



## 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

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|------|---|----|
| 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,   | 10 |
|      | i) Enterprise Resource planning and BI      ii) Business analytics and BI.                    |    |

### UNIT - III

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|------|---|----|
| 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

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|------|---|----|
| 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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