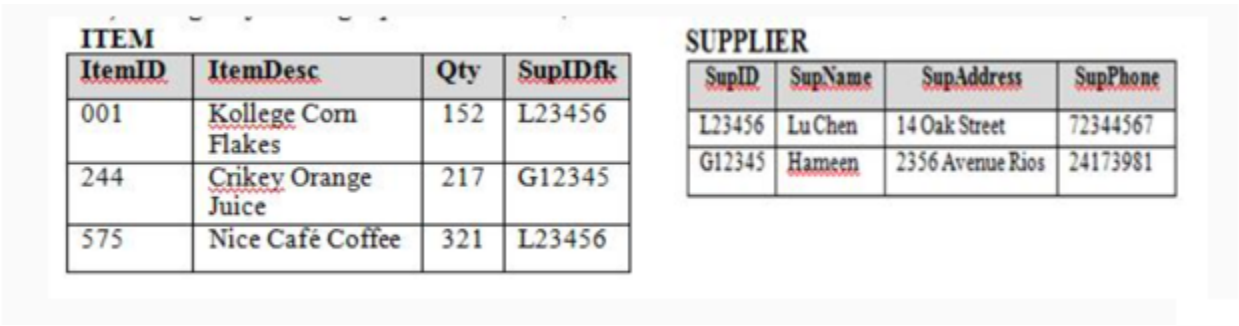
1. Which of the following is not one of the main traits that defines Big Data:

Question options:

A	Multiple venues of data relationships
B	Diverse variety in data formats
C	High velocity in data flow
D	Large volumes of digitally stored data

2.



ITEM

ItemID	ItemDesc	Qty	SupIDfk
001	Kollege Corn Flakes	152	L23456
244	Crikey Orange Juice	217	G12345
575	Nice Café Coffee	321	L23456

SUPPLIER

SupID	SupName	SupAddress	SupPhone
L23456	Lu Chen	14 Oak Street	72344567
G12345	Hameen	2356 Avenue Rios	24173981

For the following tables, which SQL command would:
List the Supplier Name and Item Description [ItemDesc] for each item the supermarket sales.

Question options:

A	SELECT SupName, ItemDesc FROM ITEM JOIN SUPPLIER ON supIDfk = supID
B	SELECT * from ITEM, SUPPLIER
C	LIST SupName, ItemDesc FROM ITEM, SUPPLIER where supIDfk = supID
D	SELECT SupName, ItemDesc FROM ITEM, SUPPLIER

3. _____ is a popular technology designed to efficiently process large amounts of diverse types of data. Words associated with this technology include 'Pig', 'Hive', 'Zookeeper'.

Question options:

A	data warehousing
B	hadoop
C	high speed SQL processing

D	data mining

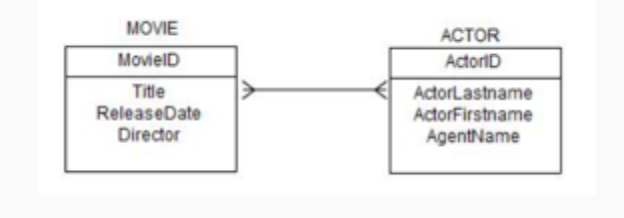
4.

NoSQL databases are predicted to overtake relational database systems in the next few years.

Question options:

	True
	False

5.



Choose the answer that best maps the following ERD to tables.

Question options:

A	MOVIE(MovieID,Title,ReleaseDate,Director) ACTOR(ActorID,ActorLastname,ActorFirstName,AgentName
B	MOVIE(MovieID,Title,ReleaseDate,Director) ACTOR(ActorID,ActorLastname,ActorFirstName,AgentName
C	MOVIE(MovieID,Title,ReleaseDate,Director,*ActorID*) ACTOR(ActorID,ActorLastname,ActorFirstName,Age INTERSECTION(*MovieID,ActorID*,ActorLastName,ReleaseDate)
D	MOVIEINFO(MovieID, Title,ReleaseDate,Director, ActorLastname,ActorFirstName,AgentName)
E	MOVIE(MovieID,Title,ReleaseDate,Director,*ActorID*) ACTOR(ActorID,ActorLastname,ActorFirstName,Age

6.

When a transaction functions in such a way that either all of the transaction actions are completed or none of them will be, the transaction is said to be:

Question options:

A	consistent
B	atomic
C	locked

D	logical
E	isolated

7.

What concurrent processing problem occurs when a transaction reads a changed record that has not been committed to the database?

