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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

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

END SEMESTER EXAMINATIONS, NOV/DEC 2017

SUBJECT : BUSINESS INTELLIGENCE AND ITS APPLICATION [CSE 4024]

REVISED CREDIT SYSTEM (22-11-2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **All five** full questions.
- ❖ Missing data may be suitably assumed.

- 1A.** With a diagram explain UIMA Architecture. **4M**
- 1B.** Differentiate between OLTP and OLAP for the following features: **3M**
a) Focus b) Purpose of data c) Data contents d) Queries
e) Access f) Operations
- 1C.** Explain why Business Intelligence is necessary. **3M**
- 2A.** What are the main goals of a Data Warehouse? **3M**
- 2B.** Explain the technologies used for data integration. Give suitable diagrams. **5M**
- 2C.** Write 4 differences between federated database and data warehouse. **2M**
- 3A.** An industry service provider, “InfoMechanics”, has several business units(BUs) such as testing services(FS) and Insurance services(IS). Each BU has a BU head, who is most certainly an employee of the company. A BU head can head at the most one BU. A BU head as the manager, has many employees reporting to him. Each employee has a current residential address. There are also cases where a couple (both husband and wife) are employed either in the same BU or a different one. In such a case, they (the couple) have the same address. An employee can be on a project, but at any given point in time, he or she can be working on a single project only. Each project belongs to a client. There could be chances where a client has awarded more than one project to the company (either to the same BU or different BUs). A project can also be split into modules which can be distributed to BUs according to their field of specialization. e.g., in an insurance project, the development and maintenance work is with insurance services(IS) and the testing task is with testing services(TS). Each BU usually works on several projects at a time.
Given the above specifications, draw the ER Model for “InfoMechanics”. **4M**
- 3B.** What is a for loop container? What are the properties of the for loop container which gives the number of times it is executed? With a diagram show how it can be used to execute SQL task and Data flow task multiple times. **4M**
- 3C.** What is an Analysis Services Execute DDL Task? Which DDL queries can it handle for cubes and dimensions? **2M**

- 4A.** What is a conceptual data model? List all features of a conceptual data model. **5M**
Give the conceptual data model for TenToTen stores.
- 4B.** Explain any three SMART test for ensuring metric relevance to business. **3M**
- 4C.** What are measures and measure groups as pertaining to cubes. **2M**
- 5A.** Categorize Dashboards based on span of data and describe each of them. **3M**
- 5B.** List 8 common mistakes in Dashboard design. **4M**
- 5C.** With a diagram explain the Report structure of a Report Project. **3M**