

**End SemesterQuestion Bank**

**Year/Sem:III -II**  **Program**: B. Tech **Regulation**: **KGR21**

**Name of the Course: BIG DATA ANALYTICS Course Code: KG21CD603**

**Branch**:**Computer Science & Engineering Data Science** **Academic Year:** 2024-25

**Name & Details of the Course Coordinator: Mrs.Afiya Parveen Begum**

K1-Remembering; K2-Understanding; K3-Applying; K4-Analyzing; K5-Evaluating; K6-Creating

**Note: minimum no. of 05 marks Question are 08 for unit**

**Minimum no. of 10 marks Question are 03 for unit**

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| **Q.**  **No.** | **Question** | **Course**  **Outcome** | **Bloom’s Taxonomy Level** | **Marks** |
| **Unit-I** | | | | |
| 1 | Explain the key characteristics of Big Data. | CO1 | K2 | 05 Marks |
| 2 | Discuss some important applications of Big Data across different industries. | CO1 | K2 | 05 Marks |
| 3 | **List** and briefly explain a few important Big Data tools and their applications. | CO1 | K1 | 05 Marks |
| 4 | **Identify** and explain the various sources of digital data with relevant examples. . | CO1 | K1 | 05 Marks |
| 5 | **Illustrate** and explain the different forms of data with suitable examples. | CO1 | K2 | 05 Marks |
| 6 | **Explain** the importance of Big Data and its impact on various industries with relevant examples. | CO1 | K2 | 05 Marks |
| 7 | Identify and explain the key challenges of Big Data with suitable examples. | CO1 | K1 | 05 Marks |
| 8 | Explain the differences between Traditional Data and Big Data with relevant examples. | CO1 | K2 | 05 Marks |
| 9 | **Evaluate** and explain four Vs of big data with examples. | CO1 | K5 | 10 Marks |
| 10 | **Select** drivers of big data using suitable example. | CO1 | K5 | 10 Marks |
| 11 | **Design** the applications of big data analytics? | CO1 | K6 | 10 Marks |
| Unit-II | | | | |
| 1 | **Define** HDFS and **explain** its significance in Big Data processing. | CO2 | K2 | 05 Marks |
| 2 | **Explain** Mobile BI and its significance in business intelligence with relevant examples. | CO2 | K2 | 05 Marks |
| 3 | **Define** Predictive Analytics and explain its importance with relevant examples. | CO2 | K1 | 05 Marks |
| 4 | **Contrast** between open source and proprietary tools in big data. | CO2 | K2 | 05 Marks |
| 5 | **Utilize** cloud environment and explain its importance? | CO2 | K3 | 05 Marks |
| 6 | **Contrast** between Cloud Computing and Big Data, highlighting key differences with examples. | CO2 | K2 | 05 Marks |
| 7 | **Explain** Data Discovery and its role in data analysis with relevant examples. | CO2 | K2 | 05 Marks |
| 8 | **Define** Predictive Analytics and describe its significance with suitable examples. | CO2 | K1 | 05 Marks |
| 9 | **Arguing** the concept of Hadoop Parallel World and its significance in Big Data processing | CO2 | K5 | 10 Marks |
| 10 | **Evaluate** the differences between Open Source Technologies and Proprietary Tools with relevant examples. | CO2 | K5 | 10 Marks |
| 11 | **Justify** Mobile BI and explain Crowd sourced Analytics with relevant examples. | CO2 | K5 | 10 Marks |
| Unit-III | | | | |
| 1 | **Explain** the Hadoop Ecosystem and its key components with relevant examples. | CO3 | K2 | 05 Marks |
| 2 | **Explain** the core components of Hadoop and their roles in Big Data processing. | CO3 | K2 | 05 Marks |
| 3 | **What** is MapReduce? Explain its role in Big Data processing with relevant examples. | CO3 | K1 | 05 Marks |
| 4 | **What** is a Key-Value Data Store? **Explain** its significance with relevant examples. | CO3 | K2 | 05 Marks |
| 5 | **Define** Serialization and explain its importance with relevant examples. | CO3 | K1 | 05 Marks |
| 6 | **List** and **explain** the key components of the Hadoop ecosystem with their functions. | CO3 | K2 | 05 Marks |
| 7 | **Explain** Data Serialization and its importance using a suitable example. | CO3 | K2 | 05 Marks |
| 8 | **Explain** the logical architecture of MapReduce and its workflow with a suitable example. | CO3 | K2 | 05 Marks |
| 9 | **Construct** the Hadoop architecture with a suitable diagram and example. | CO3 | K6 | 10 Marks |
| 10 | **Design** the Data Flow Representation in Hadoop with a suitable example. | CO3 | K6 | 10 Marks |
| 11 | **Analyze** the inputs and outputs of map reduce. | CO3 | K4 | 10 Marks |
| Unit-IV | | | | |
| 1 | **Compare** RDBMS and Hadoop, highlighting their key differences with relevant examples. | CO4 | K4 | 05 Marks |
| 2 | **Evaluate** the role of HDFS Daemons and their significance in Hadoop architecture. | CO4 | K5 | 05 Marks |
| 3 | **Contrast** between Hive and Pig, highlighting their key differences with relevant examples. | CO4 | K4 | 05 Marks |
| 4 | **Lis**t and **explain** the major Hadoop distributors and their key features. | CO4 | K2 | 05 Marks |
| 5 | **Identify** the roles of HBase and explain its advantages with relevant examples. | CO4 | K1 | 05 Marks |
| 6 | **Explain** about anatomy of file read and file write in Hadoop? | CO4 | K2 | 05 Marks |
| 7 | **Explain** the roles of Name Node and Data Node in Hadoop with relevant examples. | CO4 | K2 | 05 Marks |
| 8 | **Differentiate** RDBMS and Hadoop, highlighting their key differences with relevant examples. | CO4 | K4 | 05 Marks |
| 9 | **Assessing** about map reduce framework? | CO4 | K5 | 10 Marks |
| 10 | **Evaluate**  Hbase,its featuresand its applications? | CO4 | K5 | 10 Marks |
| 11 | **Demonstrate**  the Pig and Hive in detail. | CO4 | K3 | 10 Marks |
| Unit-V | | | | |
| 1 | **Define** Supervised Learning and explain its significance with relevant examples. | CO5 | K1 | 05 Marks |
| 2 | **Define** Unsupervised Learning and explain its significance with relevant examples. | CO5 | K1 | 05 Marks |
| 3 | **Explain** Collaborative Filtering and explain its significance with relevant examples. | CO5 | K2 | 05 Marks |
| 4 | **Define** Mobile Analytics and explain its significance with relevant examples. | CO5 | K1 | 05 Marks |
| 5 | **Explain** Social Media Analytics and its significance with relevant examples. | CO5 | K2 | 05 Marks |
| 6 | **Demonstrate** Unsupervised Learning with a suitable example and explain its significance. | CO5 | K3 | 05 Marks |
| 7 | **Explain** about R analytics and its tools? | CO5 | K2 | 05 Marks |
| 8 | **How** can R Analytics be implemented? Explain with relevant examples. | CO5 | K2 | 05 Marks |
| 9 | **Simulating** in detail about Supervised Learning with relevant examples. | CO5 | K6 | 10 Marks |
| 10 | **Analyze** collaborative filtering step by step. | CO5 | K4 | 10 Marks |
| 11 | **Compare** and contrast between mobile analytics and social media analytics? | CO5 | K4 | 10 Marks |