K. J. Somaiya Institute of Technology, Sion, Mumbai-22
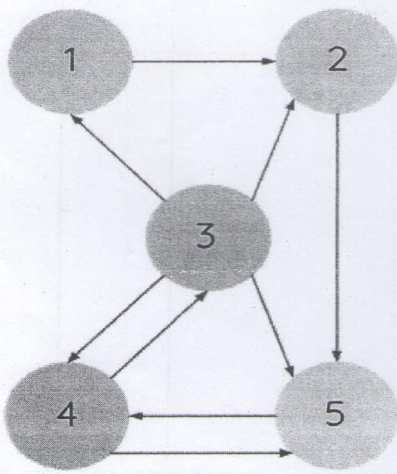**(Autonomous College Affiliated to University of Mumbai)**

July/Aug 2024

(B.Tech) Program:Computer Engineering Scheme IIB
~~Regular~~/Supplementary Examination: LY Semester: VIII
Course Code: CEDLC8031 and Course Name: Social Media Analytics

Date of Exam: 30.07.2024   Duration: 2.5 Hours   Max. Marks: 60

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

		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	Differentiate between Estimated and Factual data sources.	2	CO1	U
ii)	Define data visualization w.r.t to social media analytics.	2	CO2	U
iii)	Explain query semantics in keyword search?	2	CO3	U
iv)	State the role of networks measures in social media analytics?	2	CO4	U
v)	List the three major categories of individual behavior in the theory of behavior analytics.	2	CO5	U
vi)	How to explore trending topics on Twitter.	2	CO6	U
vii)	List and explain the different tools of text mining.	2	CO2	U
viii)	Identify which of the following triangles are unstable	2	CO5	An
Q.2	Solve any four questions out of six.	16		
i)	Write about the social media analytics challenges.	4	CO1	U

ii)	Is the given visualization categories with its proper explanation is correct? If not then correct it.		4	CO2	An

Sr.no	Visualization types	Explanation
1	Structural	Instead of highlighting the explicit relationships found in the data represents high level attributes & connections of actors & links either implicitly or explicitly inferred from cross-referencing sources
2	Semantic	Topology of a graph that represents the actors and relationships in a social network
3	Temporal	Often correspond to network statistics that represent the structure of network such as degree centrality & clustering coefficient.
4	Statistical	A special type of semantic information that has captured the attention of social network visualization is time.

iii)	Describe the graph exploration by Backward Search.	4	CO3	U
iv)	How similarity between two nodes can be computed using structural equivalence. Explain with an example.(Assume suitable graph)	4	CO4	U
V)	Explain the models of Individual behavior modeling.	4	CO5	U
Vi)	How would you define twitter & facebook's social graph API.	4	CO6	U
Q.3	Solve any two questions out of three.	16		
i)	Explain the seven layers of social media analytics.	8	CO1	U
ii)	Calculate the page rank of the following graph.	8	CO4	Ap

iii)	What is collective behavior analysis? Explain user migration in social media with example.	8	CO5	U
Q.4	Solve any two questions out of three.	16		

i)	a) Explain the different data mining challenges with social media data. (4M) b) Write a short note on Naive bayes. (4M)	8	CO2	U
ii)	Write a short note on a)Graph exploration by bidirectional search b)Index based search	8	CO3	U
iii)	Explain facebook with analyzing the social graph connections.	8	CO6	U

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