GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VIII (NEW) EXAMINATION – WINTER 2017

Subject Code: 2180710   **Date: 07/11/2017**

Subject Name: Big Data Analytics(Departmental Elective - III)

Time:02:30 PM TO 05:00 PM   **Total Marks: 70**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

			MARKS
Q.1	**(a)**	Explain structure and semi structure	**03**
	(b)	Drivers for Big Data	**04**
	(c)	Explain Four V's	**07**
Q.2	**(a)**	Explain fair and capacity scheduler	**03**
	(b)	How Map Reduce work and explain terminology used in Map reduce	**04**
	(c)	Hadoop serialization with example	**07**
		OR	
	(c)	Draw Map Reduce Execution pipeline architecture	**07**
Q.3	**(a)**	Difference between Hive and RDBMS	**03**
	(b)	Explain Hive Data types	**04**
	(c)	Explain the HiveQL-Select-Order By with suitable example	**07**
		OR	
Q.3	**(a)**	Difference between HDFS and HBase	**03**
	(b)	Explain HBase architecture	**04**
	(c)	Define join and explain types of join	**07**
Q.4	**(a)**	Define Spark and features of Apache Spark	**03**
	(b)	Explain the following spark components i) MLib ii) GraphX	**04**
	(c)	Explain traditional stream processing architecture	**07**
		OR	
Q.4	**(a)**	How many ways of creating RDDs explain it?	**03**
	(b)	i) Dynamic Load Balancing ii) Fast failure and straggler recovery.	**04**
	(c)	Explain feature Extraction and Transformation	**07**
Q.5	**(a)**	Define NoSQL and where is it used?	**03**
	(b)	i) Document Oriented Database ii) Graph based Database	**04**
	(c)	Use of NoSQL in industry	**07**
		OR	
Q.5	**(a)**	Define NewSQL and explain benefits and limitation of NewSQL	**03**
	(b)	Explain MongoDB shell and how to run the shell	**04**
	(c)	Explain MongoDB-Create database and Drop-Database	**07**