

The market for IT professionals is still increasing and will continue to do so in the future, as the world gets ever more dependent on computer systems. True or False?

- True (*)
- False

Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information?

- Data (*)
- Information
- Both
- Neither

Information which was gained from data is the same as: (Choose Two)

- Knowledge (*)
- Raw Materials
- Intelligence (*)
- There is no difference between data and information.

The first step in system development is to document the requirements. Why?

- Wrong. A blueprint for the database design is not needed. We can just start coding straight away.
- It clarifies what a business wants to accomplish, and provides measures for deciding if the system delivers all that is required. (*)
- It allows application development to be conducted without having to consider database design.
- It keeps businesses honest.

Which of the following are types of databases?

- Hierarchical (*)
- Relational (*)
- SQL
- Network (*)

Databases perform these functions....

- Running multiple applications on multiple client-servers
- Providing integrated software on fast processing servers
- Providing software running on a variety of platforms and configurations allowing companies a structured way to access and manage their data (*)
- They run purely as client-based software on personal computers

In a physical data model, a relationship is represented as a?

- Column

- Row
- Instance
- Foreign Key (*)

Which of the following statements about relationships are true? (Choose Two)

- They become Foreign Keys in the database. (*)
- They Must be Mandatory to be created in the database.
- They can be either mandatory or optional. (*)
- They must exist between two different Entities.

Which of the following entities most likely contains valid attributes? (Choose two)

- Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)
- Entity: Pet. Attributes: Name, Birthdate, Owner (*)
- Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed
- Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

All of the following would be instances of the entity ANIMAL SPECIES except which?

- Dog
- Bird
- Elephant
- Leaf (*)

.An entity can have many Unique Identifiers. True or False?

- True (*)
- False

The entity/relationship model is created before the physical database design model. True or False?

- True (*)
- False

All of the following are examples of ENTITY: Instance except two. Select the answers that are ENTITY: Instance. (Choose Two)

- TRANSPORTATION METHOD: Car (*)
- ANIMAL: Dog (*)
- MEAT PRODUCT: Lettuce
- BODY PART: Larry Ellison

One Relationship can be both mandatory and optional at different ends. True or False?

- True (*)
- False

Which of the following are valid relationship degrees? (Choose two)

- 1:1 (*)
- 1:M (*)
- 1:O
- O:O

All the Attributes in a system are just written on the ERD, and they all go in the Top Left Hand Corner of the paper. True or False?

- True
- False (*)

Entity names are always singular. True or False?

- True (*)
- False

Matrix Diagrams are mandatory when doing data modelling. True or False?

- True
- False (*)

Which of the following is true about subtypes?

- One instance may belong to two subtypes of the same supertype.
- Subtypes must be mutually exclusive. (*)
- Subtypes must not be mutually exclusive.
- Subtype entities may not have relationships to the other subtype entities, only the supertype itself.

A Supertype can have only one subtype. True or False?

- True
- False (*)

A supertype can only have two subtypes and no more. True or False?

- True
- False (*)

You can only create relationships to a Supertype, not to a Subtype. True or False?

- True
- False (*)

When creating entities you must follow these rules: (Choose Two)

- Name them in Plural
- Name them in Singular (*)
- Exclude Attributes
- Include Attributes (*)

How would you model a business rule that states that girls and boys may not attend classes together?

- Use a supertype
- Use two subtypes with relationships from class to student gender (*)
- Make the attribute Gender mandatory
- You cannot model this. You need to document it.

Can all constraints be modeled on an ER diagram?

- No, in which case you should let the database administrator handle them
- No, but you just explain them to the users so they can enforce them
- Yes, all constraints must be modeled and shown on the ER diagram
- No, so you should list them on a separate document to be handled programmatically (*)

"Only teachers may supervise exams" is an example of which of the following?

- A procedural business rule (*)
- An attribute that should be stored on the PERSON entity
- A structural business rule
- An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Why is it important to identify and document structural rules?

- Ensures we know what data to store and how that data works together. (*)
- Ensures nothing. There is no benefits to be gained from documenting your Structural Business Rules. We need to concentrate on the Procedural Business Rules only.
- Ensures we know what Information to store and how that Information works together.
- All of the Above.

If a relationship can NOT be moved between instances of the entities it connects, it is said to be:

- Mandatory
- Optional
- Transferrable
- Non-Transferable (*)

Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False?

- True
- False (*)

What uncommon relationship is described by the statements: "Each DNA SAMPLE may be taken from one and only one PERSON and each PERSON may provide one and only one DNA SAMPLE"

- One to Many Optional
- One to Many Mandatory

- One to One Optional (*)
- Many to Many Mandatory

Relationships can be Redundant. True or False?

- True (*)
- False

A relationship from an entity back to itself is called a _____ relationship.

- Mandatory
- Recursive (*)
- Many to Many Optional
- Transferrable

All entities must be given a new artificial UID. True or False?

- True
- False (*)

When data is stored in one place in a database, the database conforms to the rules of _____.

- Normality
- Reduction
- Normalization (*)
- Multiplication

Would it be a good idea to model age as an attribute of STUDENT

- Yes
- Maybe it could stop us having to calculate someones age every time we need it
- Sometimes
- No - it breaks the Normalization rules (*)

Arcs are Mandatory in Data modelling. All ERD's must have at least one Arc. True or False?

- True
- False (*)

Arcs are used to visually represent _____ between two or more relationships in an ERD.

- Sameness
- Differencies
- Exclusivity (*)
- An Arc is what Noah sailed on with all the animals.

An arc can be modelled as Supertype and Subtypes. True or False?

- True (*)
- False

No parts of a UID are mandatory. True or False?

- True
- False (*)

Consider the entity ADDRESS with the attributes:

ADDRESS:

House Number

* Street

* Town

* City

* Year of Build

o City Population

This entity is NOT in 3rd Normal Form ("no non-UID attribute can be dependent on another non-UID attribute). True or False?

- True (*)
- False

A relationship can be both Recursive and Hierarchal at the same time. True or False?

- True
- False (*)

If Audit trail attributes are added to an entity they must be in the entities they are auditing. True or False?

- True (*)
- False

Communication Skills, Team-working and Presentations skills are all important for Consultants. True or False?

- True (*)
- False

Which of the following are NOT valid techniques for effective public speaking? (Choose Two)

- Whispering (*)
- Using specialist language and technical abbreviations when communicating technical information (*)
- Being enthusiastic
- All of the Above

When you add the concept of time to your data model, your model becomes more complex. True or False?

- True (*)
- False

Which of the following would be a logical constraint when modeling time for a City entity?

- People are born in the city and people die in the city.
- Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)
- If you are doing a system for any French City, you would need security clearance
- You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor

What do users of a system without the concept of time lose?

- Journaling becomes much easier.
- Journaling becomes slightly harder.
- The ability to track data over time. (*)
- Nothing is lost if a system does not track time.

If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False?

- True
- False (*)

Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two)

- This would only be required in the US to allow the New York Stock Exchange to be notified of this information.
- To allow the sales people to determine when the shares were bought and therefore at what price. (*)
- You would not want to model this, it is not important.
- The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

All systems must include functionality to provide logging or journaling in conceptual data models. True or False?

- True
- False (*)

The main subject areas taught by the Oracle Academy are:

- Computer Repairs

- Database performance tuning.
- Data Modeling, SQL and PL/SQL (*)
- Systems programming and computer architecture

Consider your school library. It will have a database with transaction details of which student borrows which books. Is details of the total number of books out on loan in one given month Data or Information?

- Data
- Information (*)
- Both
- Neither

Information which was gained from data is the same as: (Choose Two)

- Knowledge (*)
- Raw Materials
- Intelligence (*)
- There is no difference between data and information.

