VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING & INFORMATION TECHNOLOGY

SESSION 2014-2015 (EVEN SEMESTER)

(4)	Total Pages-4
	(Set-1)
7. Explain each of the following social networks briefly: 2+4+4	B.Tech-8th Social Network Analysis
(a) Blogs and on-line communities (b) Influencial social network	Full Marks: 70
	Time: 3 hours
(c) Text and opinion mining. Write short notes on: 4+4+2	Answer any six questions including Q. No. 1 which is compulsory
(i) Taxonomy of visualisation	The figures in the right-hand margin indicate marks
(ii) Data mining	1. Answer the following: 2×10
(iii) Smart business decisions.	(a) What is a social network?
AMERICAN AND AND ADDRESS OF THE PARTY OF THE	(b) Give at least one advantage and one disadvantage of social media websites.
A secondary and the secondary	(c) Give a classification of social networks.
And the reserve to the street of the street	(d) Distinguish between "capacity" and "flow" in a social network.
Service de continue d'hiberte de man en man	(e) What are the advantages of visualization tools?
de Well verschieder eine eine erneit verschieder eine eine eine eine eine eine eine ei	(/) What are the problems in geographical displays?
h-Sth-Social Network Analysis(Set-1) BE-100	. (Turn Over

- (g) Define degree, connectivity and diameter in a graph.
- (h) What is the behavior of non-giant weakly connected component in a graph?
- (i) Find the relation between eigen and degree power law.
- (i) Define weighted and unweighted graph.
- (a) Write an algorithm to compute all pairs-shortest path lengths for large graphs. Compute it's time complexity.
 - (b) What is triangle power law? Give a relation between number of triangles and clustering co-efficient of a graph. Illustrate with a diagram.
- 3. (a) What do you mean by gelling point?

 Discuss it's impact on graph properties.
 - (b) What is the impact of having a small diameter on community structure in social network?

 How shrinking diameter affects densification in a social network?

- (a) What is "spread maximization problem"?
 Discuss it's application in marketing using social network sites.
 - (b) Discuss the merits and demerits of social networks Myspace and Blogsphere for solving spread maximization problem.
- (a) How the structure of a random graph is generated using preferential attachment model with degree bands? Explain with a diagram.
 - (b) How the average and maximum degree of a random graph affects the balls and urns in a preferential attachment process? Illustrate with an example.
- 6. (a) What are the methods to organize a collection of documents on a particular topic using social network?
 - (b) What are the different kinds of web pages from a Spammer's point of view? Explain with examples.