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Sub Code: NIT-067

Roll No. 

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**B. TECH.**  
**(SEM VI) THEORY EXAMINATION 2017-18**  
**BIG DATA**

**Time: 3 Hours****Total Marks: 100**

Note: Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt all questions in brief. 2 x 10 = 20**

- a. What is big data, why we need to analyze big data?
- b. Define "Data Locality Optimization".
- c. List down the tools related with Hadoop.
- d. State the purpose of Hadoop Pipes.
- e. What is map reducing?
- f. Write the difference between operational and analytical system.
- g. Explain Hadoop distributed file system.
- h. Write down any four industry examples for Big Data.
- i. List down the entity of YARN.
- j. What is Hadoop architecture?

**SECTION B**

**2. Attempt any three of the following: 10 x 3 = 30**

- a. Why crowd sourcing analytics needed? Explain.
- b. Illustrate on how cloud and big data related to each other.
- c. Discuss the design of Hadoop Distributed File System (HDFS) in detail.
- d. Discuss the queries involved in Hive data definition.
- e. Write in detail about Hbase data model and pig data model.

**SECTION C**

**3. Attempt any one part of the following: 10 x 1 = 10**

- (a) How does Hadoop system analyze data? Explain your answer with example.
- (b) Explain Cassandra data model.

**4. Attempt any one part of the following: 10 x 1 = 10**

- (a) Explain the Anatomy of MapReduce job run.
- (b) Discuss the different types and formats of Map Reduce with examples.

**5. Attempt any one part of the following: 10 x 1 = 10**

- (a) With the help of a Data Model explain aggregations and relations.
- (b) Write a brief note on composing map-reduce calculation.

**6. Attempt any one part of the following: 10 x 1 = 10**

- (a) Explain Master slave and peer-peer replication in detail.
- (b) Discuss about the three dimensions of Big Data.

**7. Attempt any one part of the following: 10 x 1 = 10**

- (a) Describe about graph database and schema less databases.
- (b) Elaborate on graph mapping schemas. What do you mean by lower bounds replication rate?