

Ruchi Verma

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- October -2019

B.Tech/VII Semester

COURSE CODE: 18B1WCI732

MAX. MARKS:25

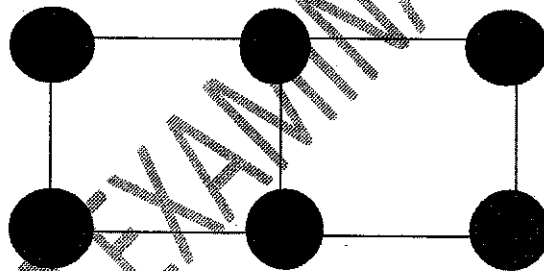
COURSE NAME: SOCIAL NETWORK ANALYSIS

COURSE CREDITS: 3

MAX. TIME: ^{1.5} 2 hrs

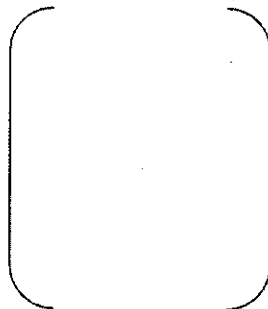
Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. What is cluster analysis and what are the benefits of cluster analysis? What are the applications of clustering? (3 marks)
2. Explain how K Means Clustering Algorithm works. (4 marks)
3. What do you understand by a dendrogram? Explain in detail. (3 marks)
4. Calculate the betweenness centrality of the edges using Girvan Newman. (5 marks)



5. What do you understand by Hyperlink Induced Topic Search? Calculate the hub and authority score of the given adjacency matrix using HITS algorithm, given value $k=3$. (6 marks)

0 1 1 1
0 0 1 1
1 0 0 1
0 0 0 1



6. Explain the page rank algorithm? (2 marks)

7. What are the various applications of community detection? Explain three in detail.
(2 marks)

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