Seat No. _____

HO-003-1082002

M. Sc. (IT & CA) (Sem. II) (CBCS)
(W.E.F. 2016) Examination
April - 2023
CS - 08 : Introduction to Big Data & HADOOP

Faculty Code : 003
Subject Code : 1082002

Time : $2\frac{1}{2}$ Hours / Total Marks : **70**

1 (a) Objective type questions :   **4**

   (1) Give the full form of 3v.

   (2) What is the full form of SMAC?

   (3) Give full form of HDFS.

   (4) What is CRC?

   (b) Answer in brief : (any **one**)   **2**

   (1) Explain rack awareness and block placement.

   (2) Explain CAP theorem.

   (c) Answer in detail : (any **one**)   **3**

   (1) Explain advance features of HDFS.

   (2) Explain Name Node, Data Node and Check point Node.

   (d) Write a note on : (any **one**)   **5**

   (1) Explain HDFS Architecture.

   (2) Explain features of NoSQL Database.

2 (a) Objective type questions :   **4**

   (1) MR stands for _____ ?

   (2) CLC stands for _____ ?

   (3) In Hadoop, the default Partitioner is _____ ?

   (4) What is slot and container?

(b) Answer in brief : (any **one**)   **2**

     (1) Explain Hadoop data types.

     (2) Explain ACID v/s BASE.

(c) Answer in detail : (any **one**)   **3**

     (1) Explain Load, Store, and Dump with suitable example.

     (2) Explain Legacy MR v/s Next Generation MR.

(d) Write a note on : (any **one**)   **5**

     (1) Explain Pig Architecture.

     (2) Explain Map Reduce Architecture.

3 (a) Objective type questions :   **4**

     (1) The Java API supports Write and read binary, JSON, text and XML document. True/false?

     (2) Which two methods are required to implement the writable interface?

     (3) What is combiner?

     (4) Give the full form of TF-IDF.

(b) Answer in brief : (any **one**)   **2**

     (1) Explain different Modes of executing Hive queries.

     (2) Explain select statement with suitable example.

(c) Answer in detail : (any **one**)   **3**

     (1) Explain Old and the new MR API.

     (2) Explain sorting algorithm.

(d) Write a note on : (any **one**)   **5**

     (1) Explain Hive Architecture.

     (2) Give the difference between Pig and Hive.

4 (a) Objective type questions :   **4**

     (1) _____ is a column oriented non relational database management system.

     (2) What is ZooKeeper?

     (3) _____ is a process by which HBase cleans itself.

     (4) What is the full form of REST?

    (b)   Answer in brief : (any **one**)   **2**

        (1)   Explain Master and the Region Server.

        (2)   Explain use of Filters in HBase.

    (c)   Answer in detail : (any **one**)   **3**

        (1)   Explain HBase v/s Cassandra.

        (2)   Explain HBase coprocessors.

    (d)   Write a note on : (any **one**)   **5**

        (1)   Explain HBase Architecture.

        (2)   Explain catalog tables.

5   (a)   Objective type questions :   **4**

        (1)   What is the full form of RDD?

        (2)   Full form of DAG is _____ ?

        (3)   EMR stands for _____.

        (4)   AmazonEC2 stands for _____.

    (b)   Answer in brief : (any **one**)   **2**

        (1)   How to export data using Sqoop?

        (2)   Explain workflows in Oozie.

    (c)   Answer in detail : (any **one**)   **3**

        (1)   Explain Different interfaces of Spark.

        (2)   Explain Neo4j.

    (d)   Write a note on : (any **one**)   **5**

        (1)   Explain Spark Architecture.

        (2)   What is Flume? How it works ?

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