Question options:

A	Unlocked reads
B	Serialized reads
C	Dirty reads
D	Nonrepeatable reads
E	Phantom reads

8.

The purpose of concurrency control is to:

Question options:

A	Ensure that no two SQL statements are executed at the same time.
B	Ensure that every input form has a corresponding output report.
C	Ensure that one user's work does not interfere with another's.
D	Ensure that resource locking is always used.

9.

Serializable prevents which of the following?

Question options:

A	Lost-update
B	Phantom read
C	Dirty read

D	Nonrepeatable read
E	All of the above

10.

Tables/ Forms	Spectators	Seats	Tickets	Games
SpectatorInformationForm	CRUD			
SeatsForm		RU		R
TicketForm	R	R	CRUD	
GamesForm				R
PrintedTicket	R	R	R	
SeatAvailabilityReport	R	R		

Given the following security matrix, the GAMES table is accessed by how many forms?

Question options:

A	None
B	1
C	2
D	3
E	All tables

11.

SELECT ALL THAT APPLY:

Who is responsible for insuring the confidentiality of data in the Kennesaw Owlexpress database?

Remember: SELECT ALL THAT APPLY.

Question options:

A	Students
B	Database Administrators
C	Faculty

D	Database programmers

12.

What concurrent processing problem occurs when a transaction rereads data and finds new rows that were inserted by a different transaction since the prior read?

Question options:

A	Unlocked reads
B	Nonrepeatable reads
C	Phantom reads
D	Dirty reads
E	Serialized reads

13.

Row level security is often implemented through the use of:

Question options:

A	SQL views
B	Prepared Queries
C	User profiles and assigned processing rights
D	Username and password

14.

HIPPA is related to:

Question options:

A	Police records
B	DNA databases
C	Bank records
D	healthcare data

15.

Scenario b:

Step	Associated sample SQL
Lock for Student A	Lock Table SEATS
Show available seats for Student A	Select * from SEATS Where seat_status ='open'
Add seat for Student A	Update SEATS Set seat_reserved = 'Student A' Where seat_no = 'lastseat'
	Unlock Table SEATS
Lock for Student B	Lock Table SEATS
Show available seats for Student B	Select * from SEATS Where seat_status ='open'
Add seat for Student B	Update SEATS Set seat_reserved = 'Student B' Where seat_no = 'lastseat'
	Unlock Table SEATS

***NOTE: result of the SQL statement (whether it is successful or not) is NOT shown**

It is the KSU Fighting Owls football team's inaugural season and season tickets are in high demand. In fact, only one season ticket remains. Student A and Student B both want season tickets. Given the following, who gets the ticket?

Question options:

A	Student A and Student B both get the ticket
B	Not enough information to tell.
C	Student B
D	Student A

16.

SQL injections occur most often because of stolen passwords.

Question options:

A	True
B	False

17.

Which of the following about deadlocks is untrue?

Question options:

A	Most database systems automatically check for and resolve deadlocks.
B	Deadlocks occur when two transactions are each waiting for access to a table that the other one has locke

C	Deadlocks rarely happen.
D	Serialized locking of all resources utilized by a transaction helps to prevent deadlocks.

18.

Which method can often tell if the backend of a web form is using SQL?

Question options:

A	Adding /sql onto the end of the Web form URL
B	Entering /sql?=' onto the end of the Web form URL
C	Entering a single quote into a username entry field on a web form
D	Entering 1=1 into a username entry field on a web form

19.

Database inference is easily solved by:

Question options:

A	Allowing users only access to aggregated data results
B	White listing
C	Prepared queries
D	There is not an easily implemented technology solution to prevent database inference

20.

The most common form of database security is implemented by:

Question options:

A	Pessimistic record locking
B	Table encryption
C	Complex SQL processing
D	Username/password

21.

SELECT ALL THAT APPLY.

Relationships when mapped to tables are expressed by:

Remember: SELECT ALL THAT APPLY.

Question options:

A	foreign keys
B	duplicate columns
C	data types
D	primary keys

22.

Step	Associated sample SQL
Show available seats for Student A	Select * from SEATS Where seat_status ='open'
Show available seats for Student B	Select * from SEATS Where seat_status ='open'
Add seat for Student A	Update SEATS Set seat_reserved = 'Student A' Where seat_no = 'lastseat'
Add seat for Student B	Update SEATS Set seat_reserved = 'Student B' Where seat_no = 'lastseat'

***NOTE: result of the SQL statement (whether it is successful or not) is NOT shown**

It is the KSU Fighting Owls football team's inaugural season and season tickets are in high demand. In fact, only one season ticket remains. Student A and Student B both want season tickets. From the following scenario, who gets the ticket?

