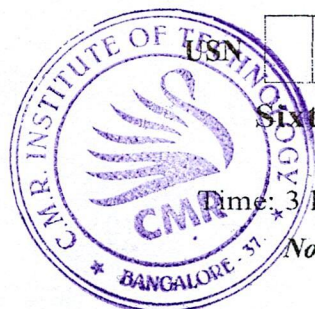


# CBCS SCHEME

BAD601/BDS601



Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025

## Big Data Analytics

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. M: Marks, L: Bloom's level, C: Course outcomes.

| Module – 1 |    |                                                                                                                                    | M  | L  | C   |
|------------|----|------------------------------------------------------------------------------------------------------------------------------------|----|----|-----|
| Q.1        | a. | Explain classification of Big Data with a diagram.                                                                                 | 10 | L2 | CO1 |
|            | b. | Define Big Data explain its characteristics and challenges.                                                                        | 10 | L1 | CO1 |
| OR         |    |                                                                                                                                    |    |    |     |
| Q.2        | a. | What is NoSQL? Explain different types of NoSQL database with an example.                                                          | 10 | L1 | CO1 |
|            | b. | Explain shared nothing architecture, CAP theorem and list its advantages.                                                          | 10 | L2 | CO1 |
| Module – 2 |    |                                                                                                                                    |    |    |     |
| Q.3        | a. | Differentiate between.<br>i. RDBMS and Hadoop<br>ii. Mapper and Reducer                                                            | 10 | L2 | CO2 |
|            | b. | Identify and explain key aspects and components of Hadoop.                                                                         | 10 | L3 | CO2 |
| OR         |    |                                                                                                                                    |    |    |     |
| Q.4        | a. | Explain Hadoop distributed File System (HDFS) with a diagram.                                                                      | 10 | L2 | CO2 |
|            | b. | Identify and explain different phase of map task and reduce task for the word count problem.                                       | 10 | L3 | CO2 |
| Module – 3 |    |                                                                                                                                    |    |    |     |
| Q.5        | a. | What is CRUD operation in Mongo DB? Explain the following commands.<br>i. Insert method<br>ii. Update on array<br>iii. Save method | 10 | L1 | CO3 |
|            | b. | Determine and explain the characteristics of Mongo DB.                                                                             | 10 | L3 | CO3 |
| OR         |    |                                                                                                                                    |    |    |     |
| Q.6        | a. | Write short notes on.<br>i. Aggregate function<br>ii. Map reduce function in Mongo DB                                              | 10 | L2 | CO2 |
|            | b. | Determine and explain creation of database, dropping of database and datatypes of Mongo DB                                         | 10 | L3 | CO2 |
| Module – 4 |    |                                                                                                                                    |    |    |     |
| Q.7        | a. | Define Hive. Explain its main task and features.                                                                                   | 10 | L1 | CO4 |
|            | b. | Analyze Hive architecture with its diagram.                                                                                        | 10 | L4 | CO4 |
| OR         |    |                                                                                                                                    |    |    |     |
| Q.8        | a. | Define Pig. Explain its feature, anatomy and philosophy.                                                                           | 10 | L1 | CO4 |
|            | b. | Examine identifiers, keywords, data types and operators of Pig with an example.                                                    | 10 | L4 | CO4 |
| Module – 5 |    |                                                                                                                                    |    |    |     |
| Q.9        | a. | Analyze spark SQL and Pandas for data analysis.                                                                                    | 10 | L4 | CO4 |
|            | b. | Determine and explain component, features of spark architecture.                                                                   | 10 | L3 | CO5 |
| OR         |    |                                                                                                                                    |    |    |     |
| Q.10       | a. | Analyze different phase of text mining process with a diagram.                                                                     | 10 | L4 | CO5 |
|            | b. | Identify and explain preprocessing steps, mining task for web content.                                                             | 10 | L3 | CO5 |

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