Databases are used in most countries and by most governments. Life, as we know it, would change drastically if we no longer had access to databases. True or False?

- True (*)
- False

Incorrect. Refer to Section 1.

Section 1 Lesson 4

(Answer all questions in this section)

5. Which of the following are types of databases? Mark for Review

(1) Points

(Choose all correct answers)

Hierarchical (*)

Relational (*)

SQL

Network (*)

Correct

6. Databases perform these functions.... Mark for Review

(1) Points

Running multiple applications on multiple client-servers

Providing integrated software on fast processing servers

Providing software running on a variety of platforms and configurations allowing companies a structured way to access and manage their data (*)

They run purely as client-based software on personal computers

Correct

Section 2 Lesson 2

(Answer all questions in this section)

Review
(1) Points

7. In a physical data model, a relationship is represented as a? Mark for

Column

Row

Instance

Foreign Key (*)

Correct

8. An entity is instantiated as a ? Mark for Review
(1) Points

experience

instance

table (*)

none of the above

Correct

9. A/an _____ is a picture of all the information that will form the basis for the finished system.
Mark for Review

(1) Points

ERD (*)

Process

Table

Attribute

Correct

10. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Address, Date Built (*) Entity: Home. Attributes: Number of Bedrooms, Owner,

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Speed Entity: Car. Attributes: Owner Occupation, Owner Salary,

Salary Entity: Mother. Attributes: Name, Birthdate, Occupation,

ew your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 2 Lesson 2

(Answer all questions in this section)

11. All of the following would be instances of the entity ANIMAL SPECIES except which? Mark for Review

(1) Points

Dog

Bird

Elephant

Leaf (*)

Correct

12. Which of the following statements about relationships are true? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

They become Foreign Keys in the database. (*)

They Must be Mandatory to be created in the database.

They can be either mandatory or optional. (*)

They must exist between two different Entities.

Correct

13. Primary Unique Identifiers... (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

Are Required. The data model is not complete until all entities have a Primary UID. (*)

Distinguish each instance of an entity from all others (*)

Are not required

You may create more than one Primary Unique Identifier for an entity

Correct

Section 3 Lesson 1

(Answer all questions in this section)

14. Which of the following are valid relationship degrees? (Choose two) Mark
for Review
(1) Points

(Choose all correct answers)

1:1 (*)

1:M (*)

1:0

0:0

Correct

15. Relationships represents something of significance to the business? True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. The many end of a Relationship is called: Mark for Review

(1) Points

Gulls Foot

Pigs Ear

Crows Ear

Crows Foot (*)

Correct

17. The single end of a Relationship is called: Mark for Review

(1) Points

Single Toe (*)

Big Toe

Single Foot

Crows Foot

Incorrect. Refer to Section 3.

Section 3 Lesson 3

(Answer all questions in this section)

18. Two entities can ONLY have one relationship between them. True or False?

Mark for Review

(1) Points

True

False (*)

Incorrect. Refer to Section 3

Section 4 Lesson 1

(Answer all questions in this section)

19. You can only create relationships to a Supertype, not to a Subtype. True or

False? Mark for Review

(1) Points

True

False (*)

Correct

20. A Supertype can have only one subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 4 Lesson 1

(Answer all questions in this section)

21. Which of the following is true about subtypes? Mark for Review

(1) Points

One instance may belong to two subtypes of the same supertype.

Subtypes must be mutually exclusive. (*)

Subtypes must not be mutually exclusive.

Subtype entities may not have relationships to the other subtype entities, only the supertype itself.

Correct

22. A supertype can only have two subtypes and no more. True or False? Mark
for Review
(1) Points

True

False (*)

Correct

23. All ER diagrams must have one of each of the following: (Choose two) Mark
for Review

(1) Points

(Choose all correct answers)

One or more Entities (*)

Relationships between entities (*)

Arcs

At least one supertype and subtype

Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. Can all constraints be modeled on an ER diagram? Mark for Review

(1) Points

handle them No, in which case you should let the database administrator

enforce them

No, but you just explain them to the users so they can

diagram

Yes, all constraints must be modeled and shown on the ER

handled programmatically (*)

No, so you should list them on a separate document to be

Correct

25. "Only teachers may supervise exams" is an example of which of the following?
Mark for Review
(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

26. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review

(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

27. How would you model a business rule that states that girls and boys may not attend classes together? Mark for Review

(1) Points

Use a supertype

Use two subtypes with relationships from class to student gender (*)

Make the attribute Gender mandatory

You cannot model this. You need to document it.

Correct

Section 5 Lesson 1

(Answer all questions in this section)

28. If a relationship can NOT be moved between instances of the entities it connects, it is said to be: Mark for Review

(1) Points

Mandatory

Optional

Transferrable

Non-Transferable (*)

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Which of the following pairs of entities is most likely to be modeled as a M:M relationship? Mark for Review

(1) Points

CAR and WHEEL

TREE and BRANCH

PERSON and FINGERPRINT

TEACHER and SUBJECT AREA (*)

Incorrect. Refer to Section 5.

30. A relationship from an entity back to itself is called a _____ relationship. Mark for Review

(1) Points

Mandatory

Recursive (*)

Many to Many Optional

Transferrable

Correct

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2

(Answer all questions in this section)

31. How do you include a relationship as part of the UID for an entity? Mark
for Review
(1) Points

By barring the relationship in question (*)

By reporting it in an external document

By including the UID from the parent entity as an attribute in
the entity

You cannot model that.

Correct

32. Relationships can be Redundant. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 6 Lesson 1

(Answer all questions in this section)

33. A unique identifier must be made up of more than one attribute. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. Until all attributes are single-valued, the database model is said to be: Mark
for Review
(1) Points

Normalized

Not Normalized (*)

1st Normal Form

2nd Normal Form

Incorrect. Refer to Section 5

Section 6 Lesson 3

(Answer all questions in this section)

35. Any Non-UID must be dependant on the entire UID. True or False? Mark
for Review

(1) Points

True (*)

False

Correct

Section 7 Lesson 1

(Answer all questions in this section)

36. Primary UIDs are: Mark for Review

(1) Points

Something that each Entity should have, but is not
mandatory (*)

Useful as an alternative means identifying instances of an
entity, independent of their datatype

Mandatory in data modeling

Always comprised of numbers

Incorrect. Refer to Section 7

37. All relationships participating in an arc must be mandatory. True or False?

Mark for Review

(1) Points

True

False (*)

Incorrect. Refer to Section 7

38. Arcs are Mandatory in Data modelling. All ERD's must have at least one Arc.

True or False? Mark for Review

(1) Points

True

False (*)

Correct

39. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review
(1) Points

True (*)

False

Correct

40. Arcs are used to visually represent _____ between two or more
relationships in an ERD. Mark for Review
(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Modeling historical data can produce a unique identifier that always excludes dates. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Communication Skills, Team-working and Presentations skills are all important for Consultants. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Your apperance at a presentation is important. You need to look smart and presentable. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review

(1) Points

True

False (*)

Correct

46. Modeling historical data is Optional. True or False? Mark for Review

(1) Points

True (*)

False

Correct

47. When you add the concept of time to your data model, your model becomes more complex. True or False? Mark for Review

(1) Points

True (*)

False

Correct

48. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shares were bought and therefore at what price. (*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

Correct

50. You are doing a data model for a computer sales company, where the price of postage is dependant on what day of the week goods are shipped. So shipping is more expensive if the customer wants a delivery to take place on a Saturday or Sunday. What would be the best way to model this? Mark for Review

(1) Points

Use a Delivery Day entity, which holds prices against week days, and ensure the we also have an attribute for the Requested Delivery Day in the Order Entity. (*)

Email current price to all employees whenever the prices change.

