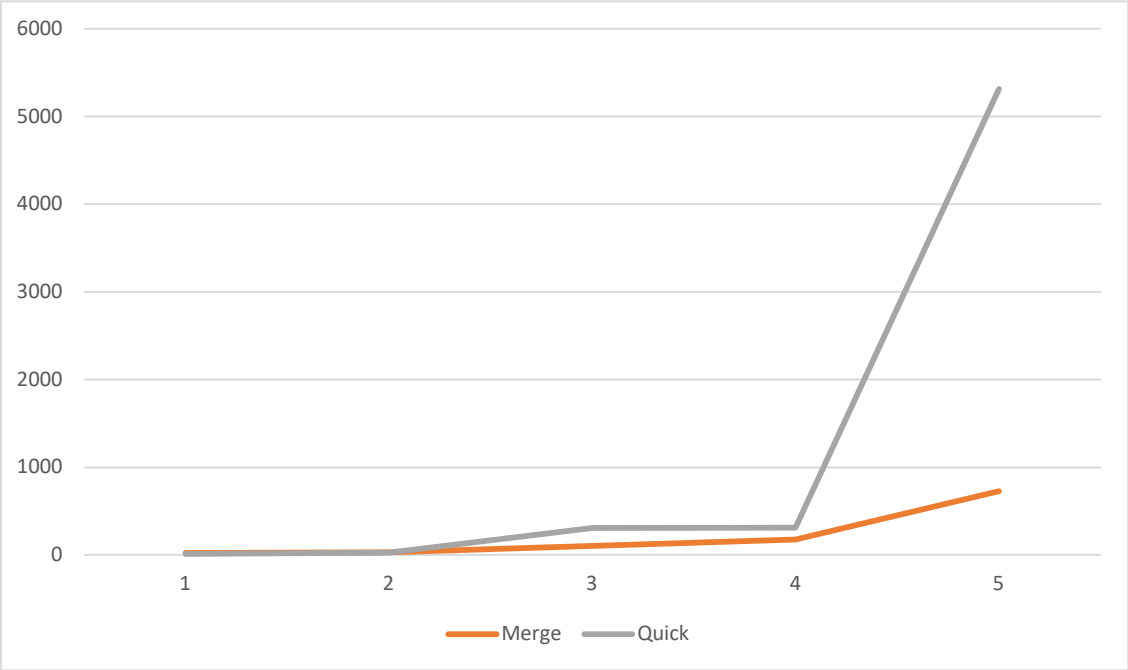
Enrollment no:- 22BECE30124

- **Analysis on Merge sort and Quick sort algorithm with a Chart diagram**

	50000	200000	500000	1000000	5000000
Merge	23.3309	32.43296	104.4288	175.8976	725.9376
Quick	13.01222	27.02573	306.5863	314.0982	5313.956



- **Time Complexity of Merge sort and Quick sort**

	Best case	Average case	Worst case
Merge sort	O(n log n)	O(n log n)	O(n log n)
Quick sort	O(n log n)	O(n log n)	O(n^2)

Conclusion:- Merge sort is a strong choice when stability or linked list sorting is required but Quick sort is often preferred for its speed and efficiency so Quick Sort is best Algoritham.