

BSc. Information Technology
Class: SYIT
SEM III
Database Management System
Sample Questions

Multiple Choice Questions

- 1) Which of the following hardware component is the most important to the operation of a database management system?
 - a. High resolution video display
 - b. Printer
 - c. High speed, large capacity disk
 - d. Mouse

- 2) The information about data in a database is called _____
 - a. Metadata
 - b. Hyper data
 - c. Tera data
 - d. servedata

- 3) The DBMS acts as an interface between what two components of an enterprise-class database system?
 - a. Database application and the database
 - b. Data and the database
 - c. The user and the database application
 - d. Database application and SQL

- 4) A relational database consists of a collection of
 - a. Tables
 - b. Fields
 - c. Records
 - d. Keys

- 5) _____ is the smallest unit of allocation in an Oracle database)
 - a. Database
 - b. Instance
 - c. Tablespace
 - d. Database Block

- 6) Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time)
 - a. Instance, Schema
 - b. Relation, Schema
 - c. Relation, Domain
 - d. Schema, Instance

- 7) Which one of the following provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database?
 - a. DML(Data Manipulation Language)
 - b. DDL(Data Definition Language)
 - c. Query
 - d. Relational Schema

- 8) Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?
 - a. Candidate key
 - b. Sub key
 - c. Super key

d. Foreign key

9) To remove a relation from an SQL database, we use the _____ command.

- a. Delete
- b. Purge
- c. Remove
- d. Drop table

10) The database design prevents some data from being represented due to _____

- a. Deletion anomalies
- b. Insertion anomalies
- c. Update anomaly
- d. single anomaly

11) Database security helps organizations to protect data from _____

- a. Internal users
- b. External users
- c. Non-external users
- d. Non internal users

12) In the client / server model, the database:

- a. Is downloaded to the client upon request
- b. Is shared by both the client and server
- c. Resides on the client side
- d. Resides on the server side

13) The database design that consists of multiple tables that are linked together through matching data stored in each table is called

- a. Hierarchical database
- b. Network database
- c. Object oriented database
- d. Relational database

14) Which of the following relation updates all instructors with salary over \$100,000 receive a 3 percent raise, whereas all others receive a 5 percent raise)

a.

```
UPDATE instructor
SET salary = salary * 1)03
WHERE salary > 100000;
UPDATE instructor
SET salary = salary * 1)05
WHERE salary <= 100000;
```

b.

```
UPDATE instructor
SET salary = salary * 1)05
WHERE salary < (SELECT avg (salary)
FROM instructor);
```

c.

```
UPDATE instructor
SET salary = CASE
WHEN salary <= 100000 THEN salary * 1)03
ELSE salary * 1)05
END
```

d. UPDATE instructor

```
SET salary = salary * 1.05
WHERE salary > (SELECT avg (salary)
FROM instructor);
```

The order of the two update statements is important) If we changed the order of the two statements, an instructor with a salary just under \$100,000 would receive an over 8 percent raise) SQL provides a case construct that we can use to perform both the updates with a single update statement, avoiding the problem with the order of updates)

15) Which of the join operations do not preserve non matched tuples?

- a. Left outer join
- b. Right outer join
- c. Inner join
- d. Natural join

16) Which of the following makes the transaction permanent in the database?

- a. View
- b. Commit
- c. Rollback
- d. Flashback

17) Domain constraints, functional dependency and referential integrity are special forms of _____

- a. Foreign key
- b. Primary key
- c. Assertion
- d. Referential constraint

18) In contemporary databases, the top level of the hierarchy consists of _____ each of which can contain _____

- a. Catalogs, schemas
- b. Schemas, catalogs
- c. Environment, schemas
- d. Schemas, Environment

19) Which of the following is used to access large objects from a database?

- a. setBlob()
- b. getBlob()
- c. getClob()
- d. setBlob() , getBlob(),getClob()

20) Which of the following fixed database roles can add or remove user IDs?

- a. db_accessadmin
- b. db_securityadmin
- c. db_setupadmin
- d. db_sysadmin

21) Temporary stored procedures are stored in _____ database)

- a. Master
- b. Model
- c. User specific
- d. Tempdb

22) The traditional storage of data that is organized by customer, stored in separate folders in filing cabinets is an example of what type of 'database' system?

