

**Time: 3 Hours****Total Marks: 80**

- N.B.:**
- 1) Question No.1 is **compulsory**.
  - 2) Attempt any **three** from the remaining **five** questions.
  - 3) Figures to the right indicate full marks

- Q1.** Write short note on
- (a) CAP theorem **5**
  - (b) HiveQL **5**
  - (c) Speculative Execution **5**
  - (d) HDFS High availability **5**
- Q2.**
- (a) What is Big Data? What are its various characteristics? **10**
  - (b) Explain the Hadoop ecosystem with the diagram. Elaborate any three components of Hadoop Ecosystem? **10**
- Q3.**
- (a) Explain Map Reduce Architecture and elaborate Map task and Reduce task with an example? **10**
  - (b) Discuss HBASE architecture. **10**
- Q4.**
- (a) Illustrate with Diagram Hadoop Architecture YARN 2.0 in detail? **10**
  - (b) Write down a Map Reduce algorithm for word Count. **10**
- Q5.**
- (a) What is HIVE? Explain HIVE architecture in detail. **10**
  - (b) What is Pig? Discuss the Load () & Store() commands in Pig framework. **10**
- Q6.** Write short notes on **any four** of the followings **20**
- (a) Row oriented vs. column oriented storage
  - (b) Recordreader in Hadoop Mapreduce
  - (c) Name Node vs Data Node
  - (d) 5 HDFS Commands
  - (e) Key-value databases

\*\*\*\*\*