

# B.E. - SEM-III C-scheme Summer 2025 ECS

616125

**Duration 3 Hours**

**Maximum marks: 80**

- 1) Question 1 is compulsory
- 2) Attempt any three from the remaining questions
- 3) All questions carry equal marks.
- 4) Assume suitable data if necessary.

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|-------|---|----|
| Q.1.  | Attempt any <b>four</b> from the following questions  | 20 |
| a     | Compare Traditional and Big Data business approach.   | 5  |
| b     | Write difference between Hadoop1 and Hadoop2?   | 5  |
| c     | Explain NoSQL business drivers?   | 5  |
| d     | Write short note on CAP Theorem?  | 5  |
| e     | Explain Edit Distance with suitable example?  | 5  |
| Q.2.a | Explain Data Stream Management System with example?   | 10 |
| b     | Explain NoSQL databases in detail with examples?  | 10 |
| Q.3.a | Explain in detail K-means clustering Algorithm.   | 10 |
| b.    | Explain in detail about Apriori Algorithm.  | 10 |
| Q.4.a | Explain Page Rank with suitable example and discuss the problem associated with PageRank?           | 10 |
| b.    | List Big Data Challenges and solution for each of the challenge.                                    | 10 |
| Q.5 a | Give functions of all components of Hadoop Ecosystem and explain core components in detail.         | 10 |
| b     | Explain Bloom filtering with suitable example?  | 10 |
| Q.6 a | Explain various phases of Map-Reduce execution pipeline and role of combiner with suitable example. | 10 |
| b     | Explain Collaborative Filtering and Content-based filtering in Recommendation Systems with example? | 10 |

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