Update the prices in the system, print out the current prices when they change and pin them on the company noticeboard

Allow them to enter whatever delivery charge they want.

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1

(Answer all questions in this section)

1. Once you have learned how to write programs and build systems, you no longer need any input or involvement from any users, as you are perfectly capable of delivering the systems the business needs and wants. Mark for Review

(1) Points

True. All that perfect systems need are correct programs.

False. Business requirements can and will change. For instance new legal requirements may arise. (*)

True. All users do is delay systems delivery with their forever changing minds and new requirements.

True. Users never know what they want anyway, so building systems are best left to the professionals.

Section 1 Lesson 2

(Answer all questions in this section)

2. Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information? Mark for Review

(1) Points

Data (*)

Information

Both

Neither

Correct

Correct

3. Consider your school library. It will have a database with transaction details of which student borrows which books. Is details of the total number of books out on loan in one given month Data or Information? Mark for Review

(1) Points

Data

Information (*)

Both

Neither

Correct

Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. The first step in system development is to document the requirements. Why?

Mark for Review

(1) Points

Wrong. A blueprint for the database design is not needed. We can just start coding straight away.

It clarifies what a business wants to accomplish, and provides measures for deciding if the system delivers all that is required. (*)

It allows application development to be conducted without having to consider database design.

It keeps businesses honest.

Correct

Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Businesses involved in any of the following typically use databases to handle their data: Finance, Logistics, Commerce, Procurement and Distribution? True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

6. Oracle Database Software provides which of the following functionality?
(Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Graphical User Interface (*)

Internet Browser

Server (*)

Operating Systems

Incorrect

Incorrect. Refer to Section 1.

Section 2 Lesson 2

(Answer all questions in this section)

7. All of the following could be attributes of an ENTITY called PERSON except one. Select the incorrect one: Mark for Review

(1) Points

Haircolor

Weight

Gender

Natacha Hansen (*)

Correct

Correct

8. An entity can have many Unique Identifiers. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

9. Relationship names are usually verbs. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

10. All of the following would be instances of the entity ANIMAL SPECIES except which? Mark for Review

(1) Points

Dog

Bird

Elephant

Leaf (*)

Correct

Correct

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Summary

Section 2 Lesson 2

(Answer all questions in this section)

11. A/an _____ is a picture of all the information that will form the basis for the finished system. Mark for Review

(1) Points

ERD (*)

Process

Table

Attribute

Correct

Correct

12. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed

Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

Correct

Correct

13. Which of the following statements about relationships are true? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

They become Foreign Keys in the database. (*)

They Must be Mandatory to be created in the database.

They can be either mandatory or optional. (*)

They must exist between two different Entities.

Incorrect

Incorrect. Refer to Section 2

Section 3 Lesson 1

(Answer all questions in this section)

14.

Relationship Degree/Cardinality is important. True or False?

Mark for Review

(1) Points

True (*)

False

Correct

Correct

15.

Relationship Names are optional. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. The many end of a Relationship is called:

Mark for Review

(1) Points

Gulls Foot

Pigs Ear

Crows Ear

Crows Foot (*)

Correct

Correct

17. The single end of a Relationship is called:

Mark for Review

(1) Points

Single Toe (*)

Big Toe

Single Foot

Crows Foot

Incorrect

Incorrect. Refer to Section 3.

Section 3 Lesson 3

(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. You can only create relationships to a Supertype, not to a Subtype. True or

False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

20. A Supertype can have only one subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

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Section 4 Lesson 1

(Answer all questions in this section)

21. All instances of the supertype must be an instance of one of the subtypes.

True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

22. A supertype can only have two subtypes and no more. True or False? Mark

for Review

(1) Points

True

False (*)

Correct

Correct

for Review

(1) Points

23. Which of the following are suitable Entity names? (Choose Two)

Mark

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Correct

Correct

(Answer all questions in this section)

24. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review

(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

Correct

25. "Only teachers may supervise exams" is an example of which of the following? Mark for Review

(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

Correct

26. How would you model a business rule that states that girls and boys may not attend classes together? [Mark for Review](#)

(1) Points

Use a supertype

Use two subtypes with relationships from class to student gender (*)

Make the attribute Gender mandatory

You cannot model this. You need to document it.

Correct

Correct

27. Why is it important to identify and document structural rules? Mark for Review

(1) Points

Ensures we know what data to store and how that data works together. (*)

Ensures nothing. There is no benefits to be gained from documenting your Structural Business Rules. We need to concentrate on the Procedural Business Rules only.

Ensures we know what Information to store and how that Information works together.

All of the Above.

Incorrect

Incorrect. Refer to Section 4

Section 5 Lesson 1

(Answer all questions in this section)

28. Transferable relationships can only be mandatory, not optional. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Which of the following pairs of entities is most likely to be modeled as a M:M relationship? Mark for Review

(1) Points

CAR and WHEEL

TREE and BRANCH

PERSON and FINGERPRINT

TEACHER and SUBJECT AREA (*)

Incorrect

Incorrect. Refer to Section 5.

30. If two entities have two relationships between them, these relationships can be either _____ or _____? Mark for Review

(1) Points

Redundant or Required (*)

Replicated or Required

Resourced and Really Good

Redundant and Replicated

Correct

Correct

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Section 5 Lesson 2

(Answer all questions in this section)

31. Relationships can be Redundant. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

32. Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 6 Lesson 1

(Answer all questions in this section)

33. The first UID for an entity is called the Primary UID, the second is called Secondary UID and so on. Mark for Review

(1) Points

Yes, this is the way UID's are named. (*)

No, it is not possible to have more than one UID for an Entity.

Yes, but then it stops. No entities can have more than two UID's.

No, each Entity can only have one UID, the secondary one.

Correct

Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. An entity without repeated values is said to be on 1st Normal Form. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. Would it be a good idea to model age as an attribute of STUDENT Mark
for Review
(1) Points

Yes

Maybe it could stop us having to calculate someones age every time we need it

Sometimes

No - it breaks the Normalization rules (*)

Incorrect

Incorrect. Refer to Section 6

Section 7 Lesson 1

(Answer all questions in this section)

36. Consider the entity ADDRESS with the attributes:

ADDRESS:

House Number

* Street

* Town

* City

* Year of Build

o City Population

This entity is NOT in 3rd Normal Form ("no non-UID attribute can be dependent on another non-UID attribute). True or False?

Mark for Review

(1) Points

True (*)

False

Correct

Correct

37. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review
(1) Points

True (*)

False

Incorrect

Incorrect. Refer to Section 7

38. No parts of a UID are mandatory. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

39. Arcs are used to visually represent _____ between two or more relationships in an ERD. Mark for Review

(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Correct

Correct

40. Which of the following is NOT a relationship type? Mark for Review

(1) Points

Some to None (*)

One to One

One to Many

Many to Many

Correct

Correct

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Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? Mark for Review

(1) Points

True

False (*)

Incorrect Incorrect. Refer to Section 7

Section 7 Lesson 3

(Answer all questions in this section)

42. Modeling historical data can produce a unique identifier that always excludes dates. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Consultants often use their experience in ensuring projects stay on track and delivers within the timescales set out for the project. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Your apperance at a presentation is important. You need to look smart and presentable. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Incorrect

Incorrect. Refer to Section 10

46. Which of the following would be a logical constraint when modeling time for a City entity? Mark for Review

(1) Points

People are born in the city and people die in the city.

Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)

If you are doing a system for any French City, you would need security clearance

You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor

Correct

Correct

47. There is only one way to model time in a Data Model. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

48. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review

(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with Time.

