



CBCS SCHEME

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18CS72

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024 Big Data and Analytics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. How is Data Architecture layers used for analytics? Explain with functions of each layer. (10 Marks)
b. Briefly describe the three fundamental services offered by Cloud Computing. (10 Marks)

OR

- 2 a. List the features of Grid Computing. How does it differ from clusters and cloud computing. (10 Marks)
b. Why is Data quality important in discovering new knowledge and decision making? (10 Marks)

Module-2

- 3 a. List Hadoop core components and explain with appropriate diagram. (10 Marks)
b. Explain the working of the Hadoop Map Reduce frame work. (10 Marks)

OR

- 4 a. Explain the working of Hadoop – 2 Execution model (YARN Model). (10 Marks)
b. With a diagram, explain the concept of APACHE Sqoop to acquire relational data. (10 Marks)

Module-3

- 5 a. Define NOSQL Explain Big Data NOSQL or Not – only SQL with its features, transactions and solutions. (10 Marks)
b. Describe graph database characteristic, typical used and examples. (10 Marks)

OR

- 6 a. Explain Mongo DB with its features. (10 Marks)
b. Compare and contrast RDBMS and Mongo DB databases. (05 Marks)
c. What are the different ways of handling Big Data Problems? (05 Marks)

Module-4

- 7 a. Describe the Hive architecture components along with Hive Built – in functions. (10 Marks)
b. Explain with respect to Hive QL
i) Hive QL Data Definition Language (DDL).
ii) Hive QL Data Manipulation Language (DML). (10 Marks)

OR

- 8 a. Explain the architecture, feature and applications of PIG. (10 Marks)
b. Illustrate by considering an example the working of the Map Reduce programming model. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-5

- 9 a. How does regression analysis predict the value of the dependent variable in case of linear regression? (10 Marks)
- b. Explain with example and algorithm, the working principle of Apriori process for adopting the subset of frequent item sets as a frequent itemset. (10 Marks)
- OR
- 10 a. Define Web Mining. Discuss the broad classification of web mining and their applications. (10 Marks)
- b. Define the term Social network. Explain social network as graphs with Centralities, Ranking and Anomaly Detection. (10 Marks)
