

(Time: $2\frac{1}{2}$ hours)

[Marks: 75]

Please check whether you have got the right question paper.

- 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 calculator is allowed.

1. Attempt any two of the following: 10

- What are the characteristics of a Data Warehouse?
- Differentiate OLTP and OLAP.
- Explain the different types of facts in a fact table with suitable examples.
- Differentiate Star and Snowflake Schema with respect to Data warehouse.

2. Attempt any two of the following: 10

- Why is it necessary to configure a listener before creating the database? Explain the steps to configure a listener.
- What are the different components of OWB? Illustrate the same with a neat diagram.
- Explain the three windows in the OWB Design Center.
- What is the role of a DSN? What are the steps involved in configuring a DSN?

3. Attempt any two of the following: 10

- Why is it necessary to create a target user and a target module while designing a DW in OWB?
- Differentiate relational and multidimensional implementation of a dimensional model in a database.
- Why Time dimension is considered a key part of most data warehouses? Explain the different characteristics of a dimension that has to be defined in an OWB.
- What are the Cube Details that can be seen for a cube in the Data Object Editor?

4. Attempt any two of the following: 10

- What is the significance of ETL while creating a Data Warehouse in OWB? How is this accomplished in OWB?
- Explain how an Aggregator data flow operator is used in mapping between sources and targets in OWB.
- Discuss in detail the constraints tab in the Data Object Editor in OWB.
- What is the role of a Joiner data flow operator in mapping sources and targets in OWB?

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5. Attempt any two of the following:
- Explain any three transformations operator in OWB.
 - Why is a Key Lookup operator necessary in a mapping in OWB?
 - Why is it important to validate the objects in a Design Center? What are the possible results after validation process?
 - What are the default operating modes the mapping code can run in when executing in the database?
6. Attempt any two of the following:
- What is the significance of Snapshot in OWB?
 - Why is it necessary to synchronize objects in OWB?
 - Explain the terms Data Sparsity and Data Explosion with respect to a Data warehouse.
 - Explain with a neat diagram the basic OLAP System Architecture.
7. Attempt any three of the following:
- Explain Slowly Changing Dimension with a suitable example.
 - What are the steps involved in configuring repository and workspaces in OWB?
 - What are the **Dimension Details** that can be seen in the **Data Object Editor**?
 - List the properties seen in the property window of Aggregator operator.
 - Explain the columns in Object Details window under the Control Center Manager window in OWB.
 - What is the role of Recycle Bin in OWB? Explain.
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