CBCS SCHEME

SRI SAIRAM COLLEGE OF ENGINEERING

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BCS714D

Seventh 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 Big Data Analytics. Explain classification of analytics.	10	L2	CO1
	b.	List and explain the terminologies used in Big Data Environments.	10	L2	CO1
		OR			
Q.2	a.	Explain Hadoop ecosystem with a neat diagram.	10	L2	CO1
	b.	What is NOSQL? Explain the different types of NOSQL databases with an example.	10	L2	CO1
		Module – 2			
Q.3	a.	With a neat diagram explain Hadoop distributed file system architecture.	10	L2	CO2
	b.	Give the HDFS commands to perform the following operations: i) To get the list of directories and files at the root of HDFS ii) To create a directory (Say sample) in HDFS iii) To copy a file from HDFS to local file system iv) To display the contents of an HDFS file on console.	10	L3	CO2
		OR			
Q.4	a.	Explain anatomy of HDFS file read and write.	10	L2	CO2
	b.	With a neat diagram, demonstrate YARN architecture.	10	L3	CO2
		Module – 3			
Q.5	a.	What is MongoDB? Explain creation of database, dropping of database and datatypes of MongoDB.	10	L3	CO3
	b.	Write the MongoDB commands to perform the following operations: i) To find the number of documents in the students collection. ii) To retrieve the first 3 documents from the students collection where in the grade is VII. iii) To sort the documents from the students collection in the ascending order of StudName. iv) To skip the first 2 documents from the students collection. v) To sort the documents from the students collection in the descending order of StudName.	10	L3	CO3

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		OR			
Q.6	a.	Demonstrate the following: i) Aggregate function with an examples. ii) MapReduce function in MongoDB with examples.	10	L3	CO3
	b.	Demonstrate the following methods with an example for each: i) Save( ) ii) Find( ) iii) Update( ) iv) Insert( )	10	L3	CO3
		Module – 4			
Q.7	a.	What is Hive? Explain Hive architecture with a neat diagram.	10	L2	CO4
	b.	Explain bucketing with an example.	5	L2	CO4
	c.	What is Pig? Explain the key features of Pig.	5	L2	CO4
		OR			
Q.8	a.	Explain the anatomy of Pig, Pig philosophy and execution modes of Pig.	10	L2	CO4
	b.	Explain any five relational operators of Pig with an example.	10	L2	CO4
		Module – 5			
Q.9	a.	Explain the five layer architecture for running applications using spark stack.	10	L2	CO5
	b.	Explain the main features of spark with a neat diagram.	10	L2	CO5
		OR			
Q.10	a.	Define text mining. With a neat diagram explain the text mining process.	10	L2	CO5
	b.	With a neat diagram, explain the three phases of web usage mining.	10	L2	CO5

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