

M.Sc.(IT & CA) Semester - 2 (CBCS) Examination
May/June-2022 (NEW COURSE)
INTRODUCTION TO BIG DATA AND HADOOP(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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| Q-1 | (a) Answer the following questions | [3] |
| | 1. What is Hadoop? | |
| | 2. What is data node? | |
| | 3. What is HDFS? | |
| | (b) Answer the following questions (ANY TWO) | [6] |
| | 1. Explain Structured and Unstructured Data. | |
| | 2. Explain Unity Shell (Ubuntu UI). | |
| | 3. Explain Advanced HDFS features. | |
| | (c) Answer the following questions (ANY ONE) | [5] |
| | 1. Explain architecture of HDFS. | |
| | 2. Explain Core Hadoop Components. | |
| Q-2 | (a) Answer the following questions | [3] |
| | 1. Write full form of YARN. | |
| | 2. Write full form of BSP. | |
| | 3. What is Tuple in pig? | |
| | (b) Answer the following questions (ANY TWO) | [6] |
| | 1. Explain input splits in pig. | |
| | 2. Differentiate: Slots vs Containers | |
| | 3. Explain map reduce architecture. | |
| | (c) Answer the following questions (ANY ONE) | [5] |
| | 1. Explain Hadoop Data Types. | |
| | 2. Explain LOAD and STORE in Pig Latin language Constructs with example. | |
| Q-3 | (a) Answer the following questions | [3] |
| | 1. To arrange the data into ascending and descending ____ is used in hive. | |
| | 2. Hadoop can be installed and run in ____ modes. | |
| | 3. Default mode of Hadoop is ____. | |
| | (b) Answer the following questions (ANY TWO) | [6] |
| | 1. Explain hive architecture. | |
| | 2. Explain managed table and external table. | |
| | 3. Compare: Pig and Hive. | |

- (c) Answer the following questions (ANY ONE) [5]
1. Explain any one optimization techniques in map reduce.
 2. Explain in detail: partitions in hive.
- Q-4 (a) Answer the following questions [3]
1. What is HBase coprocessor?
 2. What is Bidirectional?
 3. HBase is called the _____ database because it is a NoSQL database that runs On top of Hadoop.
- (b) Answer the following questions (ANY TWO) [6]
1. Create a table in HBase using java API.
 2. Explain zookeeper.
 3. Explain Region and Region Server.
- (c) Answer the following questions (ANY ONE) [5]
1. Explain HBase vs Cassandra.
 2. Explain Major and Minor compaction.
- Q-5 (a) Answer the following questions [3]
1. Write full form of MPP.
 2. Write full form of RDD.
 3. Write full form of EMR.
- (b) Answer the following questions (ANY TWO) [6]
1. Explain Read & Write Process in HDFS.
 2. Explain Spark architecture.
 3. Explain Oozie work flow.
- (c) Answer the following questions (ANY ONE) [5]
1. Explain Graph Database in detail.
 2. Explain different modes of Hadoop cluster.
