

MIDTERM EXAMINATION
Fall 2010 (8 Dec 2010)
CS614- Data Warehousing

Question No: 1 (Marks: 1) - Please choose one

Data Warehouse is about taking / collecting data from different _____ sources:

- ▶ Harmonized
- ▶ Identical
- ▶ Homogeneous
- ▶ **Heterogeneous**

Question No: 2 (Marks: 1) - Please choose one

_____ is class of Decision Support Environment.

- ▶ OLTP
- ▶ **OLAP**
- ▶ DBMS
- ▶ Network

Question No: 3 (Marks: 1) - Please choose one

For good decision making, data should be integrated across the organization to cross the LoB (Line of Business). This is to give the total view of organization from:

- ▶ Owner's Perspective
- ▶ Customer's Perspective
- ▶ **Decision Maker's Perspective**
- ▶ Employee's Perspective

Question No: 4 (Marks: 1) - Please choose one

For a relation to be in 4NF it must be:-

- ▶ In 2NF if and only if it is in first normal form and all nonkey attributes are fully functionally dependent on the key.
- ▶ In 3NF and every non-key column is non-transitively dependent upon its primary key.
- ▶ In 3NF and every non-key column is non-transitively dependent upon its Foreign key.
- ▶ **In 3NF and It does not have multi valued dependencies**

Question No: 5 (Marks: 1) - Please choose one

Horizontal splitting breaks a table into multiple tables based upon _____

- ▶ Common Row values
- ▶ Range of Data.
- ▶ Redundant data.
- ▶ **Common column values.**

Question No: 6 (Marks: 1) - Please choose one

D-Normalization speeds up _____

- ▶ **Data Retrieval**
- ▶ Data Duplication
- ▶ Data Extraction
- ▶ Data Loading

Question No: 7 (Marks: 1) - Please choose one

The most common use of range partitioning is on _____.

- ▶ **Date**
- ▶ Rows
- ▶ DSS
- ▶ None of these

Question No: 8 (Marks: 1) - Please choose one

The fact table is a way of *visualizing as* an _____ cube

- ▶ Rolled Up
- ▶ **Un-rolled**
- ▶ Rolled Down

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- ▶ None of these

Question No: 9 (Marks: 1) - Please choose one

High Granularity, more _____.

- ▶ **Details**
- ▶ Dimensions
- ▶ Aggregates
- ▶ Cubes

Question No: 10 (Marks: 1) - Please choose one

Transactional fact tables do not have records for events that do not occur. These are called

- ▶ **Not Recording Facts**
- ▶ Fact-less Facts
- ▶ Null Facts
- ▶ None of these

Question No: 11 (Marks: 1) - Please choose one

Cubes not drilled down is, It is a _____.

- ▶ **Data Mart**
- ▶ DWH
- ▶ DOLAP
- ▶ None of these

Question No: 12 (Marks: 1) - Please choose one

During ETL process of an organization, suppose you have data which can be transformed using any of the transformation method. Which of the following strategy will be your choice for least complexity?

- ▶ **One-to-One Scalar Transformation**
- ▶ One-to-Many Element Transformation
- ▶ Many-to-Many Element Transformation
- ▶ Many-to-One Element Transformation

Question No: 13 (Marks: 1) - Please choose one

Full & Incremental Extraction are the types of _____ Extraction

- ▶ **Logical**
- ▶ Physical
- ▶ Both Logical & Physical
- ▶ None of Above

Question No: 14 (Marks: 1) - Please choose one

Selectivity is low in _____ environment.

- ▶ **DWH**
- ▶ DBMS
- ▶ OLTP
- ▶ None of Above

Question No: 15 (Marks: 1) - Please choose one

When performing objective assessments, companies follow a set of principles to develop metrics specific to their needs, there is hard to have "one size fits all" approach. Which of the following statement represents the pervasive functional forms?

- ▶ **Simple Ratio, Min or Max Operation, Weighted Average**
- ▶ Only Complex Ratio, Min Operation, Max Operation
- ▶ Only Simple Ratio, Min or Max Operation
- ▶ Only Min or Max Operation, Weighted Average

Question No: 16 (Marks: 1) - Please choose one

The input to the data warehouse can come from OLTP or transactional system but not from other third party database.

- ▶ True
- ▶ **False**

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Question No: 17 (Marks: 1) - Please choose one

Normalization effects performance

- ▶ True
- ▶ **False**

Question No: 18 (Marks: 1) - Please choose one

MOLAP physically builds “cubes” for direct access in a multi-dimensional database (MDD) Therefore _____ is not supported. ▶ One-to-One

- ▶ Facts
- ▶ **ANSI SQL**
- ▶ Dimensions
- ▶ None of these

Question No: 19 (Marks: 1) - Please choose one

The users of data warehouse are knowledge workers in other words they are _____ in the organization.

- ▶ **Decision maker**
- ▶ Manager
- ▶ Database Administrator
- ▶ DWH Analyst

Question No: 20 (Marks: 1) - Please choose one

If w is the window size and n is the size of data set, then the complexity of merging phase in BSN method is _____

- ▶ $O(n)$
- ▶ $O(w)$
- ▶ **$O(w n)$**
- ▶ $O(w \log n)$

Question No: 21 (Marks: 2)

Briefly describe features of MOLAP.

Question No: 22 (Marks: 2)

Name the steps involved in cleansing of data?

Question No: 23 (Marks: 3)

Briefly describe the features of Star Schema?

Question No: 24 (Marks: 3)

Briefly describe, what is multi-pass BSN Approach?

Question No: 25 (Marks: 5)

What are the benefits of HOLAP & DOLAP over MOLAP & ROLAP?

Question No: 26 (Marks: 5)

What is the relationship between Data quality and the value of a particular application? When efforts for data quality are logical?