

Code No.: DS623PE

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**CMR ENGINEERING COLLEGE: : HYDERABAD**  
**UGC AUTONOMOUS**  
**III-B.TECH-II-Semester End Examinations (Regular) - May- 2023**  
**DATA ENGINEERING**  
**(CSD)**

[Time: 3 Hours]

[Max. Marks: 70]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

(20 Marks)

1. a) List drawbacks of RDBMS. [2M]
- b) Define OLAP and OLTP in DBMS. [2M]
- c) What are 4 Vs of Big Data? [2M]
- d) What is cloud computing and give an example of cloud provider? [2M]
- e) Define Idempotency and List idempotent methods in REST API. [2M]
- f) Differentiate between Docker Image and Docker Container. [2M]
- g) Define ACID properties. [2M]
- h) What is MPP database and give an example? [2M]
- i) List types of Machine Learning techniques? [2M]
- j) What is the difference between Lambda Architecture and Kappa Architecture? [2M]

**PART-B**

(50 Marks)

2. Compare and Contrast SQL and NO SQL Databases. [10M]  
OR
3. Explain the importance of Data storage and types of data storage and their advantages and disadvantages. [10M]
4. Explain briefly about Dataware house Architecture. [10M]  
OR
5. Explain in detail about any 3 services of AWS. [10M]
6. What is REST API and explain about architecture and principles of REST API? [10M]  
OR
- 7.a) Define Container Orchestration. [2M]
- b) Why do we need container orchestration? [3M]
- c) How Does Container Orchestration work and its benefits? [5M]
8. Explain about data processing frameworks and its components. [10M]  
OR
- 9.a) What is Document Store database? [2M]
- b) Distinguish between HDFS and MongoDB. [8 M]
- 10.a) What is Data Processing? [2 M]
- b) Compare between Batch and Stream processing in analytics. [8 M]  
OR
- 11.a) Explain about Artificial Intelligence, Machine learning and Deep Learning. [5 M]
- b) How Training and Testing data sets work in Machine learning? [5 M]

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