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P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Eighth Semester, B.E. - Computer Science and Engineering
Semester End Examination; July - 2023
Business Intelligence and Applications

Time: 3 hrs   *Max. Marks: 100*

Course Outcomes

The Students will be able to:
CO1: Illustrate role of business intelligence in the IT applications.
CO2: Construct OLAP operations to analyze business intelligence
CO3: Apply various ETL techniques of data integration
CO4: Identify data modeling technique to analyze data for a successful business enterprise.
CO5: Construct enterprise reports for various situations of a business enterprise

Note: **I) PART - A** *is compulsory.* **Two** *marks for each question.*
   II) PART - B: *Answer any* **Two** *sub questions (from a, b, c) for a Maximum of* **18 marks** *from each unit.*

Q. No.	Questions	Marks	BLs	COs	POs
	I : PART - A	**10**			
1 a.	List out the advantages and challenges of OLTP.	2	L2	CO1	PO1,2
b.	Explain BI value chain.	2	L2	CO2	PO1,2
c.	Define ETL and the purpose.	2	L2	CO3	PO1,2
d.	Define entity, attribute with respect to data modeling.	2	L2	CO4	PO1,2
e.	What are dashboards and why enterprises need dashboards?	2	L2	CO5	PO1,2
	II : PART - B	**90**			
	UNIT - I	**18**			
2 a.	Compare and contrast structured, semi-structured and unstructured data.	9	L3	CO1	PO1,2
b.	Explain different types of OLAP architecture in detail.	9	L2	CO1	PO1,2
c.	Investigate the differences between OLTP and OLAP.	9	L3	CO1	PO1,2
	UNIT - II	**18**			
3 a.	Explain the categories of BI roles and their responsibilities.	9	L2	CO2	PO1,2
b.	Describe the components of BI architecture.	9	L2	CO2	PO1,2
c.	Illustrate how BI support decision making in the enterprise?	9	L2	CO2	PO1,2
	UNIT - III	**18**			
4 a.	Define data warehouse. Describe the goals of data warehouse.	9	L2	CO3	PO1,2
b.	Illustrate how schema integration and instance integration are carried out using suitable examples.	9	L2	CO3	PO1,2
c.	What is data profiling? Explain when and how to conduct data profiling?	9	L2	CO3	PO1,2

	UNIT - IV	**18**			
5 a.	Define data model. Explain three types of data models.	9	L2	CO4	PO1,2
b.	Explain star, snowflake and fact constellation schemas with suitable examples.	9	L2	CO4	PO1,2
c.	Write a note on Key Performance Indicators (KPI).	9	L2	CO4	PO1,2
	UNIT - V	**18**			
6 a.	Explain the features of good reporting.	9	L2	CO5	PO1,2
b.	Discuss the common report layout types.	9	L2	CO5	PO1,2
c.	Explain the perspectives of balanced scorecard.	9	L2	CO5	PO1,2

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