Correct

Correct

50. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shares were bought and therefore at what price. (*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

Correct

Correct

11. Primary Unique Identifiers... (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

Are Required. The data model is not complete until all entities have a Primary UID. (*)

Distinguish each instance of an entity from all others (*)

Are not required

You may create more than one Primary Unique Identifier for an entity

Correct

Correct

12. All of the following could be attributes of an ENTITY called PERSON except one. Select the incorrect one: Mark for Review

(1) Points

Haircolor

Weight

Gender

Natacha Hansen (*)

Correct

Correct

13. Volatile entities have special requirements and need special attention when you are doing data modelling. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 3 Lesson 1

(Answer all questions in this section)

14.

Relationship Names are optional. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

15. Relationships represents something of significance to the business? True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. To identify an attribute as part of a unique identifier on an ER diagram, the # symbol goes in front of it. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

17. Entity names are always singular. True or False?

Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 3 Lesson 3

(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. All instances of the supertype must be an instance of one of the subtypes.
True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

20. Which of the following are suitable Entity names? (Choose Two) Mark
for Review

(1) Points

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 4 Lesson 1

(Answer all questions in this section)

21. A Supertype can have only one subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

22. You can only create relationships to a Supertype, not to a Subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

23. A supertype can only have two subtypes and no more. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. "Only teachers may supervise exams" is an example of which of the following? Mark for Review

(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

Correct

25. A new system would have a mixture of both Procedural and Structural Business Rules as part of the documentation of that new system. True or False? Mark for Review

(1) Points

True (*)

False

Incorrect

Incorrect. Refer to Section 4

26. Can all constraints be modeled on an ER diagram? Mark for Review
(1) Points

No, in which case you should let the database administrator handle them

No, but you just explain them to the users so they can enforce them

Yes, all constraints must be modeled and shown on the ER diagram

No, so you should list them on a separate document to be handled programmatically (*)

Correct

Correct

27. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review

(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

Correct

Section 5 Lesson 1

(Answer all questions in this section)

28. If a relationship can NOT be moved between instances of the entities it connects, it is said to be: Mark for Review

(1) Points

Mandatory

Optional

Transferrable

Non-Transferable (*)

Correct

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. How do you include a relationship as part of the UID for an entity? Mark
for Review

(1) Points

By barring the relationship in question (*)

By reporting it in an external document

By including the UID from the parent entity as an attribute in the entity

You cannot model that.

Correct

Correct

30. Which of the following pairs of entities is most likely to be modeled as a M:M relationship? Mark for Review

(1) Points

CAR and WHEEL

TREE and BRANCH

PERSON and FINGERPRINT

TEACHER and SUBJECT AREA (*)

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2

(Answer all questions in this section)

31. Relationships can be Redundant. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

32. A relationship from an entity back to itself is called a _____
relationship. Mark for Review

(1) Points

Mandatory

Recursive (*)

Many to Many Optional

Transferrable

Correct

Correct

Section 6 Lesson 1

(Answer all questions in this section)

33.

All entities must be given a new artificial UID. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. Normalizing an Entity to 1st Normal Form is done by removing repeated or redundant attributes. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. When is an entity in 2nd Normal Form?

Mark for Review

(1) Points

When all non-UID attributes are dependent upon the entire UID. (*)

When no attributes are mutually independent and fully independent on the primary key.

When no attributes are mutually independent and all are fully dependent on the primary key.

None of the Above.

Correct

Correct

Section 7 Lesson 1

(Answer all questions in this section)

36. All relationships participating in an arc must be mandatory. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

37. Arcs are used to visually represent _____ between two or more relationships in an ERD.

Mark for Review

(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Correct

Correct

38. No parts of a UID are mandatory. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

39. Which of the following is NOT a relationship type? Mark for Review

(1) Points

Some to None (*)

One to One

One to Many

Many to Many

Correct

Correct

40. Primary UIDs are: Mark for Review

(1) Points

Something that each Entity should have, but is not mandatory (*)

Useful as an alternative means identifying instances of an entity, independent of their datatype

Mandatory in data modeling

Always comprised of numbers

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? Mark
for Review

(1) Points

True

False (*)

Correct

Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Modeling historical data can produce a unique identifier that always excludes dates. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Database Design projects must use Consultants or they will fail. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Which of the following are NOT valid techniques for effective public speaking? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

Whispering (*)

Using specialist language and technical abbreviations when communicating technical information (*)

Being enthusiastic

All of the Above

Correct

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

46. Modeling historical data is Optional. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

47. When you add the concept of time to your data model, your model becomes more complex. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

48. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. All systems must include functionality to provide logging or journaling in conceptual data models. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

50. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review

(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with TimTest: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? Mark
for Review

(1) Points

True

False (*)

Correct

Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Modeling historical data can produce a unique identifier that always excludes
dates. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Database Design projects must use Consultants or they will fail. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Which of the following are NOT valid techniques for effective public speaking? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

Whispering (*)

Using specialist language and technical abbreviations when communicating technical information (*)

Being enthusiastic

All of the Above

Correct

Correct

(Answer all questions in this section)

45. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

46. Modeling historical data is Optional. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

47. When you add the concept of time to your data model, your model becomes more complex. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

48. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. All systems must include functionality to provide logging or journaling in conceptual data models. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

50. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review

(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with Tim

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1

(Answer all questions in this section)

1. The market for IT professionals is still increasing and will continue to do so in the future, as the world gets ever more dependent on computer systems. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 1 Lesson 2

(Answer all questions in this section)

2. Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information? Mark for Review

(1) Points

Data (*)

Information

Both

Neither

Incorrect

Incorrect. Refer to Section 1.

3. What is the difference between "information" and "data"? Mark for
Review
(1) Points

Data is held and understood only by Users

Information is held and understood only by users

Information and data have no differences - they are two words for the same thing

Data turns into information when it is stored in a database and accessed by systems and users (*)

Correct

Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. Databases are used in most countries and by most governments. Life, as we know it, would change drastically if we no longer had access to databases. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Databases perform these functions.... Mark for Review

(1) Points

Running multiple applications on multiple client-servers

Providing integrated software on fast processing servers

Providing software running on a variety of platforms and configurations allowing companies a structured way to access and manage their data (*)

They run purely as client-based software on personal computers

Correct

Correct

6. Software cannot operate without Hardware. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 2 Lesson 2

(Answer all questions in this section)

7. Which of the following statements about relationships are true? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

They become Foreign Keys in the database. (*)

They Must be Mandatory to be created in the database.

They can be either mandatory or optional. (*)

They must exist between two different Entities.

Correct

Correct

8. A/an _____ is a picture of all the information that will form the basis for the finished system. Mark for Review

(1) Points

ERD (*)

Process

Table

Attribute

Correct

Correct

9. All of the following are examples of ENTITY: Instance except two. Select the answers that are ENTITY: Instance. (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

TRANSPORTATION METHOD: Car (*)

ANIMAL: Dog (*)

MEAT PRODUCT: Lettuce

BODY PART: Larry Ellison

Correct

Correct

10. An entity can have many Unique Identifiers. True or False? Mark for
Review
(1) Points

True (*)

False

Incorrect

Incorrect. Refer to Section 7Skip navigation elements to page contents

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1

(Answer all questions in this section)

1. Once you have learned how to write programs and build systems, you no longer need any input or involvement from any users, as you are perfectly capable of delivering the systems the business needs and wants. Mark for Review

(1) Points

True. All that perfect systems need are correct programs.

False. Business requirements can and will change. For instance new legal requirements may arise. (*)

True. All users do is delay systems delivery with their forever changing minds and new requirements.