- a. Hierarchical
- b. Network

- c. Object oriented
- d. Relational

23) Each modification done in database transaction are first recorded into the

- a. Harddrive
- b. Log
- c. Disk
- d. Datamart

24) DBMS periodically suspends all processing and synchronizes its files and journals through the use of

- a. Checkpoint facility
- b. Backup facility
- c. Recovery manager
- d. Database change log

25) Which of the following gives a logical structure of the database graphically?

- a. Entity-relationship diagram
- b. Entity diagram
- c. Database diagram
- d. Architectural representation

26) In order to maintain transactional integrity and database consistency, what technology does a DBMS deploy?

- a. Triggers
- b. Pointers
- c. Locks
- d. Cursors

27) A window into a portion of a database is

- a. Schema
- b. View
- c. Query
- d. Data dictionary

28) To delete a database _____ command is used

- a. Delete database database_name
- b. Delete database_name
- c. drop database database_name
- d. drop database_name

29) The term for information that describes what type of data is available in a database is:

- a. Data dictionary
- b. data repository
- c. Index data
- d. Metadata

30) Which is a bottom-up approach to database design that design by examining the relationship between attributes:

- a. Functional dependency
- b. Database modeling
- c. Normalization
- d. Decomposition

31) Which normal form is considered adequate for normal relational database design?

- a. 2NF
- b. 5NF
- c. 4NF
- d. 3NF

32) How inserting data through stored procedure do reduces network traffic and increase database performance?

- a. Stored procedure can accept parameter
- b. Permission check is not required
- c. The execution plan is stored in the cache after it was executed the first time
- d. Stored procedure can't accept parameter

33) What is the best way to represent the attributes in a large database?

- a. Relational-and
- b. Concatenation
- c. Dot representation
- d. comma

34) Which is the subset of SQL commands used to manipulate Oracle Database Structures, including tables?

- a. Data Definition Language
- b. Data Manipulation Language
- c. Data Described Language
- d. Data Retrieval Language

35) What MySQL property is used to create a surrogate key in MySQL?

- a. UNIQUE
- b. SEQUENCE
- c. AUTO_INCREMENT
- d. AUTO

36) The _____ layer, which provides the interface between the business-logic layer and the underlying database)

- a. Business logicBusiness logic
- b. Presentation
- c. User interaction
- d. Data access

37) Which schema object instructs Oracle to connect to a remotely access an object of a database?

- a. Sequence
- b. Remote link
- c. Database link
- d. Data link

38) In the following query, which expression is evaluated first?

```
SELECT id_number, (quantity - 100 / 0)15 - 35 * 20) FROM inventory
```

- a. 100 / 0)15
- b. quantity - 100
- c. 35*20
- d. 0)15-35

39) A lock that prevents the use of any tables in the database from one transaction while another transaction is being processed is called a

- a. Database-level lock
- b. Table-level lock
- c. Page-level lock
- d. Row-level lock

40) In SQL, which command is used to issue multiple CREATE TABLE, CREATE VIEW and GRANT statements in a single transaction?

- a. CREATE PACKAGE
- b. CREATE SCHEMA
- c. CREATE CLUSTER

d. CREATE SCHEMES

41) In a database where the encryption is applied the data is cannot be handled by the unauthorised user without

- a. Encryption key
- b. Decryption key
- c. Primary key
- d. Authorised key

42) In _____ of Oracle, the database administrator creates a user account in the database for each user who needs access)

- a. Database Authentication
- b. Operating System Authentication
- c. Internal Authentication
- d. External Authentication

43) The extent of the database resource that is included with each lock is called the level of

- a. Impact
- b. Granularity
- c. Management
- d. DBMS control

44) _____ is popular for applications such as storage of log files in a database system since it offers the best write performance)

- a. RAID level 1
- b. RAID level 2
- c. RAID level 0
- d. RAID level 3

45) Which of the following are the process of selecting the data storage and data access characteristics of the database?

- a. Logical database design
- b. Physical database design
- c. Testing and performance tuning
- d. Evaluation and selecting

46) Which of the following is the oldest database model?

- a. Relational
- b. Hierarchical
- c. Physical
- d. Network

47) What are the correct features of a distributed database?

