KUMARAGURU
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B.E DEGREE EXAMINATIONS: NOV/DEC 2022

(Regulation 2018)

Fifth Semester

INFORMATION SCIENCE AND ENGINEERING

U18ISI5202**:** Big Data Technologies

COURSE OUTCOMES

CO1:   Understand the importance of big data processing and its application

CO2:   Gain an understanding of what insights big data can provide by modelling, integrating, and processing big data

CO3:   Understand the core tools used to wrangle and analyze big data

CO4:   Apply appropriate techniques to solve fundamental problems in Big Data

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Define Data silos. Why are they bad?	CO1	[K_1]
2.	State the challenges with big data that has high volume.	CO1	[K_2]
3.	List the benefits of data integration.	CO2	[K_1]
4.	Distinguish Data Model and Data Format.	CO2	[K_2]
5.	Construct a Data Pipeline with neat sketch.	CO2	[K_2]
6.	Mention the Hadoop Ecosystem Major Components.	CO3	[K_1]
7.	Summarize the role of Job Tracker.	CO3	[K_2]
8.	Compare Spark and Tez.	CO3	[K_2]
9.	Recall the HDFS API?	CO4	[K_1]
10.	State MapReduce framework with an example.	CO4	[K_2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.		Explain the Characteristics and 6V's of Big Data with example.	16	CO1	[K_2]
12.	a)	Clearly explain the different types of data models used in Big Data Technologies.	8	CO2	[K_2]

	b)	Write and explain an Apache Spark Word-count application.	8	CO2	[K$_3$]
13.	a)	Highlight the features of Hadoop and Demonstrate the functionalities of Hadoop cluster.	8	CO3	[K$_2$]
	b)	Illustrate YARN in detail.	8	CO3	[K$_2$]
14.		Examine the majority types of nodes with HDFS Architecture.	16	CO4	[K$_4$]
15.	a)	Traditional data processing tools are not suitable for processing big data- Justify	8	CO1	[K$_2$]
	b)	Outline the Typical Analytical Operations in Big Data Pipelines.	8	CO2	[K$_2$]
16.	a)	Explain the procedure to create and manage the data bases in HIVE?.	8	CO3	[K$_2$]
	b)	Summarize the HDFS Tuning Parameters.	8	CO4	[K$_2$]

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