**UNIT I**

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| **Q.No.** | **Question** | **Marks** |
| 1 | Compare structured and unstructured data with example. What is NoSQL? Why NoSQL is required? | 10 |
| 2 | Compare advantages and disadvantages of RDBMS and NoSQL. | 8 |
| 3 | What is CAP Theorem? Compare ACID properties of RDBMS with BASE properties of NoSQL. | 8 |
| 4 | Which are the various categories of NoSQL Database? | 8 |
| 5 | Which are the various challenges of NoSQL? Explain pros and cons of NoSQL in brief. | 8 |
| 6 | Explain in brief the following benefits of NoSQL over SQL   1. Dynamic Schemas 2. Sharding 3. Replication 4. Integrated Caching | 10 |
| 7 | Differentiate between SQL and NoSQL | 8 |
| 8 | What is MongoDB? Explain following components of MongoDB with suitable examples   1. MongoDB Database 2. Collection 3. Document | 8 |
| 9 | What is MongoDB shell? Write command to access MongoDB database using MongoDB Shell. | 4 |
| 10 | Explain basic data types in MongoDB. | 8 |
| 11 | Write queries in MongoDB to perform basic operations (Create, Update, Read and Delete) on documents. | 8 |
| 12 | A user wants to insert 1000 documents into MongoDB collection with the value of key “ID” increments by 1 while the value of key “STATUS” is 1 for all documents. Let the name of database id mydb and name of collection is MyCollection. Write the suitable queries.  {  “ID” : (0-1000)  “STATUS” : 1  } | 4 |
| 13 | Explain with suitable examples various methods to update the documents in MongoDB. | 6 |
| 14 | Explain with suitable examples the following modifiers in MongoDB :   1. $set 2. $inc 3. $push 4. $pull | 10 |
| 15 | What is aggregation? Explain various methods to achieve aggregation in MongoDB. | 6 |
| 16 | Explain with suitable examples   1. Aggregation Pipeline 2. Map-Reduce | 10 |
| 17 | Explain ***group*** and ***distinct*** queries with suitable examples. | 4 |
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