

May-June 2026

Program: B. Tech. Scheme: IIB

Regular Examination: LY Semester: VIII

Course Code: CEDLC8031 and Course Name: Social Media Analytics

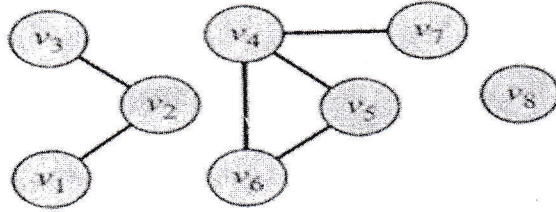
Date of Exam: **23-05-26**

Duration: 02.5 Hours

Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Describe the various data sources provided by different social media platforms and explain their importance in social media analytics.		CO1	U
b)	Explain the commonly used structural visualization techniques in social media analytics and discuss how they aid in interpreting and understanding social media data.		CO2	U
c)	Given a corpus of three documents, define the process of computing TF-IDF values. Illustrate your answer by calculating the TF-IDF scores for the terms "apple" and "banana" across the following documents: Document 1: "Apple and banana are healthy fruits." Document 2: "I like to eat apple every day." Document 3: "Banana smoothies are delicious and nutritious." Show the step-by-step computation for TF-IDF of the given terms.		CO3	Ap
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the concept of betweenness centrality in network analysis and illustrate it with a suitable example, highlighting its significance in identifying influential nodes in a social network.		CO4	U
b)	Using appropriate similarity measures in a graph, calculate the similarity between nodes 5 and 7 in the given network and interpret the obtained result in the context of social network analysis. 		CO5	Ap

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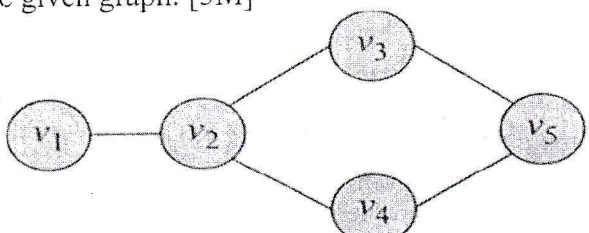
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c)	List and explain the sequential steps to analyze Twitter data using the Tweet Characteristic Features from Twitter API.		CO6	Ap
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Explain the social media life cycle and analyze how data generation evolves across digital platforms, using a real-world case scenario.		CO1	U
b)	Explain the role of visualization techniques in social media analytics and describe how different visualization methods help in understanding user behavior, trends, and network structures.		CO2	U
c)	Compare Backward Search, Bidirectional Search, and Index-based Search in graph exploration, and discuss their advantages, limitations, and suitability for large-scale social network analysis.		CO3	U
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	i. Describe group centrality in social networks and explain its role in detecting influential groups. [5M] ii. Additionally, calculate the closeness centrality for the nodes in the given graph. [5M] 		CO4	Ap
b)	Explain the concept of collective behavior prediction in social media analytics with a suitable use case. For example, discuss how audience reactions, discussions, and engagement trends for a movie like <i>Dhurandhar</i> can be analyzed to predict overall public response.		CO5	U
c)	Describe the step-by-step procedure for accessing and exploring the Facebook Social Graph API with suitable examples. Also, illustrate its application using a real-world scenario such as analyzing the spread of a viral video on Facebook.		CO6	U
