Exam. Code: 1046
Sub. Code: 6414

2072

M.E. Computer Science and Engineering (Cyber Security)

Second Semester

CSN-8207: Social Network Analysis

Time allowed: 3 Hours Max. Marks: 50

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Explain the following:-

a) Adjancency matrix

b) Closeness

c) Clustering

d) Couch surfing

e) Geographic networks (5x2)

UNIT - I

II. a) Where one and two mode networks are required and why? Explain in detail their functioning also.

b) Why and how is centrality computed? Also explain its importance for N/W centralization? (2x5)

III. a) How is average shortest path computed? Explain its usefulness for random network models.

b) How do you define the community structures? Explain the limitations in case of overlapping communities. (2x5)

IV. a) Define network, node, edges and node-degree through examples and applications.

b) Explain the concepts of 'breadth-first search' and 'preferential attachment' in context of Random network models. (2x

UNIT - II

V. a) How are small-world network models formatted and optimized? Explain.

b) define contagion. Explain threshold model in this context. (2x5)

VI. a) What is the application and usage of strategic network search? Explain decentralized search in this context.

b) Explain the features of 'Facebook' and 'Twitter' to understand their users. (2x5)

VII. a) Which are the usual and unusual applications of SNA? Exemplify.

b) What are online social networks? How can one improve their functionality? Explain. (2x5)

x-x-x