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Printed Pages : 1 Roll No. NIT067

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B.TECH.

THEORY EXAMINATION (SEM–VI) 2016-17

BIG DATA

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Explain the following: **10 x 2 = 20**

(a) List the characteristics of big data.

(b) How to calculate risk in marketing?

(c) Why would you use inferential statistics in big data?

(d) What do you mean by shrading?

(e) State the usage of Hadoop pipes.

(f) Compare Master-Slave and peer to peer architecture in NoSql.

(g) What is the purpose of bloom filter?

(h) Compare the classic Map Reduce with YARN.

(i) Mention the usage of Grunt.

(j) How Date and Time data types are used in Hive?

(k) Why Hive is preferred instead of PigLatin?

SECTION – B

2. Attempt any five of the following questions: **5 x 10 = 50**

(a) Relate crowd sourcing and big data. Justify the relationship with an example.

(b) Write down the aggregate data model in detail with an example.

(c) Differentiate "Scale up and Scale out" Explain with an example How Hadoop uses Scale out feature to improve the Performance.

(d) Discuss in detail about the basic building blocks of Hadoop with a neat sketch.

(e) Explain in detail about Map-reduce Workflows.

(f) Provide overview of HBase data model.

(g) Enumerate the rules followed while data modeling in Cassandra. How the relationships are handled in Cassandra?

(h) Write down the Hive queries for natural join and outer join. Give examples.

SECTION – C

Attempt any two of the following questions: **2 x 15 = 30**

3 (i) Explain with a neat sketch about the processing of a job in hadoop.

(ii) List the various operational modes of hadoop cluster configuration and explain in detail about configuring/installing the hadoop in local/standalone mode.

4 (i) Consider the student data File (st.txt), Data in the following format Name, District, age, gender.

- Write a PIG script to Display Names of all female students
- Write a PIG script to find the number of Students form XXXX District
- Write a PIG script to Display District wise count of all male students.

(ii) Explain the operators supported by pig w.r.to. data access, transformations and debugging operations.

5 (i) Discuss the different ways of constructing version stamps. What are their pros and cons?

(ii) Write in detail about the three dimensions of big data.

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