

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C. U. SHAH UNIVERSITY

## Winter Examination-2021

Subject Name : Business Intelligence and Big Data Analytics

Subject Code : 4TE07BIB1

Branch: B.Tech (CE)

Semester: 7

Date: 15/12/2021

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

**Q-1 Attempt the following questions: (14)**

- a) Give definition of Business Intelligence.
- b) What is the default HDFS block size?
- c) Explain Metastore in Hive.
- d) What is OLAP?
- e) Define E-commerce.
- f) What is meant by Data node?
- g) Define clustering.
- h) What are the main features of HDFS?
- i) List some tools used for Big Data.
- j) What is cluster analysis?
- k) In how many forms Big Data can be found?  
A) 2                      B) 3                      C) 4                      D) 5
- l) Which of the following are incorrect Big Data technologies?  
A) Apache Hadoop      B) Apache Spark      C) Apache PyTorch      D) Apache Kafka
- m) Which is the main component of Big Data?  
A) Map Reducer      B) HDFS      C) YARN      D) All of the above
- n) Big Data analysis does the following except?  
A) Analyzes data      B) Spreads data      C) Organizes data      D) Collects data

**Attempt any four questions from Q-2 to Q-8**

**Q-2 Attempt all questions (14)**

- a) Define NoSQL and where is it used? (03)
- b) Explain Hive Data types. (04)
- c) Write the steps of the K-means Clustering Algorithm. Also state its limitation. (07)

**Q-3 Attempt all questions (14)**

- a) Difference between Hive and RDBMS. (03)



- b) Explain characteristics of Big Data. (04)
- c) What is Market Basket Analysis? Explain Association Rules with Confidence & Support. (07)
- Q-4** **Attempt all questions** (14)
- a) Write a short note on intellectual property challenges for big data (07)
- b) Write a note on NoSQL databases. List the differences between NoSQL and relational databases. (07)
- Q-5** **Attempt all questions** (14)
- a) What is supervised and unsupervised learning? (03)
- b) How RDBMS differs from HBase? (04)
- c) Explain the architecture of Hive. List out features of Hive. (07)
- Q-6** **Attempt all questions** (14)
- a) Explain CRUD operations in MongoDB. (07)
- b) How big data analysis helps businesses increase their revenue? Give example. (07)
- Q-7** **Attempt all questions** (14)
- a) Explain Visual Data Analysis Techniques in details. (07)
- b) What are the advantages of Hadoop? Explain Hadoop Architecture and its Components with proper diagram. (07)
- Q-8** **Attempt all questions** (14)
- a) Explain four V's of big data in detail. (07)
- b) Explain the steps of the "AprioriAlgorithm" for mining Frequent Item set. (07)

