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## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Fifth Semester, Master of Computer Applications (MCA)

Semester End Examination; Dec - 2016/Jan - 2017

**Business Intelligence-Data Warehousing and Analytics**

Time: 3 hrs

Max. Marks: 100

*Note: Answer FIVE full questions, selecting ONE full question from each unit.*

### UNIT - I

- 1 a. Explain structured, semi-structured and unstructured data with examples. 12
- b. Why do we need core business function? List few common core business functions. Describe the core business functions with an example. 8
- 2 a. Describe the different OLAP architectures. 7
- b. Bring out the differences between OLTP and OLAP. 8
- c. Suppose that a data warehouse consists of three dimensions time, doctor and patient, and the two measures count and charge, where charge is the fee that a doctor charges a patient for a visit. Draw a star schema for the data warehouse. 5

### UNIT - II

- 3 a. Briefly explain the common OLAP operations on multidimensional data with an example for each. 12
- b. Explain how BI contributes to visibility into enterprise performance. 8
- 4 a. What is Business Intelligence? Explain the important features of Business Intelligence. 10
- b. Bring out the differences between,  
i) Enterprise Resource planning and BI      ii) Business analytics and BI. 10

### UNIT - III

- 5 a. Differentiate between casual and power users. 5
- b. Describe BI component framework. 10
- c. Explain any five best practices to be followed in BI space. 5
- 6 a. State the differences between data warehouse and data marts. 5
- b. What are the differences between top-down approach and the bottom-up approach for building a data warehouse? 5
- c. What are the advantages of data integration? Explain the two approaches for data integration. 10

### UNIT - IV

- 7 a. Explain the various types of facts with an example for each. 10
- b. Explain the different approaches for handling a slowly changing dimension. 10

- 8 a. Explain the four components of metric data: subject, quantum, stratum and application. Use an example to explain your answers. 5
- b. What is KPI? List few sample KPI employed for a restaurant case study by,
  - i) Employee Training Management Division 15
  - ii) Help desk division
  - iii) Human capital and training management division.

**UNIT - V**

- 9 a. Describe the usage of KPI in companies. 8
- b. Explain the different types of common report layout. 12
- 10a. Describe the characteristics of Enterprise reporting in OLAP world. 10
- b. What are Dash Boards? Explain the types of Dash boards. 10

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