(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. State and justify the characteristics of a Data Warehouse with suitable examples.
   b. Differentiate OLTP and OLAP.
   c. Discuss the different types of facts with respect to measures stored in the fact table in a Data Warehouse.
   d. Why a dimension is called Slowly changing dimension? Explain.

2. **Attempt *any two* of the following:**   10
   a. What is the relationship between OWBSYS and Oracle Warehouse Builder?
   b. i) Name and define the utility that has to be configured before creating an Oracle database.
       ii) Draw a neat diagram that illustrates the various components of OWB.
   c. What is the significance of HS parameters in the heterogeneous service configuration file?
   d. Explain the term module with reference to design of a DW in a Design Center.

3. **Attempt *any two* of the following:**   10
   a. Explain the relational implementation of a dimensional model – Star Schema.
   b. Name and explain the objects that are relational and dimensional objects in an Oracle module.
   c. Every dimension has four characteristics that have to be defined in OWB. What are they?
   d. Explain the tabs Name, storage, Attributes, Levels and Hierarchies in Editor Window of any object that is currently being edited.

4. **Attempt *any two* of the following:**   10
   a. What is ETL? Explain with an example.
   b. Explain the data flow operators
       i)   Aggregator
       ii)   Joiner
       iii) Expression
   c. What is set in the Keys tab in the Table Editor window in OWB?
   d. Explain the Indexes and Partitions tab in the Table Editor.

5. **Attempt *any two* of the following:**   10
   a. Discuss any three transformation operators used in ETL processing.
   b. What is the role of a LOOKUP operator in a mapping?
   c. Explain Full and Intermediate generation styles.
   d. i)   Validation will result in one of the three possibilities. What are they?
       ii) Mention the five default operating mode of the mapping.