Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

V SEMESTER B.TECH. (COMPUTER SCIENCE & ENGINEERING)

END SEMESTER EXAMINATIONS, NOV/DEC 2016

SUBJECT: BUSINESS INTELLIGENCE AND ITS APPLICATIONS

[CSE 4024]

REVISED CREDIT SYSTEM
(01/12/2016)

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL** the questions.
- Missing data may be suitable assumed.

1A.	What are the different ways of managing semi-structured data?	**3**
1B.	What is the need and advantages of data integration? Write a note on following data integration technologies. i. Data Interchange ii. Object Brokering	**1+3**
1C.	Differentiate between OLTP and OLAP. Mention any 6 differences.	**3**
2A.	Define data quality and explain any 4 characteristics or dimensions with necessary example.	**5**
2B.	Explain with neat diagram, advantages and disadvantages of Ralph Kimball's and Inmon's approach of building a data warehouse.	**3**
2C.	What is data Profiling? When to conduct data profiling?	**2**
3A.	Explain the role of physical data model. Give steps for designing a physical data model.	**3**
3B.	Write a note on star model and Snowflake model for OLAP with an example.	**4**
3C.	Explain different types of OLAP architecture along with their advantages and disadvantages.	**3**
4A.	Explain different types of Dimension tables.	**5**
4B.	Define any 3 terminologies associated with system measurement with an example to each.	**3**
4C.	Explain SMART test and its related focus for ensuring metric relevance to business.	**2**

5A. Define 1st Normal form ,2nd Normal Form, and 3rd Normal Form.Convert the following relational table TABLE_PURCHASE_DETAIL shown in Table Q.5A into 2nd Normal Form. Justify your answer.

TABLE_PURCHASE_DETAIL

Customer ID	Store ID	Purchase Location
1	1	Los Angeles
1	3	San Francisco
2	1	Los Angeles
3	2	New York
4	3	San Francisco

3

Table Q.5A.

5B. Explain the different steps used in creating a dash board. **4**

5C. Show diagrammatically how the data in relational table shown in Table Q.5C can be represented in Multi-Dimensional OLAP cube. **3**

Model	Year	Color	Sales
Chery	1990	Red	5
Chery	1990	White	87
Chery	1990	Blue	62
Chery	1991	Red	54
Chery	1991	White	95
Chery	1991	Blue	49
Chery	1992	Red	31
Chery	1992	White	54
Chery	1992	Blue	71
Ford	1990	Red	64
Ford	1990	White	62
Ford	1990	Blue	63
Ford	1991	Red	52
Ford	1991	White	9
Ford	1991	Blue	55
Ford	1992	Red	27
Ford	1992	White	62
Ford	1992	Blue	39

Table Q.5C