Question options:

A	Both Student A and student B get the ticket
B	Student B
C	Student A
D	Not enough information to tell

23.

The recommended procedure for preventing SQL injections is:

Question options:

A	Prepared queries

B	Black listing
C	SQL mapping
D	White listing

24.

The process of tracking who accesses a database and which resources are accessed is called _____ and the information obtained from this tracking is recorded in a _____.

Question options:

A	auditing, log file
B	auditing, archive file
C	tracking, log file
D	tracking, archive file

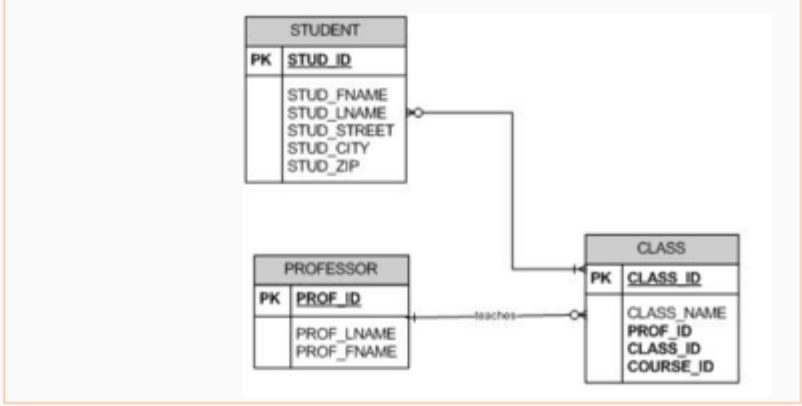
25.

Another name for a transaction is:

Question options:

A	SQL command
B	Concurrency control
C	Logical Unit of Work
D	Concurrent user action

26.



A	A professor may teach one or more classes but a student must take one or more classes. A class must be may or may not have students.
B	A professor is required to teach at least one class and students must take at least one class.
C	A professor must teach one or more classes and a class must be taught by one professor. A student may class must have one or more students.
D	A professor may teach one or more classes and a student may take one or more classes. A class must be class must have at least one student.

27.

Tables/ Forms	Spectators	Seats	Tickets	Games
SpectatorInformationForm	CRUD			
SeatsForm		RU		R
TicketForm	R	R	CRUD	
GamesForm				R
PrintedTicket	R	R	R	
SeatAvailabilityReport	R	R		

Given the following Security matrix, which is the most most complex form to implement?

Question options:

A	PrintedTicket
B	TicketForm
C	SpectatorInformationForm

D	SeatsForm

28.

Normalization answers which question:

Question options:

A	How many candidate keys are needed?
B	What should the primary key be?
C	How many tables?
D	What is the cardinality?
E	What are the functional dependencies?

29.

Which locking methods employs the use of making a copy of the original records and checking for changes to that record before committing an update?

Question options:

A	pessimistic locking
B	optmistic locking
C	lost-update
D	deadlock

30.

Tables/ Forms	Spectators	Seats	Tickets	Games
SpectatorInformationForm	CRUD			
SeatsForm		RU		R
TicketForm	R	R	CRUD	
GamesForm				R
PrintedTicket	R	R	R	
SeatAvailabilityReport	R	R		

Given the following security matrix, which form(s) are not able to alter table data for any table?

Question options:

A	SeatsForm,TicketForm,GamesForm
B	GamesForm, PrintedTicket , SeatAvailabilityReport
C	SeatsForm, SeatAvailabilityForm
D	TicketForm

31.

The best method of providing access to end users to data contained in a database is:

Question options:

A	A multi-layer architecture composed of a middle layer that communicates with the database
B	a Web form connected to the database
C	A secure user login to the database system
D	A client app that is installed on the end users' PC or other device that establishes an ODBC connection to

32.

A database system crashes and needs to be restored to its state at the time of the crash. A complete backup of the database is done once a day. The crash occurred at 12 noon. The last full backup was done at 4:00 am.
The latest full backup is restored.

Then _____ is done

in a process known as _____.

Question options:

A	reprocessing, roll forward
B	recovery, roll forward
C	reprocessing, rollback
D	recovery, redo
E	recovery, rollback