Course: BUSINES INTELLIGENCE

Unit 1: Introduction to Business Intelligence

1. What is Business Intelligence (BI)?
2. Explain the role of BI in decision-making.
3. Differentiate between BI and Business Analytics.
4. What are the main components of a BI system?
5. Discuss the evolution of BI tools.
6. How is BI useful for strategic decision-making?
7. What are the benefits and challenges of BI adoption?
8. How does BI relate to data-driven culture?
9. Explain operational vs. strategic BI.
10. What are BI maturity models?

Unit 2: Data Warehousing

11. Define Data Warehouse.
12. Explain the architecture of a Data Warehouse.
13. What is ETL (Extract, Transform, Load)?
14. Compare OLTP and OLAP.
15. Explain star and snowflake schema.
16. What is data mart?
17. Discuss types of data warehouse systems.
18. Explain slowly changing dimensions (SCDs).
19. What is metadata in the context of data warehousing?
20. Explain the concept of data staging area.

Unit 3: Data Mining

21. What is data mining?
22. Differentiate between classification and clustering.
23. Explain association rule mining with an example.
24. What are decision trees and how are they used?

25. Discuss applications of data mining in business.

26. Explain support and confidence in data mining.

27. What is anomaly detection?

28. Describe the CRISP-DM methodology.

29. How is regression analysis used in data mining?

30. What are the ethical issues in data mining?

Unit 4: Business Performance Management

31. What is Business Performance Management (BPM)?

32. Explain Key Performance Indicators (KPIs).

33. How are dashboards used in BPM?

34. What is Balanced Scorecard?

35. Explain the role of BI in BPM.

36. What is benchmarking in performance management?

37. Describe performance gap analysis.

38. How is forecasting used in BPM?

39. What is variance analysis?

40. Explain predictive vs. descriptive performance metrics.

Unit 5: Business Analytics & Data Visualization

41. What is Business Analytics?

42. Differentiate between descriptive, predictive, and prescriptive analytics.

43. What are the tools used for data visualization?

44. Explain the role of Tableau/Power BI in BI.

45. What are the principles of effective data visualization?

46. What is a heatmap and how is it used?

47. Explain the use of dashboards and scorecards.

48. What are the best practices in designing BI reports?

49. What is storytelling with data?

50. Discuss challenges in implementing analytics in organizations.