

(2½ hours)

[Total Marks: 75]

- N. B.: (1) **All** questions are **compulsory**.  
 (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.  
 (3) Answers to the **same question** must be **written together**.  
 (4) Numbers to the **right** indicate **marks**.  
 (5) Draw **neat labeled diagrams** wherever **necessary**.  
 (6) Use of **Non-programmable** calculators is **allowed**.

**1. Attempt any two of the following:****10**

- What is a Data Warehouse? Explain.
- Explain the architecture of a Data Warehouse.
- Explain the granularity of facts with a suitable example.
- What is meant by additivity of facts?

**2. Attempt any two of the following:****10**

- What are the steps to configure a listener in OWB?
- How is the Repository and workspace configured using OWB?
- Name and explain the three windows in the main Design Center screen.
- What is the role of a module in the Design Center and explain the steps to create an Oracle module?

**3. Attempt any two of the following:****10**

- Explain star schema with a suitable example.
- Explain ROLAP and MOLAP.
- Every dimension, has four characteristics that have to be defined in OWB. What are they?
- What is the significance of Time Dimension and explain the steps to create a Time Dimension.

**4. Attempt any two of the following:****10**

- What is meant by ETL in data warehouse? Explain.
- Explain any four source and target operators in OWB.
- What are the four different constraints that can be added to a table?
- What are the steps involved while designing any mapping in OWB?

**5. Attempt any two of the following:****10**

- Explain with example any four transformation operators in OWB.
- What are the features and benefits of OWB?
- The process of building the data warehouse from our model in the Warehouse Builder involves four steps. What are they? Explain.
- What are the five Default operating modes of the mapping?

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**6. Attempt any two of the following:****10**

- What are the five operations that can be performed on Snapshots in OWB?
- What is the significance of Metadata Loader (MDL) feature used for export and import of workspace objects in OWB?
- What happens if, let's say for example, a table definition is updated after we have defined it and created a mapping or mappings that include it? What if a dimensional object is changed? In that case, what happens to the underlying table? How is this handled in OWB?
- How is the term Data Explosion related to Data warehouse?

**7. Attempt any three of the following:****15**

- Differentiate OLAP and OLTP.
- Explain OWB components with a neat diagram.
- Explain the various OWB design objects.
- Explain any four data flow operators in OWB.
- What are the details given by The Object Details window in control center manager?
- What is meant by Metadata change management in OWB? Explain.