

# IT344 Final review

Final exam has duration of two hours and is of 50% weight. All chapters are included along with their exercises and reading material available on blackboard

- 30 MCQs (30 marks) -----from all weeks
- 20 True False (20 marks) -----from all weeks
- 5 short question (6 marks each) ----- 2 or 3 questions from week 1-7 and 2 or 3 questions from week 9-12
- 2 Long questions (10 marks each)----- from ch 23, 24, 25 and 26.

1. Which of the following is NOT primary storage?

- a) register
- b) cache**
- c) main memory
- d) CD ROM

2. The time required to position the read/write head over a record to be read is called the \_\_\_\_ time

- a) seek**
- b) block transfer
- c) rotational time
- d) Greenwich Mean

3. Which of the following are new storage systems

- a) NAS
- b) SANS
- c) iSCSI
- d) All of the above**

e) two of the above

4. A secondary index can be specified on \_\_\_\_\_.

a) any field of a file

**b) any non-ordering field of a file**

c) a primary key of the file

d) an ordering field of the file

5. A clustering index differs from a primary by \_\_\_\_\_.

**a) the values the file is ordered on are not unique**

b) being dense

c) being faster

d) more efficient

6. Which of the following data structures is used for multilevel indexes?

a) linked list

b) graph

**c) B-tree**

d) stack

7. The first step in query processing is \_\_\_\_.

**a) scan the query**

b) use heuristic optimization

c) compute the cost of the operations

d) determine the execution plan

8. Which search method is the simplest to code for implementing the select command?

a) Using a hash key

**b) linear search**

c) binary search

d) using a primary index

9. What is the first step in a heuristic optimization of a relational algebra query tree?

a) Cascade of project

b) Commuting project with select

c) Commutating the project operation

**d) Cascade of select**

10. Which of the following is NOT an important factor influencing physical database design?

- a) analysis of the database queries
- b) analysis of the frequency of queries and transactions
- c) number of users**
- d) analysis of the uniqueness constraints on attributes

11. An example of denormalization of a relation is \_\_\_\_\_.

- a) changing a relation from first to second normal form
- b) changing a relation from third to second normal form**
- c) changing a relation from second to third normal form
- d) all of the above

12. Which of the following is NOT a reason for revising the initial choice of indexes?

- a) Certain indexes are on non-key fields**
- b) certain queries may take to run because they don't use an index
- c) certain indexes aren't utilized
- d) certain indexes may undergo too much updating

13. A transaction is a \_\_\_\_ unit of work that must be either entirely completed or aborted.

- a. timed
- c. Logical**
- b. practical
- d. Physical

14. All transactions must display \_\_\_\_\_.

- a. atomicity, consistency, and durability
- b. durability and isolation
- c. consistency, durability, and isolation
- d. atomicity, durability, consistency, and isolation**

16. In the optimistic approach, during the \_\_\_\_\_ phase, changes are permanently applied to the database.

- a. read
- b. validation
- c. **Write**
- d. Shared

17. The \_\_\_\_ approach to scheduling concurrent transactions assigns a global unique stamp to each transaction.

- a. scheduled
- b. table-locking
- c. Unique
- d. **Timestamping**

18. Lock \_\_\_\_ indicates the level of lock use.

- a. **granularity**
- b. shrinking
- c. Growing
- d. serializability

Final Exam

Chapter 23

19. The information stored in the \_\_\_\_ is used by the DBMS for a recovery requirement triggered by a ROLLBACK statement, a program's abnormal termination, or a system failure such as a network discrepancy or a disk crash.

- a. data dictionary
- b. **metadata**
- c. rollback manager
- d. transaction log

20. One of the entries in the system or transaction log is a list of all active transactions which is called a \_\_\_\_?

- a. **checkpoint**
- b. core dump
- c. roadblock
- d. timestamp

21. The \_\_\_\_ points to the most recent database pages on disk.

- a) shadow directory
- b) root directory
- c) **current directory**
- e) all of the above

22. \_\_\_\_ deals with ensuring that data is protected against unauthorized access, and if the data are accessed by an authorized user, that the data are used only for an authorized purpose.

- a. Integrity
- b. Compliance
- c. Availability
- d. **Confidentiality**

23. "All users must have passwords" is an example of a \_\_\_\_.

- a. rule
- b. **policy**
- c. standard
- d. procedure

24. A \_\_\_\_ is a named collection of database access privileges that authorize a user to connect to the database and use the database system resources.

- a. user
- b. **role**
- c. profile
- d. manager

#### Chapter 25

25. A distributed database is composed of several parts known as database \_\_\_\_.

- a. sections
- b. **fragments**
- c. partitions
- d. Parts

26. \_\_\_\_ distributed database systems integrate only one type of centralized DBMS over a network.

- a. **Homogeneous**
- b. Heterogeneous
- c. Fully heterogeneous
- d. Combination

27. A(n) \_\_\_\_ database stores each database fragment at a single site.

- a. partially replicated
- b. **unreplicated**
- c. fully replicated
- d. partitioned

28. Which of the following is NOT part of the generalized model for active database.

- a. event
- b. condition
- c. **cascade less**
- d. action

29. Which of the following is NOT a feature of image analysis?

- a. size
- b. color
- c. texture
- d. shape

Chapter 28

30. Which if the following is a goal of data mining?

- a. generating reports
- b. retrieving facts
- c. predicting behavior
- d. finding erroneous data

31. An association rule is written in the form.

- a.  $R(a,b)$
- b.  $a \Rightarrow b$
- c.  $a | b$
- d.  $a = b$

32. An algorithm for finding large itemsets is called \_\_\_\_\_ algorithm?

- a. Cromardi's
- b. fast find
- c. buchberger's

**d. apriori**

33. Data is captured from the OLTP system and placed on the \_\_\_\_ on a near-real time basis.

- a. decision support system
- b. portal
- c. data warehouse
- d. dashboard

34. The basic star schema has four components: facts, \_\_\_\_, attributes, and attribute hierarchies.

a. keys

c. cubes

b. relationships

**d. dimensions**

35. A(n) \_\_\_\_ is a dynamic table that not only contains the SQL query command to generate the rows, but also stores the actual rows.

a. OLAP

c. star schema

**b. materialized view**

d. data cube