

Enrolment No. /Seat No.: \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MCA INTEGRATED – SEMESTER VIII- EXAMINATION –WINTER-2025**

**Subject Code: 2688601**

**Date: 14/11/2025**

**Subject Name: Big Data Analytics**

**Time:02:30 PM TO 05:00 PM**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1** (a) What is Big Data? What are the 4 V's of Big Data? Explain. **07**  
(b) Explain algorithm of Big Data using map reduce method. **07**
- Q.2** (a) What is Hive? Explain architecture of Hive. **07**  
(b) What is HBase? Explain how data is stored in HBase with example. **07**
- OR**
- (b) What is map reducing? Discuss inputs and outputs of map reduce. **07**
- Q.3** (a) What is NoSQL? Discuss advantages and disadvantages of NoSQL. **07**  
(b) What is Hadoop? Explain Hadoop Eco system in detail. **07**
- OR**
- Q.3** (a) What is ZooKeeper? Explain how it helps in monitoring cluster. **07**  
(b) What is Apache Pig? Explain in detail. **07**
- Q.4** (a) Explain Schema design and Advanced indexing in detail. **07**  
(b) What is data analytics? Explain use of spark in it. **07**
- OR**
- Q.4** (a) What is HiveQL? Explain various statements in HiveQL with example. **07**  
(b) What are different RDD operations? Explain any one in detail. **07**
- Q.5** (a) Explain CRUD operations in MongoDB with proper example. **07**  
(b) List and explain types of NoSQL databases. **07**
- OR**
- Q.5** (a) What is MongoDB query language? Explain in detail. **07**  
(b) Explain principles of schema design in detail. **07**

\*\*\*\*\*