(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**

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

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

a. What are the steps to configure a listener in OWB?
b. How is the Repository and workspace configured using OWB?
c. Name and explain the three windows in the main Design Center screen.
d. 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**

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

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

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

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

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

[TURN OVER]

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

a. What are the five operations that can be performed on Snapshots in OWB?

b. What is the significance of Metadata Loader (MDL) feature used for export and import of workspace objects in OWB?

c. 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?

d. How is the term Data Explosion related to Data warehouse?

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

a. Differentiate OLAP and OLTP.

b. Explain OWB components with a neat diagram.

c. Explain the various OWB design objects.

d. Explain any four data flow operators in OWB.

e. What are the details given by The Object Details window in control center manager?

f. What is meant by Metadata change management in OWB? Explain.
