647510 **MIT2IbdC102x** **Seat No :_____**

M.Sc.(IT & CA) Semester - 2 (*CBCS*) Examination
March/April – 2026 (As Per Syllabus Year-2018)
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.

Que.1(A) Answer the following questions. (03)

(1) Full form of HDFS.
(2) Full form of CRC.
(3) Full form of CAP.

Que.1(B) Answer the following question. (Any Two) (06)

(1) What is Big Data? And Describe Sources of Big Data.
(2) Explain Features of HDFS.
(3) Explain data Read and Write operation in Hadoop HDFS.

Que.1(C) Answer the following question. (Any One) (05)

(1) Explain Hadoop Architecture.
(2) Explain HDFS Federation in details.

Que.2(A) Answer the following questions. (03)

(1) DHSA stands for _____.
(2) Full form of YARN.
(3) Full form of BSP.

Que.2(B) Answer the following question. (Any Two) (06)

(1) Explain Map-Reduce with example.
(2) Explain Pig LOAD operator with example.
(3) Explain Shuffling and Sorting in Map-Reduce.

Que.2(C) Answer the following question. (Any one) (05)

(1) Explain Architecture of Pig.
(2) Describe Map-Reduce Architecture.

Que.3(A) Answer the following questions. (03)

(1) Full form of DDL.
(2) Hive developed by _____.
(3) By default, Hive uses a built-in _____SQL server.

Que.3(B) Answer the following question. (Any Two) (06)

(1) What is Hive?
(2) Difference between Old and New MR API.
(3) What is Avro?

Que.3(C) Answer the following question. (Any One) (05)

(1) Explain Architecture of Hive.
(2) Explain MR Algorithms.

Que.4(A) Answer the following questions. (03)

(1) Table is a collection of _____.
(2) HBase is a _____ NoSQL Database.
(3) _____ is the default Port of Rest API.

Que.4(B) Answer the following question. (Any Two) (06)

(1) What is HBase?
(2) Explain Catalog Tables in HBase.
(3) Difference between HBase and RDBMS.

Que.4(C) Answer the following question. (Any One) (05)

(1) Explain HBase Coprocessors.

(2) Explain HBase Architecture.

Que.5(A) Answer the following questions. (03)

(1) Full form of RDD is _____.

(2) Full form of EMR.

(3) Sqoop is an open source tool written at _____.

Que.5(B) Answer the following question. (Any Two) (06)

(1) What is Apache Spark?

(2) Describe: Flume and Oozie.

(3) Explain Graph processing with Neo4J.

Que.5(C) Answer the following question. (Any One) (05)

(1) What is Sqoop? And How Sqoop works?

(2) Explain Spark Architecture.

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