CBCS SCHEME

USN

BAD601/BDS601

Sixth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Big Data Analytics

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Define Bigdata list and describe its key characteristics.	8	L2	CO1
	b.	Compare the data in warehouse environment and data in Hadoop environment.	6	L2	CO1
	c.	Write a note on the importance of Big Data in healthcare.	6	L1	CO1
		OR			
Q.2	a.	What is NOSQL? List its types and advantages in Big Data Analytics.	8	L1	CO1
	b.	Explain the components available in the Hadoop ecosystem for Data Ingestion, Processing and Analysis.	6	L2	CO1
	c.	Explain why traditional data tools fail with Big data.	6	L2	CO1
		Module – 2			
Q.3	a.	Illustrate the working of Hadoop YARN with a diagram.	10	L2	CO2
	b.	Write a MapReduce program to count word frequencies on a file.	10	L3	CO3
		OR			
Q.4	a.	Explain the architecture and working of HDFS.	10	L2	CO2
	b.	Write a MapReduce program to process weather data and show how many days fall into each weather category based on temperature.	10	L3	CO3
		Module – 3			
Q.5	a.	Demonstrate CRUD operations in MongoDB with example queries.	10	L2	CO3
	b.	List and explain the major differences between MongoDB and RDBMS.	10	L3	CO3

		OR			
Q.6	a.	How can you update an array in MongoDB using $push, $pop, $pull, $addtoset and $pull explain with an example program.	10	L2	CO3
	b.	Write MongoDB queries to demonstrate the following operations on a student collection : count – sort – skip – aggregate.	10	L3	CO3
		Module – 4			
Q.7	a.	Define Hive. Explain its architecture with a neat diagram.	8	L2	CO3
	b.	What is RC file format in Hive and how is it useful?	6	L2	CO3
	c.	Write HQL to create a table, insert data, and fetch employees with salary > 50K	6	L3	CO3
		OR			
Q.8	a.	Write a Pig Latin script to join two datasets and filter based on a condition.	8	L2	CO3
	b.	Demonstrate how Pig Latin handles complex data types with suitable example.	6	L2	CO3
	c.	Differentiate between Pig and Hive.	6	L3	CO3
		Module – 5			
Q.9	a.	Define Spark. Explain Spark architecture and its components with a neat diagram.	10	L2	CO4
	b.	Explain spark RDD and transformation with an example.	10	L3	CO4
		OR			
Q.10	a.	What is text mining? Explain the main steps and applications of text mining.	10	L2	CO5
	b.	Explain the concept and application of the page rank algorithm.	10	L3	CO5

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