Hall Ticket Number:

CS415(JOEL01) (R20)

B.TECH. DEGREE EXAMINATION, MAY-2024

Semester VII [Fourth Year] (Supplementary)

BIG DATA PROCESSING

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)
Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

(a)	What are the characteristics of the data?	CO1
(b)	Write down the four computing resources of Big Data Storage.	CO1
(c)	Write about challenges with Big Data?	CO1
(d)	List building blocks of Hadoop systems.	CO1
(e)	Differentiate between Hadoop and Map Reduce.	CO2
(f)	List the main features of Map Reduce.	CO2
(g)	What is the use of sorting and joins.	CO2
(h)	List the advantages of NoSQL over SQL.	CO3
(i)	What are aggregate data models?	CO3
(j)	What are materialized views in NoSQL?	CO3
(k)	Write syntax for Bag in PIG.	CO4
(l)	Write how to script with pig latin?	CO4
(m)	Why Pig is faster than Hive?	CO4
(n)	Write the differences between HBase and Hive.	CO4

UNIT – I

2. (a) Explain the classification of Digital Data. (7M) CO1
   (b) How do you analyse the data in Hadoop. Explain the concept of read and write in Hadoop. (7M) CO1

(OR)

3. (a) List and explain the important features of Hadoop. (7M) CO1
   (b) How NameNode gets to know if a data block is corrupted? (7M) CO1

UNIT – II

4. (a) Explain Hadoop API for Map reduce framework. (7M) CO2
   (b) Explain 'Map Phase' and 'Combiner Phase' in MapReduce. (7M) CO2

(OR)

5. (a) Describe the working of Map reduce with a relevant example. (7M) CO2
   (b) Discuss in detail about the sorting and joins in Map Reduce with an example. (7M) CO2

UNIT – III

6. (a) Illustrate the key value pairs in data architectural patterns with an example. (7M) CO3
   (b) Explain sharding distribution models. (7M) CO3

(OR)

7. (a) Explain about NoSQL data store and its characteristics. (7M) CO3
   (b) Describe the principle of working of CAP theorem. (7M) CO3

UNIT – IV

8. (a) What is Pig Latin and specify its role in Hadoop? (7M) CO4
   (b) With a neat diagram explain the key components of Hive architecture. (7M) CO4

(OR)

9. (a) Describe the features of Zookeeper. (7M) CO4
   (b) What is HBASE? Give detailed note on features of HBASE. (7M) CO4

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