True. Users never know what they want anyway, so building systems are best left to the professionals.

Section 1 Lesson 2

(Answer all questions in this section)

2. Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information? Mark for Review

(1) Points

Data (*)

Information

Both

Neither

Correct

Correct

3. Consider your school library. It will have a database with transaction details of which student borrows which books. Is details of the total number of books out on loan in one given month Data or Information? Mark for Review

(1) Points

Data

Information (*)

Both

Neither

Correct

Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. The first step in system development is to document the requirements. Why?

Mark for Review

(1) Points

Wrong. A blueprint for the database design is not needed. We can just start coding straight away.

It clarifies what a business wants to accomplish, and provides measures for deciding if the system delivers all that is required. (*)

It allows application development to be conducted without having to consider database design.

It keeps businesses honest.

Correct

Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Businesses involved in any of the following typically use databases to handle their data: Finance, Logistics, Commerce, Procurement and Distribution? True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

6. Oracle Database Software provides which of the following functionality?
(Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Graphical User Interface (*)

Internet Browser

Server (*)

Operating Systems

Incorrect

Incorrect. Refer to Section 1.

Section 2 Lesson 2

(Answer all questions in this section)

7. All of the following could be attributes of an ENTITY called PERSON except one. Select the incorrect one: Mark for Review

(1) Points

Haircolor

Weight

Gender

Natacha Hansen (*)

Correct

Correct

8. An entity can have many Unique Identifiers. True or False? Mark for Review
(1) Points

True (*)

False

Correct Correct

9. Relationship names are usually verbs. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

10. All of the following would be instances of the entity ANIMAL SPECIES except which? Mark for Review

(1) Points

Dog

Bird

Elephant

Leaf (*)

Correct

Correct

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Summary

Section 2 Lesson 2

(Answer all questions in this section)

11. A/an _____ is a picture of all the information that will form the basis for the finished system. Mark for Review

(1) Points

ERD (*)

Process

Table

Attribute

Correct

Correct

12. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed

Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

Correct

Correct

13. Which of the following statements about relationships are true? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

They become Foreign Keys in the database. (*)

They Must be Mandatory to be created in the database.

They can be either mandatory or optional. (*)

They must exist between two different Entities.

Incorrect

Incorrect. Refer to Section 2

Section 3 Lesson 1

(Answer all questions in this section)

14.

Relationship Degree/Cardinality is important. True or False?

Mark for Review

(1) Points

True (*)

False

Correct

Correct

15.

Relationship Names are optional. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. The many end of a Relationship is called:

Mark for Review

(1) Points

Gulls Foot

Pigs Ear

Crows Ear

Crows Foot (*)

Correct

Correct

17. The single end of a Relationship is called:

Mark for Review

(1) Points

Single Toe (*)

Big Toe

Single Foot

Crows Foot

Incorrect

Incorrect. Refer to Section 3.

Section 3 Lesson 3

(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. You can only create relationships to a Supertype, not to a Subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

20. A Supertype can have only one subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

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Section 4 Lesson 1

(Answer all questions in this section)

21. All instances of the supertype must be an instance of one of the subtypes.
True or False? [Mark for Review](#)

(1) Points

☒ True (*)

☐ False

[Correct](#) [Correct](#)

22. A supertype can only have two subtypes and no more. True or False? [Mark for Review](#)

(1) Points

☐ True

False (*)

Correct

Correct

23. Which of the following are suitable Entity names? (Choose Two) Mark
for Review
(1) Points

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Correct

Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review

(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

Correct

25. "Only teachers may supervise exams" is an example of which of the following? Mark for Review

(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

Correct

26. How would you model a business rule that states that girls and boys may not attend classes together? Mark for Review

(1) Points

Use a supertype

Use two subtypes with relationships from class to student gender (*)

Make the attribute Gender mandatory

You cannot model this. You need to document it.

Correct

Correct

Review

27. Why is it important to identify and document structural rules? Mark for

(1) Points

Ensures we know what data to store and how that data works together. (*)

Ensures nothing. There is no benefits to be gained from documenting your Structural Business Rules. We need to concentrate on the Procedural Business Rules only.

Ensures we know what Information to store and how that Information works together.

All of the Above.

Incorrect

Incorrect. Refer to Section 4

Section 5 Lesson 1

(Answer all questions in this section)

28. Transferable relationships can only be mandatory, not optional. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Which of the following pairs of entities is most likely to be modeled as a M:M relationship? Mark for Review

(1) Points

CAR and WHEEL

TREE and BRANCH

PERSON and FINGERPRINT

TEACHER and SUBJECT AREA (*)

Incorrect

Incorrect. Refer to Section 5.

30. If two entities have two relationships between them, these relationships can be either _____ or _____? Mark for Review

(1) Points

Redundant or Required (*)

Replicated or Required

Resourced and Really Good

Redundant and Replicated

Correct

Correct

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Section 5 Lesson 2

(Answer all questions in this section)

31. Relationships can be Redundant. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

32. Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 6 Lesson 1

(Answer all questions in this section)

33. The first UID for an entity is called the Primary UID, the second is called Secondary UID and so on. Mark for Review

(1) Points

Yes, this is the way UID's are named. (*)

No, it is not possible to have more than one UID for an Entity.

Yes, but then it stops. No entities can have more than two UID's.

No, each Entity can only have one UID, the secondary one.

Correct

Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. An entity without repeated values is said to be on 1st Normal Form. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. Would it be a good idea to model age as an attribute of STUDENT Mark for Review

(1) Points

Yes

Maybe it could stop us having to calculate someones age every time we need it

Sometimes

No - it breaks the Normalization rules (*)

Incorrect

Incorrect. Refer to Section 6

Section 7 Lesson 1

(Answer all questions in this section)

36. Consider the entity ADDRESS with the attributes:

ADDRESS:

House Number

* Street

* Town

* City

* Year of Build

o City Population

This entity is NOT in 3rd Normal Form ("no non-UID attribute can be dependent on another non-UID attribute). True or False?

Mark for Review

(1) Points

True (*)

False

Correct

Correct

37. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review

(1) Points

True (*)

False

Incorrect

Incorrect. Refer to Section 7

38. No parts of a UID are mandatory. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

39. Arcs are used to visually represent _____ between two or more relationships in an ERD.

Mark for Review

(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Correct

Correct

40. Which of the following is NOT a relationship type?

Mark for Review

(1) Points

Some to None (*)

One to One

One to Many

Many to Many

Correct

Correct

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Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? [Mark for Review](#)

(1) Points

True

False (*)

Incorrect

Incorrect. Refer to Section 7

Section 7 Lesson 3

(Answer all questions in this section)

42. Modeling historical data can produce a unique identifier that always excludes dates. True or False? [Mark for Review](#)

(1) Points

True

False (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Consultants often use their experience in ensuring projects stay on track and delivers within the timescales set out for the project. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Your apperance at a presentation is important. You need to look smart and presentable. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Incorrect

Incorrect. Refer to Section 10

46. Which of the following would be a logical constraint when modeling time for a City entity? Mark for Review

(1) Points

People are born in the city and people die in the city.

Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)

If you are doing a system for any French City, you would need security clearance

You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor

Correct

Correct

47. There is only one way to model time in a Data Model. True or False? Mark
for Review

(1) Points

True

False (*)

Correct

Correct

48. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review

(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with Time.

Correct

Correct

50. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shares were bought and therefore at what price. (*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

Correct

Correct

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[Summary](#)

1. The main subject areas taught by the Oracle Academy are: Mark for Review

(1) Points

Computer Repairs

Database performance tuning.

