

**Question 6:** Perform hierarchical clustering using the following data having documents and their distances. Use single-linkage as the measure for cluster to cluster or cluster to object distances. [10 Marks]

|    | D1 | D2 | D3 | D4 | D5 |
|----|----|----|----|----|----|
| D1 | 0  | 3  | 20 | 8  | 11 |
| D2 |    | 0  | 9  | 2  | 18 |
| D3 |    |    | 0  | 5  | 3  |
| D4 |    |    |    | 0  | 9  |
| D5 |    |    |    |    | 0  |

**Time: 20 Min**