Exam.Code:1006
Sub. Code: 7704

2072

M.E. (Information Technology)

Second Semester

MEIT-2108: 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 terms:-

a) Betweenness centrality

b) Adjacency matrix

c) Clustering Coefficient

d) Linguistic Analysis

e) OSN (5x2)

UNIT - I

II. Explain with the help of an example how social networks can be represented in graphical form. Also draw the adjacency matrix for respective graphs. (10)

III. Apply K-mean clustering for the following dataset for two clusters. Tabulate all the assignments. (10)

Sample No	X	Y
1	185	72
2	170	56
3	168	60
4	179	68
5	182	72
6	188	77

IV. a) Differentiate between closeness centrality and betweenness centrality.

b) Explain the various types of hierarchical clustering algorithm. (2x5)

P.T.O.

UNIT - II

V. Differentiate between weighted/unweighted and dense/sparse networks. Explain the various data storage challenges for these networks. (10)

VI. Explain with the help of case study how time series analysis can be used for trend analysis or forecasting. (10)

VII. a) How sentiment analysis can be applied to social data analytics?

b) Explain the necessity of community detection in online social networks. (5,5)

x-x-x