Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Information Technology

CCS334 - Big Data Analytics

(Common to Computer Science and Engineering & Artificial Intelligence and Data Science)

Regulations – 2021

Duration : 3 Hrs *Maximum Marks: 100*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Distinguishing between big data processing and distributed processing.	RE	1	2
2.	List out the five types of big data analytics.	RE	1	2
3.	Write the syntax for materialized view.	UN	2	2
4.	List out key features of NoSQL.	RE	2	2
5.	Identify two factors that can lead to task failures in distributed computing systems.	AP	3	2
6.	How to call map reduce job?	RE	3	2
7.	Infer the types of scaling.	UN	4	2
8.	Define serialization.	RE	4	2
9.	State the difference between RDBMS and HIVE.	AN	5	2
10.	What are the data types is used in HIVE?	RE	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)*

Q.No			*Questions*	*BLT*	*CO*	*Marks*
11.	a	i	Define web analytics and explain it.	RE	1	4
		ii	Explain in detail about unstructured data.	UN	1	9
			Or			
	b	i	Explain in detail about the architecture of Hadoop and HDFS.	UN	1	9
		ii	List and elaborate about open source technologies.	RE	1	4
12.	a		Explain in detail about NOSQL databases.	UN	2	13
			Or			
	b		Explain in detail about Cassandra data model.	UN	2	13
13.	a	i	Explain an optimized workflow using YARN architecture to maximize resource utilization in a big data environment.	UN	3	7
		ii	Analyze the impact of classic MapReduce failures on job efficiency and data reliability.	AN	3	6
			Or			

	b	i	Examine the effectiveness of job scheduling strategies in MapReduce compared to other data processing frameworks.	AN	3	6
		ii	Explain in details about MapReduce types.	UN	3	7
14.	a		Explain in detail about HDFS architecture.	UN	4	13
			Or			
	b	i	Write brief notes on Cassandra and its functions in big data.	UN	4	7
		ii	Explain detail about Avro with an example.	UN	4	6
15.	a		Explain in detail about the architecture of HBASE with neat diagram.	UN	5	13
			Or			
	b		Explain in detail about the architecture of PIG with neat diagram.	UN	5	13

*PART – C (Marks 1*15 = 15)*

Q.No			*Questions*	*BLT*	*CO*	*Marks*
16.	a	i	Explain in detail about aggregate data model.	UN	2	8
		ii	Write short notes on key-value and document data models.	UN	2	7
			Or			
	b	i	Explain in detail about Hadoop I/O.	UN	2	8
		ii	Explain in detail about Hadoop streaming and pipes.	UN	2	7