Data Modeling, SQL and PL/SQL (*)

Systems programming and computer architecture

Correct

Section 1 Lesson 2

(Answer all questions in this section)

2. Consider your school library. It will have a database with transaction details of which student borrows which books. Is details of the total number of books out on loan in one given month Data or Information? Mark for Review

(1) Points

Data

Information (*)

Both

Neither

Correct

3. What is the difference between "information" and "data"? Mark for Review

(1) Points

Data is held and understood only by Users

Information is held and understood only by users

Information and data have no differences - they are two words for the same thing

Data turns into information when it is stored in a database and accessed by systems and users (*)

Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. Users with detailed business knowledge can provide input to the Database Development Process.
True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Software cannot operate without Hardware. True or False? Mark for Review

(1) Points

True (*)

False

Incorrect. Refer to Section 1

6. Databases were invented in 1989. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 2 Lesson 2

(Answer all questions in this section)

7. In a physical data model, a relationship is represented as a? Mark for Review

(1) Points

Column

Row

Instance

Foreign Key (*)

Incorrect. Refer to Section 2

8. Relationship names are usually verbs. True or False? Mark for Review

(1) Points

True (*)

11. All of the following would be instances of the entity ANIMAL SPECIES except which? Mark for Review

(1) Points

Dog

Bird

Elephant

Leaf (*)

Correct

12. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review

(1) Points

(Choose all correct answers)

Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed

Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

Correct

13. A/an _____ is a picture of all the information that will form the basis for the finished system. Mark for Review

(1) Points

ERD (*)

Process

Table

Attribute

Correct

Section 3 Lesson 1

(Answer all questions in this section)

14. Relationship Names are optional. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

15. One Relationship can be both mandatory and optional at different ends. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. The many end of a Relationship is called: Mark for Review

(1) Points

Gulls Foot

Pigs Ear

Crows Ear

Crows Foot (*)

Correct

17. Entity names are always singular. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 3 Lesson 3

(Answer all questions in this section)

18. Two entities can ONLY have one relationship between them. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. Which of the following are suitable Entity names? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Correct

20. All instances of a subtypes may be an instance of the supertype but does not have to. True or False? Mark for Review

(1) Points

True

False (*)

Section 4 Lesson 1

(Answer all questions in this section)

21. The "Other" subtype is mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Correct

22. All instances of the supertype must be an instance of one of the subtypes. True or False? Mark for Review

(1) Points

True (*)

False

Correct

23. You can only create relationships to a Supertype, not to a Subtype. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review

(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

25. A new system would have a mixture of both Procedural and Structural Business Rules as part of the documentation of that new system. True or False? Mark for Review

(1) Points

True (*)

False

Correct

26. Can all constraints be modeled on an ER diagram? Mark for Review

(1) Points

No, in which case you should let the database administrator handle them

No, but you just explain them to the users so they can enforce them

Yes, all constraints must be modeled and shown on the ER diagram

No, so you should list them on a separate document to be handled programmatically (*)

Correct

27. "Only teachers may supervise exams" is an example of which of the following? Mark for Review

(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

Section 5 Lesson 1

(Answer all questions in this section)

28. A Diamond on a relationship indicates the Relationship as Non-Tranferrable. True or False?
Mark for Review

(1) Points

True (*)

False

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False? Mark for Review

(1) Points

True

False (*)

Correct

30. How do you include a relationship as part of the UID for an entity? Mark for Review

(1) Points

By barring the relationship in question (*)

By reporting it in an external document

By including the UID from the parent entity as an attribute in the entity

You cannot model that.

31. What uncommon relationship is described by the statements: "Each DNA SAMPLE may be taken from one and only one PERSON and each PERSON may provide one and only one DNA SAMPLE"

Mark for Review

(1) Points

One to Many Optional

One to Many Mandatory

One to One Optional (*)

Many to Many Mandatory

Incorrect. Refer to Section 5

32. A relationship from an entity back to itself is called a _____ relationship. Mark for Review

(1) Points

Mandatory

Recursive (*)

Many to Many Optional

Transferrable

Correct

Section 6 Lesson 1

(Answer all questions in this section)

33. People are not born with “numbers,” but a lot of systems assign student numbers, customer IDs, etc. A shoe has a color, a size, a style, but may not have a descriptive “number”. So, to be able to uniquely and efficiently identify one instance of the entity SHOE, a/an _____ UID can be created. Mark for Review

(1) Points

artificial (*)

unrealistic

structured

identification

Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. An entity without repeated values is said to be on 1st Normal Form. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. Any Non-UID must be dependant on the entire UID. True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 7 Lesson 1

(Answer all questions in this section)

36. No parts of a UID are mandatory. True or False? Mark for Review

(1) Points

True

False (*)

Correct

37. An arc can be modelled as Supertype and Subtypes. True or False? Mark for Review

(1) Points

True (*)

False

Correct

38. Primary UIDs are: Mark for Review

(1) Points

Something that each Entity should have, but is not mandatory (*)

Useful as an alternative means identifying instances of an entity, independent of their datatype

Mandatory in data modeling

Always comprised of numbers

Incorrect. Refer to Section 7

39. Arcs are used to visually represent _____ between two or more relationships in an ERD.
Mark for Review

(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Correct

40. All relationships participating in an arc must be mandatory. True or False? Mark for Review

(1) Points

True

False (*)

41. Which of the following would be good as a Unique Identifier for its Entity? (Choose Three) Mark for Review

(1) Points

(Choose all correct answers)

Personal Identification number for Person (*)

Vehicle Registration Number for Car (*)

ISBN Number for Book (*)

Date of birth for Baby

Incorrect. Refer to Section 7

Section 7 Lesson 3

(Answer all questions in this section)

42. If Audit trail attributes are added to an entity they must be in the entities they are auditing.
True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Database Design projects must use Consultants or they will fail. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Which of the following are NOT valid techniques for effective public speaking? (Choose Two)
Mark for Review

(1) Points

(Choose all correct answers)

Whispering (*)

Using specialist language and technical abbreviations when communicating technical information
(*)

Being enthusiastic

All of the Above

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. Which of the following would be a logical constraint when modeling time for a City entity?

Mark for Review

(1) Points

People are born in the city and people die in the city.

Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)

If you are doing a system for any French City, you would need security clearance

You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor

Correct

46. There is only one way to model time in a Data Model. True or False? Mark for Review

(1) Points

True

False (*)

Correct

47. Modeling historical data is Optional. True or False? Mark for Review

(1) Points

True (*)

False

Correct

48. When you add the concept of time to your data model, your model becomes more complex.
True or False? Mark for Review

(1) Points

True (*)

False

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shares were bought and therefore at what price.
(*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase
(*)

Correct

50. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review

(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with Time.

Correct

False

Correct

9. Primary Unique Identifiers... (Choose Two) Mark for Review

(1) Points

(Choose all correct answers)

Are Required. The data model is not complete until all entities have a Primary UID. (*)

Distinguish each instance of an entity from all others (*)

Are not required

You may create more than one Primary Unique Identifier for an entity

Correct

10. An entity is instantiated as a ? Mark for Review

(1) Points

experience

instance

table (*)

none of the above

Section 1 Lesson 1

1. Why is it important to identify the business requirements before beginning to program a new system?

- It is not important to have a blueprint for database design and programs. You should just start coding as soon as possible, so you can meet your deadlines.
- It clarifies what a business wants to accomplish, so you can get your database design and coding started correctly. (*)
- It allows application development to be conducted without having to consider database design.
- It keeps businesses honest.

