

# CBCS SCHEME

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17CS82

## Eighth Semester B.E. Degree Examination, July/August 2021 Big Data Analytics

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions.**

- 1 a. What is HDFS? Explain its components with a neat diagram. (10 Marks)  
b. Explain HDFS safemode and rack awareness, with neat diagram. (10 Marks)
- 2 a. What is MapReduce Program? Explain MapReduce parallel data flow, with neat functional diagram. (10 Marks)  
b. What is Nano node federation? Explain NaneNode high availability design with diagram. (10 Marks)
- 3 a. Explain Apache Sqoop Import and Export methods, with neat diagram. (10 Marks)  
b. How do you run MapReduce and message passing interface on Yarn architecture?(10 Marks)
- 4 a. Explain with a neat diagram, the Apache Oozie work flow for Hadoop architecture. (10 Marks)  
b. What is YARN? Explain Yarn application frame work. (10 Marks)
- 5 a. What is Business Intelligence? List the different BI applications and explain in detail any four applications. (10 Marks)  
b. Draw and explain flow of BIDM cycle. Explain the Strategic and Operational decisions. (10 Marks)
- 6 a. Explain CRISP DM cycle, with neat diagram. (10 Marks)  
b. Define Data warehouse and illustrate design considerations for data warehouse. (10 Marks)
- 7 a. What is Association Rule? Explain below given rules with suitable examples :  
i) Support ii) Confidence iii) Lift. (10 Marks)  
b. What is Unsupervised Machine Learning concept? Explain K – Means clustering techniques, with suitable example. (10 Marks)
- 8 a. Write and explain Apriori Algorithm with example. (10 Marks)  
b. List and explain the steps for developing an ANN (Artificial Neural Network). (10 Marks)
- 9 a. Discuss the application and practical consideration of Social network Analysis. (10 Marks)  
b. Explain the 3 types of Web mining. Use appropriate flow diagrams to represent the same. (10 Marks)
- 10 a. Explain the Text Mining process and the architecture. (10 Marks)  
b. Briefly explain the Data Mining. Compare text mining and data mining. (10 Marks)