

B.Sc. Second Year (Data Science) NEP Semester-IV
BSCDS042 - Data Warehouse and Data Mining

P. Pages : 1

Time : Two Hours



GUG/S/25/16833

Max. Marks : 40

1. a) Define Data Warehouse and explain its importance in business intelligence. 4
b) Discuss the differences between OLTP systems and data ware house with examples. 4
OR
c) Explain the key characteristics of Data Warehouse. 4
d) Explain the Data Warehouse Development Life Cycle with the Kimball Lifecycle Diagram. 4
2. a) Explain Dimensional Modelling and how it differs from E-R Modelling. 4
b) What is a Fact Table? Explain the concept of Fact-less Fact Table and Granularity in Data Warehousing. 4
OR
c) What is ETL (Extract, Transform, Load)? Explain its importance in Data Warehousing. 4
d) Explain Data Transformation and its major types with examples. 4
3. a) Define Metadata and explain its importance in Data Warehouse. 4
b) Explain the best practices for Metadata Management in a Data Warehouse. 4
OR
c) List and explain various tools used for Metadata Management. 4
d) Describe the Architecture of Data Mining with a diagram. 4
4. a) What is Data Cleaning? Explain its key steps and significance. 4
b) Explain the concept of Data Reduction, Discretization, and Concept Hierarchy Generation. 4
OR
c) What is Cluster Analysis? How is it evaluated in Data Mining? 4
d) What is Clustering? Explain its significance in Data Mining. 4
5. a) List any three responsibilities of a Data Warehouse team. 2
b) What is E-R Modelling, and how is it used in databases? 2
c) Define Predictive Modelling and give an example. 2
d) What is data reduction? Mention its benefits. 2