2. What are the major content areas covered in the Oracle Academy?

- Database programming and Computer repair.
- Database configuration and performance tuning.
- Data Modeling, SQL Java, and PL/SQL (*)
- Data Modeling, Java, and C+

3. There is a big increase in demand for Information Technology professionals in today's market. True or False?

- True (*)
- False

Section 1 Lesson 2

1. How do you turn "data" into "information"

- By testing it
- By querying it or accessing it (*)
- By storing it on a server
- By storing it in a database

2. Consider an example where an Oracle database works "behind the scenes" for common internet activity. Which of the following best describes a database transaction?

- A person searches an airline website to find all available fares for a flight. (*)
- A business identifies what process it uses for purchasing inventory.
- A student places a link to their homepage from the school's website.
- A person looking in the newspaper for good internet sites.

3. Which of the following are examples of data vs. Information

- A. Student age vs. average age of all students in class
- B. Bank deposit amount vs. total account balance
- C. Winning time for a race vs. length of race
- D. Price of computer vs. total sales of all computers for a company
- E. Both A and B. (*)
- F. B, C, and D

4. What are the results of having all your data in one central location? (Choose two)

(Choose all correct answers)

- Improved Performance (*)
- Easier access to data (*)
- Updates are harder to execute
- Decreased performance

Section 1 Lesson 3

1. Which of the following is the correct order for the Database Development Process?

- Strategy, Analysis, Design, Build (*)
- Analysis, Strategy, Design, Build
- Build, Strategy, Analysis, Design
- Design, Build, Strategy, Analysis

2. Data Modeling is the last stage in the development of a database. True or False?

- True
- False (*)

3. Oracle was one of the first relational database systems available commercially? True or False?

- True (*)
- False

Section 1 Lesson 4

1. Databases function more efficiently as....

- multiple applications on multiple client-servers
- integrated software on fast processing servers (*)
- client-based software of client servers
- client-based software on personal computers

2. Users would use which of the following software to access essential business applications? (Choose three)

(Choose all correct answers)

- GUI Interface (*)
- Internet Browser (*)
- Server
- Operating System (*)

3. Which of the following is NOT a type of database?

- Hierarchical
- Relational
- SQL (*)
- Network

4. Personal computers (PCs) have been in existence since 1950. True or False?

- True
- False (*)

Section 2 Lesson 1

1. Which of the following are reasons we create conceptual models?

- A. It facilitates discussion. A picture is worth a thousand words.
- B. It forms important hardware system documentation.
- C. It develops business development methodology
- D. It forms a sound basis for physical database design
- B and C
- A and D (*)

2. Examples of hardware are:

- Data entry web pages, Mouse Hard disk.
- Mouse, Hard disk, Monitor (*)
- Monitor, Mouse, Printer, Printed Reports
- Monitor, Mouse, Mouse Pad, Cables and Wires, Hard disk

3.Examples of software are:

- Data entry web pages, Spreadsheets, Google and Yahoo search Engines, SQL Developer, Oracle Application Express (*)
- Microsoft Word, Microsoft Powerpoint, Microsoft Excel, Mouse pad
- Mouse, Cables, Microsoft Word, Microsoft Powerpoint
- Monitor, Microsoft Word, Microsoft PowerPoint, SQL Developer

Section 2 Lesson 2

1.A/an _____ is a piece of information that in some way describes an entity. It is a property of the entity and it quantifies, qualifies, classifies or specifies the entity.

- ERD
- Process
- Table
- Attribute (*)

2.In a physical data model, an attribute is represented as a/an

- Column (*)
- Row
- Instance
- Foreign Key

3.Which of the following entities most likely contains invalid attributes?

- Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built
- Entity: Pet. Attributes: Name, Birthdate, Owner
- Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed (*)
- Entity: Mother. Attributes: Name, Birthdate, Hair Colour, Eye Colour

4.An entity may have which of the following?

- experiences
- instances (*)
- tables
- none of the above

5.Unique Identifiers....

- distinguish one entity from another
- distinguish one instance of an entity from all other instances of that entity (*)
- distinguish all entities in a database
- distinguishes nothing

6.The word "Volatile" means....

- Changing constantly; unstable (*)
- Static; unlikely to change
- Large quantity
- Limited quantity

7.All of the following would be instances of the entity PERSON except which?

- David Jones
- Male (*)
- Angelina Rosalie
- Grace Abinajam

8.What is the purpose of a Unique Identifier?

- To uniquely determine a table and columns within that table.
- To identify a specific row within a table, using one or more columns and/or foreign keys.
- Create an entity that is unlike any other entity aside from itself.
- To identify one unique instance of an entity, by using one or more attributes and/or relationships. (*)

9.Entities are usually verbs. True or False?

- True
- False (*)

10.Which of the following statements about attributes are true? (Choose Two)

(Choose all correct answers)

- They describe, qualify, quantify, classify, or specify an entity. (*)
- They are often adjectives.
- They have a data type such as a number or character string. (*)
- They must be single valued unless they belong to more than one entity.

11.In the following statements, find two examples of ENTITY: Instance. (Choose Two)

(Choose all correct answers)

- DAIRY PRODUCT: yogurt (*)
- VEGETABLE: grows
- BOOK: Biography of Mahatma Gandhi (*)
- BODY PART: Marilyn Manson

12.Some of the following could be attributes of an ENTITY called PERSON. Select the incorrect attributes for PERSON. (Choose Two)

(Choose all correct answers)

- Age

- Freddy Wilson (*)
- Name
- Priya Hansenna (*)

Section 2 Lesson 3

1. Entity Relationship model is independent of the hardware or software used for implementation. True or False?

- True (*)
- False

2. The purpose of an ERD is to document the proposed system and facilitate discussion and understanding of the requirements captured by the developer. True or False?

- True (*)
- False

3. A well structured ERD will show only some parts of the finished data model. You should never try to model the entire system in one diagram, no matter how small the diagram might be. True or False?

- True
- False (*)

4. Which of the following statements are true about ERD's? (Choose Two)

(Choose all correct answers)

- A piece of information can be shown multiple times on an ERD.
- A piece of information should only be found one place on an ERD. (*)
- You should not model derivable data. (*)
- All data must be represented on the ERD, including derived summaries and the result of calculations.

5. In the grid computing model, resources are pooled together for efficiency. True or False?

- True (*)
- False

Section 3 Lesson 1

1. What are three properties that every relationship should have?

- Transferability, degree, name
- Name, optionality, degree (*)
- A UID bar, a diamond, an arc

- Name, optionality, arcs

2. Relationships can be either mandatory or optional. True or False?

- True (*)
- False

3. Relationships always exist between

- 3 or more entities
- 2 entities (or one entity twice) (*)
- 2 attributes
- 3 or more attributes

4. In a business that sells computers, choose the best relationship name from CUSTOMER to ITEM (computer, in this case).

- Each CUSTOMER must be the buyer of one or more ITEMS. (*)
- Each CUSTOMER must be the seller of one or more ITEMS.
- Each CUSTOMER may be the maker of one or more ITEMS.
- Each CUSTOMER may be the producer of one or more ITEMS.

Section 3 Lesson 2

1. Consider the recommended drawing conventions for ERD's. Indicate which of the following accurately describes diagramming conventions for entities and attributes:

- The * means that an attribute is optional and entity names should be plural verbs.
- The 'o' means that the attribute is optional and entity names should be plural verbs.
- The * means that an attribute is mandatory or required and the entity name should be singular. (*)
- The 'o' means that the attribute is mandatory or required and the entity name should be a singular noun.

2. Which symbol is used to indicate that a particular attribute is optional?

- *
- o (*)
- #
- &

3. On an ER diagram which symbol identifies an attribute as part of a unique identifier.

- # (*)
- *
- o
- x

4.Entity names are always plural. True or False?

