MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

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

MAKEUP EXAMINATIONS, DEC 2017

SUBJECT: BUSINESS INTELLIGENCE AND ITS APPLICATION [CSE 4024]

REVISED CREDIT SYSTEM
(27/12/2017)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

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

1A.	Define Business Intelligence. Explain the reasons why BI fails.	**4M**
1B.	Distinguish between data information and knowledge. Explain the process of converting data into actionable plan.	**3M**
1C.	What is structured Data? What are the characteristics of structured data? Mention few sources of structured data.	**3M**
2A.	Differentiate between OLAP and OLTP architecture.	**4M**
2B.	Write Ralph Kimbell's definition of DW. What is a DataMart? What are the goals of data warehouse?	**4M**
2C.	What is Data Profiling? Explain how to conduct Data Profiling?	**2M**
3A.	What is an ER diagram? What are the steps to draw an ER diagram? What are the various problems in ER modelling	**3M**
3B.	Suppose you are given the following requirements for a simple database for the National Hockey League (NHL): •The NHL has many teams. •Each team has a name, a city, a coach, a captain, and a set of players. •Each player belongs to only one team. •Each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records. •A team captain is also a player. •A game is played between two teams (referred to as host team and guest_team) and has a date (such as May 11th, 1999) and a score (such as 4 to 2). Construct an ER diagram for the NHL database. List your assumptions and clearly indicate the cardinality mappings as well as any role indicators in your ER diagram.	**3M**
3C.	With examples explain different dimensions of data quality?	**4M**

4A. Define metric, indicator and index. Briefly explain different metric components. Cell phone cost in Asia pacific region is USD 100 against target of USD 75. Mention all the metric component present in the above statement. **3M**

4B. What are the various attributes of dimension table? Explain the various types of dimension tables. **3M**

4C. Suppose that a data warehouse consists of three dimensions time, doctor and patient, and two measures count (the number of patients examined) and charge (fee that a doctor charges a patient for a visit). **4M**
i. Draw a snowflake schema for the above data warehouse.
ii.Starting with the base cuboid [day, doctor, patient], what specific OLAP operations should be performed in order to list the total fee collected by each doctor in 2010?
iii. Starting with the base cuboid [day, doctor, patient], what specific OLAP operations should be performed to list the total fee paid by patient John Citizen in the years 2009 and 2010 combined?

5A. What is a Dashboard? How do you create Dashboard? **3M**

5B. List and explain unique perspective of balanced scorecard. **3M**

5C. What are the visible components of designer window when working on a SSIS Project? Explain the functionality of any 3 of them. **4M**