

Printed Pages: 2

Paper Id: 236658

Sub Code:KCS-061

Roll No. 20210101055

B.TECH
(SEM VI) THEORY EXAMINATION 2022-23
BIG DATA

Time: 3 Hours

Total Marks: 100

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

2 x 10 = 20

- List any five big data platforms.
- Discuss the importance of hadoop technology in big data analytics.
- Explain three benefits of MapReduce.
- Define heartbeat in HDFS.
- Define data replication in Hadoop distributed file system.
- Differentiate between flume and Sqoop.
- Compare and Contrast No SQL relational databases.
- Explain briefly about the schedulers.
- Differentiate between Pig and MapReduce.
- Discuss meta store in HIVE in brief.

SECTION B

2. Attempt any three of the following:

10x3=30

- Explain Hadoop ecosystem in detail.
- Discuss Master Slave and Peer-Peer replication in detail.
- Examine the process of reading and writing data in HDFS by a client.
- Explain how CRUD operations with example are performed in MongoDB.
- Draw and explain the detailed architecture of HIVE.

SECTION C

3. Attempt any one part of the following:

10x1=10

- Detail about the analysis vs. reporting while introducing the Big Data
- Elaborate various components of Big Data architecture.

4. Attempt any one part of the following:

10x1=10

- Discuss the detailed architecture of Map-Reduce
- Discuss the detailed architecture of YARN along with its components.

5. Attempt any one part of the following:

10x1=10

- Demonstrate the design of HDFS and concept in detail.
- Discuss in brief about the cluster specification. Describe how to setting up a Hadoop Cluster?

6. Attempt any *one* part of the following:

10x1=10

- (a) State features of Apache Spark and also explain three ways of how Spark can be built with Hadoop components.
- (b) State difference between Java and Scala. Also explain various features of Scala.

7. Attempt any *one* part of the following:

10x1=10

- (a) Explain the architecture of HIVE. Also explain data flow in HIVE.
- (b) Compare and Contrast
 - (i) Apache Pig vs Map-Reduce
 - (ii) Pig vs SQL
 - (iii) Pig vs HIVE

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