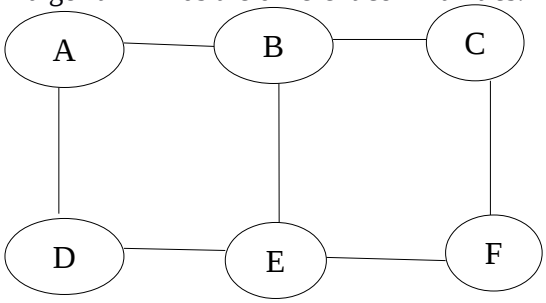
(3 Hours)

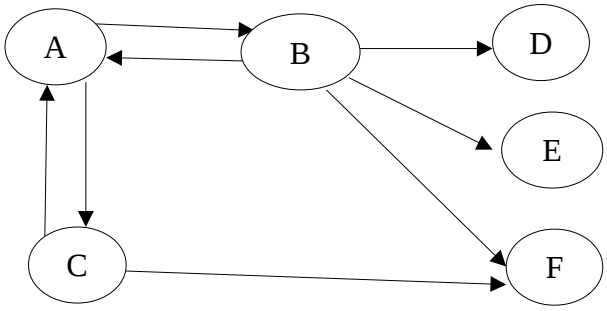
[Total Marks 80]

i. Q.1 is compulsory
ii. Attempt any three from the remaining
iii. Assume suitable data

Q.1	(a)	Explain Edit distance measure with an example.	(5)
	(b)	When it comes to big data how NoSQL scores over RDBMS.	(5)
	(c)	Give difference between Traditional data management and analytics approach Versus Big data Approach	(5)
	(d)	Give Applications of Social Network Mining	(5)
Q.2	(a)	What is Hadoop? Describe HDFS architechure with diagram.	(10)
	(b)	Explain with block diagram architechure of Data stream Management System.	(10)
Q.3	(a)	What is the use of Recommender System. How is classification algorithm used in recommendation system.	(10)
	(b)	Explain the following terms with diagram 1) Hubs and Authorities 2) Structure of the Web	(10)
Q.4	(a)	What do you mean by Counting Distinct Elements in a stream. Illustrate with an example working of an Flajolet – Martin Algorithm used to count number of distinct elements.	(10)
	(b)	Explain different ways by which big data problems are handled by NoSQL.	(10)
Q.5	(a)	Describe Girwan – Newman Algorithm. For the following graph show how the Girvan Newman algorithm finds the different communities.	(10)



	(b)	What is the role of JobTracker and TaskTracker in MapReduce.Illustrate Map Reduce execution pipeline with Word count example.	(10)
Q.6	(a)	Compute the page rank of each page after running the PageRank algorithm for two iterations with teleportation factor Beta (β)value = 0.8	(10)



	(b)	What are the challenges in clustering of Data streams. Explain stream clustering algorithm in detail.	(10)