



Roll No:

BTECH

(SEM. VI) THEORY EXAMINATION 2025-26

SOCIAL MEDIA ANALYTICS AND DATA ANALYSIS

TIME: 3 HRS

M.MARKS: 70

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt *all* questions in brief.

02 x 7 = 14

Q no.	Question	CO	Level
a.	What is a sociogram?	1	K1
b.	Mention the applications of social media analytics in business.	1	K1
c.	Define path and connectivity in a graph.	2	K1
d.	What is a node in a social network?	2	K1
e.	How does homophily influence social network formation?	3	K1
f.	Differentiate between descriptive and predictive modeling.	4	K1
g.	Mention the role of natural language processing in sentiment and trend analysis.	5	K1

SECTION B

2. Attempt any *three* of the following:

07 x 3 = 21

a.	Describe the social media landscape and classify different types of social networks with suitable examples.	1	K2
b.	Explain adjacency matrices and discuss how graphs are used to represent social networks.	2	K2
c.	Discuss affiliation networks and citation networks and compare their characteristics.	3	K2
d.	Explain Facebook analytics and discuss key metrics such as demographics, reach, and engagement.	4	K2
e.	What is clickstream analysis? Explain A/B testing and analyze its role in optimizing user engagement and conversions.	5	K2

SECTION C

3. Attempt any *one* part of the following:

07 x 1 = 07

a.	Explain the concept of social media analytics and discuss its need and applications in small and large organizations.	1	K2
b.	Explain various social media business models and their applications in different domains.	1	K2

4. Attempt any *one* part of the following:

07 x 1 = 07

a.	What is a weighted network? Compare random graphs, weighted networks, and hypergraphs with suitable examples.	2	K2
b.	Explain adjacency matrices and discuss how graphs are used to represent social networks.	2	K2



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5. Attempt any *one* part of the following:

07 x 1 = 07

a.	What is clustering in networks? Describe snowball sampling, contact tracing, and random walks in network data collection.	3	K2
b.	What is a biological network? Explain how network concepts are applied in bioinformatics.	3	K2

6. Attempt any *one* part of the following:

07 x 1 = 07

a.	Explain social contexts such as affiliation, identity, and social capital in social network analysis.	4	K2
b.	Explain the working of Google Website Optimizer and its role in website experimentation.	4	K2

7. Attempt any *one* part of the following:

07 x 1 = 07

a.	What is data visualization? Discuss influence maximization and link prediction and their applications in marketing and recommendation systems.	5	K2
b.	Discuss and compare web crawling and indexing and explain their importance in large-scale data collection.	5	K2