- a. Is always connected to the internet
- b. Always requires more than three machines
- c. Users see the data in one global schema.
- d. Have to specify the physical location of the data when an update is done

48) Each tablespaces in an Oracle database consists of one or more files called

- a. Files
- b. name space
- c. datafiles
- d. PFILE

49) A top-to-bottom relationship among the items in a database is established by a

- a. Hierarchical schema
- b. Network schema
- c. Relational schema
- d. Irrelational scheme

50) A major goal of the database system is to minimize the number of block transfers between the disk and memory) This is achieved by

- a. Buffer
- b. Catalog
- c. Storage
- d. Secondary storage

51) If a piece of data is stored in two places in the database, then

- a. Storage space is wasted
- b. Changing the data in one spot will cause data inconsistency
- c. In can be more easily accessed
- d. Storage space is wasted & Changing the data in one spot will cause data inconsistency

52) Large collection of files are called _____

- a. Fields
- b. Records
- c. Database
- d. Sectors

53) OE and SCOTT are the users in the database) The ORDERS table is owned by OE) Evaluate the statements issued by the DBA in the following sequence:

```
CREATE ROLE r1;  
GRANT SELECT, INSERT ON oe) orders TO r1;  
GRANT r1 TO scott;  
GRANT SELECT ON oe) orders TO scott;  
REVOKE SELECT ON oe)orders FROM scott;
```

What would be the outcome after executing the statements?

- a. SCOTT would be able to query the OE)ORDERS table
- b. SCOTT would not be able to query the OE)ORDERS table
- c. The REVOKE statement would remove the SELECT privilege from SCOTT as well as from the role R1
- d. The REVOKE statement would give an error because the SELECT privilege has been granted to the role R1

54) If database modifications occur while the transaction is still active, the transaction is said to use the _____ technique)

- a. Deferred-modification
- b. Late-modification
- c. Immediate-modification
- d. Undo

55) A dump of the database contents is also referred to as an _____ dump)

- a. Archival
- b. Fuzzy
- c. SQL
- d. PLSQL

56) Immediate database modification technique uses

- a. undo and redo
- b. Undo but no redo
- c. Redo but no undo
- d. NOT undo nor redo

57) Which one of the following is used to define the structure of the relation, deleting relations and relating schemas?

- a. DML(Data Manipulation Language)

- b. DDL(Data Definition Language)
- c. Query
- d. Relational Schema

58) Which one of the following provides the ability to query information from the database and to insert tuples into, delete tuples from, and modify tuples in the database?

- a. DML(Data Manipulation Language)
- b. DDL(Data Definition Language)
- c. Query
- d. Relational Schema

59)CREATE TABLE employee (name VARCHAR, id INTEGER)

What type of statement is this?

- a. DML
- b. DDL
- c. View
- d. Integrity constraint

60)SELECT * FROM employee

What type of statement is this?

- a. DML
- b. DDL
- c. View
- d. Integrity constraint

61) The basic data type char(n) is a _____ length character string and varchar(n) is _____ length character)

- a. Fixed, equal
- b. Equal, variable
- c. Fixed, variable
- d. Variable, equal

62) An attribute A of datatype varchar(20) has the value "Avi") The attribute B of datatype char(20) has value "Reed") Here attribute A has _____ spaces and attribute B has _____ spaces)

- a. 3, 20
- b. 20, 4
- c. 20, 20
- d. 3, 4

63) To remove a relation from an SQL database, we use the _____ command.

- a. Delete
- b. Purge
- c. Remove
- d. Drop table

64) DELETE FROM r; //r - relation

This command performs which of the following action?

- a. Remove relation
- b. Clear relation entries
- c. Delete fields
- d. Delete rows

65) INSERT INTO instructor VALUES (10211, 'Smith', 'Biology', 66000);

What type of statement is this?

- a. Query
- b. DML
- c. Relational
- d. DDL

66) Updates that violate _____ are disallowed.

- a. Integrity constraints
- b. Transaction control
- c. Authorization
- d. DDL constraints

67) Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?

- a. Candidate key
- b. Sub key
- c. Super key
- d. Foreign key

68) Consider attributes ID, CITY and NAME) Which one of this can be considered as a super key?

- a. NAME
- b. ID
- c. CITY
- d. CITY, ID

69) A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique)

- a. Rows
- b. Key
- c. Attribute
- d. Fields

70) Which one of the following attribute can be taken as a primary key?

- a. Name
- b. Street
- c. Id
- d. Department

71) Which one of the following cannot be taken as a primary key?

