Reg. No. : | | | | | | | | | | | | |

Question Paper Code: U2914

M.E. DEGREE EXAMINATION, MAY 2024

Elective

Computer Science and Engineering

21PCS514 - SOCIAL NETWORK ANALYSIS

(Regulations 2021)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1.	(a)	What are the key concepts and measures in network analysis, and how are they applied to understand the structure and dynamics of social networks?	CO2-App	(20)
		Or		
	(b)	Analyze the role of blogs and online communities in shaping the Social Web, highlight their contributions to information dissemination and community building.	CO2-App	(20)
2.	(a)	Compare and contrast different graph representations used in visualizing online social networks, highlighting their strengths and weaknesses..	CO2- App	(20)
		Or		
	(b)	Apply the concept of ontological representation of social individuals and relationships, and its significance in understanding the semantics of social network data.	CO2- App	(20)
3.	(a)	How advanced representations can be extracted to understand the evolution of web communities from a series of web archives. Discuss the challenges involved in this process..	CO2-App	(20)
		Or		
	(b)	Design an experiment to evaluate the performance of a community detection algorithm on a real-world social network dataset. Discuss the experimental setup.	CO2-App	(20)

4.	(a)	Apply the strategies for influence maximization in viral marketing campaigns. How can algorithms be employed to identify the most influential individuals for maximizing the spread of a message or product?	CO2- App	(20)
		Or		
	(b)	Explore the concept of expert team formation in social networks. How can algorithms be employed to form effective expert teams based on complementary skills and expertise?	CO2- App	(20)
5.	(a)	Design an experiment to evaluate the effectiveness of sentiment classification algorithms on a dataset of social media posts. Discuss the evaluation metrics and methodologies used to assess the performance of the classifiers.	CO2-App	(20)
		Or		
	(b)	Explore the challenges associated with analyzing sentiments expressed in social media posts that are influenced by external events or news. How can temporal sentiment analysis techniques adapt to such dynamic environments?	CO2-App	(20)