CBCS SCHEME

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22MCA412

Fourth Semester MCA 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, and explain its characteristics.	05	L2	CO1
	b.	With a neat block diagram, explain analytics process model.	10	L2	CO1
	c.	List and explain different data sources.	05	L2	CO1
		OR			
Q.2	a.	Write a note on : i) Types of data elements ii) Missing values	10	L2	CO1
	b.	Explain briefly about outlier detection and treatment with suitable diagrams.	10	L2	CO1
		Module – 2			
Q.3	a.	List Hadoop core components and explain with appropriate diagram.	07	L2	CO1
	b.	Explain the working of the Hadoop Map Reduce frame work.	07	L2	CO1
	c.	Explain different open – source technology for Big Data Analytics.	06	L2	CO1
		OR			
Q.4	a.	Explain crowdsourcing data analysis with suitable diagram.	10	L2	CO1
	b.	Explain value chain for Inter-Firewall and Trans-Firewall analysis with block diagram.	10	L2	CO1
		Module – 3			
Q.5	a.	Difference between Map Reduce and RDBMS.	07	L2	CO3
	b.	Comparison between Grid computing and MapReduce.	07	L2	CO3
	c.	Explain the different features supported by Hadoop Release Series.	06	L2	CO3
		OR			
Q.6		Discuss the following in detail: i) Apache PIG ii)Apache Hive iii) Apache Zookeeper iv) Apache Oozie	20	L2	CO3
		Module – 4			
Q.7	a.	Explain HDFS Namenode and Datanode with neat diagram.	10	L2	CO3
	b.	Explain the architectural differences in the HDFS federation.	10	L2	CO3

		OR			
Q.8	a.	Describe various concrete implementations in Java abstract class org.apache.hadoop.fs. Filesystem.	10	L2	CO3
	b.	Write a program of displaying files from a Hadoop filesystem on standard output using a URLSstreamHandler and Filesystem directly.	10	L2	CO3
		Module – 5			
Q.9	a.	How do you write and Executed a Map Reduce Job in Java? Describe the roles of the Mapper and Reduced classes.	10	L2	CO3
	b.	Describe the understanding of the data flow for large inputs and provide a detailed explanation of each task.	10	L2	CO3
		OR			
Q.10	a.	Describe Hadoop streaming and Hadoop Pipes with example programs.	10	L2	CO3
	b.	Explain in detail about packing of running on a cluster.	10	L2	CO3

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