- a. Id
- b. Register number
- c. Dept_id
- d. Street

72) An attribute in a relation is a foreign key if the _____ key from one relation is used as an attribute in that relation)

- a. Candidate
- b. Primary
- c. Super
- d. Sub

73) The relation with the attribute which is the primary key is referenced in another relation) The relation which has the attribute as a primary key is called _____

- a. Referential relation
- b. Referencing relation

- c. Referenced relation
- d. Referred relation

74) The _____ is the one in which the primary key of one relation is used as a normal attribute in another relation)

- a. Referential relation
- b. Referencing relation
- c. Referenced relation
- d. Referred relation

75) A _____ integrity constraint requires that the values appearing in specified attributes of any tuple in the referencing relation also appear in specified attributes of at least one tuple in the referenced relation)

- a. Referential
- b. Referencing
- c. Specific
- d. Primary

76) A relational database consists of a collection of

- a. Tables
- b. Fields
- c. Records
- d. Keys

77) A _____ in a table represents a relationship among a set of values)

- a. Column
- b. Key
- c. Row
- d. Entry

78) The term _____ is used to refer to a row)

- a. Attribute
- b. Tuple
- c. Field
- d. Instance

79) The term attribute refers to a _____ of a table)

- a. Record
- b. Column
- c. Tuple
- d. Key

80) For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute)

- a. Domain
- b. Relation
- c. Set
- d. Schema

81) Database _____ which is the logical design of the database, and the database _____ which is a snapshot of the data in the database at a given instant in time)

- a. Instance, Schema
- b. Relation, Schema
- c. Relation, Domain
- d. Schema, Instance

82) Course(course_id,sec_id,semester)

Here the course_id,sec_id and semester are _____ and course is a _____

- a. Relations, Attribute
- b. Attributes, Relation
- c. Tuple, Relation
- d. Tuple, Attributes

83) Department (dept name, building, budget) and Employee (employee_id, name, dept name, salary)

Here the dept_name attribute appears in both the relations) Here using common attributes in relation schema is one way of relating _____ relations)

- a. Attributes of common
- b. Tuple of common
- c. Tuple of distinct
- d. Attributes of distinct

84) A domain is atomic if elements of the domain are considered to be _____ units)

- a. Different
- b. Indivisible
- c. Constant
- d. Divisible

85) The tuples of the relations can be of _____ order)

- a. Any
- b. Same
- c. Sorted
- d. Constant

86) Using which language can a user request information from a database?

- a. Query
- b. Relational
- c. Structural
- d. Compiler

87) Student(ID, name, dept name, tot_cred.

In this query which attributes form the primary key?

- a. Name
- b. Dept
- c. Tot_cred
- d. ID

88) Which one of the following is a procedural language?

- a. Domain relational calculus
- b. Tuple relational calculus
- c. Relational algebra
- d. Query language

89) The _____ operation allows the combining of two relations by merging pairs of tuples, one from each relation, into a single tuple)

- a. Select
- b. Join
- c. Union
- d. Intersection

90) The result which operation contains all pairs of tuples from the two relations, regardless of whether their attribute values match)

- a. Join

- b. Cartesian product
- c. Intersection
- d. Set difference

91) The _____ operation performs a set union of two "similarly structured" tables

- a. Union
- b. Join
- c. Product
- d. Intersect

92) The most commonly used operation in relational algebra for projecting a set of tuple from a relation is

- a. Join
- b. Projection
- c. Select
- d. Union

93) The _____ operator takes the results of two queries and returns only rows that appear in both result sets)

- a. Union
- b. Intersect
- c. Difference
- d. Projection

94) A _____ is a pictorial depiction of the schema of a database that shows the relations in the database, their attributes, and primary keys and foreign keys)

- a. Schema diagram
- b. Relational algebra
- c. Database diagram
- d. Schema flow

95) The _____ provides a set of operations that take one or more relations as input and return a relation as an output)

- a. Schematic representation
- b. Relational algebra
- c. Scheme diagram
- d. Relation flow

96) The ____ condition allows a general predicate over the relations being joined.

- a. On
- b. Using
- c. Set
- d. Where

97) Which of the join operations do not preserve non matched tuples?

- a. Left outer join
- b. Right outer join
- c. Inner join
- d. Natural join

98) A _____ consists of a sequence of query and/or update statements)

- a. Transaction
- b. Commit
- c. Rollback
- d. Flashback

99) Which of the following makes the transaction permanent in the database?

- a. View
- b. Commit
- c. Rollback
- d. Flashback

100) In order to undo the work of transaction after last commit which one should be used?

- a. View
- b. Commit
- c. Rollback
- d. Flashback