



K. K. Wagh Institute of Engineering Education & Research, Nashik
(An Autonomous Institute From A.Y. 2022-23)

WINTER-2025	
Exam Seat No.:	
Academic Year:2025-2026	Semester:VI
Class:TY	Program:B.Tech
Branch Code:ADS	Pattern:2022
Name of Course:Business Intelligence and Analytics	Course Code:ADS223011
Max. Marks:60	Duration:2.30 Hrs.

Instructions: Candidates should read carefully the instructions printed on the Question Paper and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 02 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Marks CO

Question No. 1

- 1 Explain the framework for Business Intelligence and discuss how it supports organizational decision-making. (6) CO1

Question No. 2

- 2 Discuss Business Process Model and Notation (BPMN)? Explain its elements and relevance in BI (6) CO2

Question No. 3

- 3.a) Discuss data warehouse schemas (Star, Snowflake, Galaxy) with neat diagrams (6) CO3

OR

- 3.b) What is data profiling and data enrichment? Explain their need in BI. (6) CO3

- 3.c) Describe data duplication, consistency, and late-arriving facts in data loading (5) CO3

OR

- 3.d) Explain business reporting system components and the characteristics of effective business reports (5) CO3

- 3.e) Discuss types of charts and graphs used for data visualization and their appropriate usage (5) CO3

OR

- 3.f) Explain ETL architecture and describe extraction, transformation, and loading with examples (5) CO3

Question No. 4

- 4.a) Explain linear regression, its assumptions, and evaluation metrics used in BI. (6) CO4

OR

- 4.b) Discuss classification problems, evaluation of classifiers, and explain logistic regression (6) CO4

- 4.c) What are Bayesian methods? Explain their working and application in BI (5) CO4

OR

4.d) Describe clustering techniques – partitioning and hierarchical methods – with advantages (5) CO4

4.e) Explain association rule mining, structure of association rules, and the Apriori algorithm (5) CO4

OR

4.f) Compare regression, classification, and clustering in terms of BI applications (5) CO4

Question No. 5

5.a) Explain the applications of BI in higher education and healthcare monitoring with examples (6) CO5

OR

5.b) Describe the role of BI in Logistics and Supply Chain Management. (6) CO5

5.c) Discuss the use of BI in banking and telecommunication industries with suitable examples (5) CO5

OR

5.d) Explain location-based analytics and mobile BI, and discuss their advantages (5) CO5

5.e) What is Web 2.0 in BI? Explain the role of online social networking in business analytics (5) CO5

OR

5.f) Discuss cloud computing in BI and explain major issues related to analytics (5) CO5

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