- True
- False (*)

5.Entity boxes are drawn as:

- Soft Boxes (*)
- Hard Boxes
- Bold Circles
- Normal Circles

6.Attributes are written inside the entity box to which they belong. True or False?

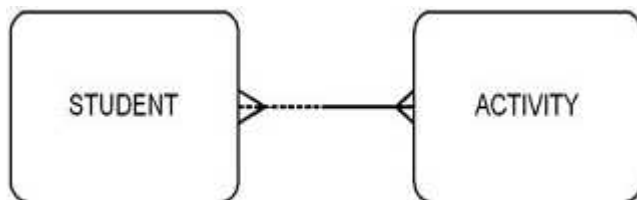
- True (*)
- False

Section 3 Lesson 3

1.Two entities can have one or more relationships between them. True or False?

- True (*)
- False

2.After looking at the diagram, choose the sentence below that could be "read" from the existing relationship (even though you're missing relationship labels!)



- Each Student must have one or more Activities.
- Each Activity may be performed by one or more Students.
- Each Student may participate in one or more Activities. (*)
- Each Activity must belong to one and only one Student.

3.When reading a relationship between 2 entities, the relationship is only read from left to right. True or False?

- True
- False (*)

Section 3 Lesson 4

1.A Matrix Diagram will help you with all of the following except:

- Defining Relationships Between Entities
- Identifying Entities
- Defining Instances of Entities (*)
- Naming Relationships

2. Creating a Matrix Diagram is mandatory when doing Data Modeling. True or False?

- True
- False (*)

3. Matrix Diagrams helps verify you have identified all possible and required relationships between your existing entities. True or False?

- True (*)
- False

Section 4 Lesson 1

1. A subtype can have a relationship not shared by the supertype. True or False?

- True (*)
- False

2. Which of the following is the best scenario for using supertype/subtype entities:

- A pet store that sells small animals, because they each need different size cages and food.
- An ice cream store that sells ice cream in sugar cones and regular cones.
- A grocery store that gives customers a choice of plastic or paper bags.
- A vehicle dealership that sells cars, trucks, and boats on trailers. (*)

3. All instances of the subtypes must be an instance of the supertype. True or False?

- True (*)
- False

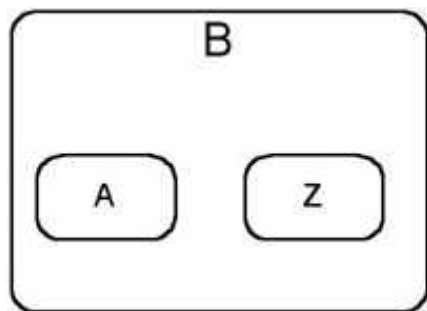
4. All instances of the supertype are also instances of one of the subtypes. True or False?

- True (*)
- False

5. A supertype should have at least two subtypes. True or False?

- True (*)
- False

6. Which of the following is a TRUE statement about the diagram below?



- Every Z is either an A or a B
- Every B is a Z
- Every A is a Z
- Every A is a B (*)

7. Which of the following is true about supertypes and subtypes?

- Instances that belong to two subtypes of the same supertype may be modeled as a one-to-one relationship between the two subtypes.
- Subtypes inherit the relationships and attributes of the supertype. (*)
- Subtypes may have no more than 2 levels of nesting.
- Supertype and subtype entities must be mutually exclusive.

8. The "Other" subtype is best used:

- For instances that belong to the supertype and at least one other subtype.
- For a subtype that does not have any of the same attributes as the supertype to which it belongs.
- As an extra subtype to ensure that all instances of subtypes are mutually exclusive and complete. By having an "Other" subtype, all instances of the Supertype will be of one subtype type. (*)
- You should never have a subtype called Other.

9. When creating entities it is important to remember all of the following: (Choose Two)

(Choose all correct answers)

- Create a formal description. (*)
- Include attributes. (*)
- Do not use synonyms.
- Do use reserved words.

10. Which of the following are valid formats for an attribute? (Choose Two)

(Choose all correct answers)

- Character string. (*)
- Decimal.
- Number. (*)

- HEX.

Section 4 Lesson 2

1.How should you handle constraints that cannot be modeled on an ER diagram?

- Always let the network architect handle them
- List them on a separate document to be handled programmatically (*)
- Explain them to the users so they can enforce them
- All constraints must be modeled and shown on the ER diagram

2.How would you model a business rule that states that on a student's birthday, they do not have to attend their classes?

- Use a supertype
- Use a subtype
- Make the attribute Birthdate mandatory
- You cannot model this. You need to document it (*)

3.Which of the following is an example of a structural business rule?

- All employees must belong to at least one department. (*)
- Buildings to be purchased by the business must be current with earthquake building code.
- All overdue payments will have an added 10 % late fee.
- All products will have a selling price no less than 30 % greater than wholesale.

4."Only managers can approve travel requests" is an example of which of the following?

- A structural business rule.
- A mandatory business rule.
- A procedural business rule. (*)
- An optional business rule.

5.A business rule such as "All accounts must be paid in full within 10 days of billing" is best enforced by:

- Making the payment attribute mandatory.
- Making the relationship between CUSTOMER and PAYMENT fully mandatory and 1:1 on both sides.
- Creating a message to be printed on every bill that reminds the customer to pay within ten days.
- Hiring a programmer to create additional programming code to identify and report accounts past due. (*)

6.Business rules are important to data modelers because:

- A. They capture all of the needs, processes, and required functionality of the business. (*)

- B. They are easily implemented in the ERD diagram.
- C. The data modeler must focus on structural rules, because they are easily represented diagrammatically, and eliminate other rules that involve extra procedures or programming.
- D. Both A and C are true

7. Why is it important to identify and document business rules?

- It allows you to create your data model, then check for accuracy. (*)
- It allows you to improve the client's business.
- It ensures that the data model will automate manual processes.
- None of the above.

Section 5 Lesson 1

1. If a relationship can be moved between instances of the entities it connects, it is said to be:

- Implicit
- Transferrable (*)
- Committed
- Recursive

2. A non-transferable relationship is represented by which of the following symbols?

- Heart
- Diamond (*)
- Circle
- Triangle

3. Non-transferable relationships can only be mandatory, not optional. True or False?

- True (*)
- False

Section 5 Lesson 2

1. When resolving an M:M relationship, the new relationships will always be _____ on the many side.

- optional
- recursive
- mandatory (*)
- redundant

2.What uncommon relationship is described by the statements: "Each LINE must consist of many POINTS and each POINT must be a part of many LINES"

- One to Many Optional
- One to Many Mandatory
- Many to Many Optional
- Many to Many Mandatory (*)

3.When are relationships redundant?

- When you can derive the relationship from other relationships in the model (*)
- When they have the same visual structure but different meaning
- When the information does not relate to the model
- When the relationships connect 2 entities and they each have distinct meanings

4.Many to many relationships between entities usually hide what?

- Another relationship
- Another entity (*)
- More attributes
- Uniqueness

5.If the same relationship is represented twice in an Entity Relationship Model, it is said to be:

- Replicated
- Removable
- Redundant (*)
- Resourceful

6.Which of the following are relationship types? (Choose Two)

(Choose all correct answers)

- One to Some
- Many to Many (*)
- One to Many (*)
- One to Another

7.Which of the following pairs of entities is most likely to be modeled as a M:M relationship? (Choose Two)

(Choose all correct answers)

- STUDENT and CLASS (*)
- TREE and SEEDLING
- EMPLOYEE and MANAGER
- CAR and DRIVER (*)

Section 5 Lesson 3

1.If an intersection entity is formed that contains no attributes of its own, its uniqueness may be modeled by

- Creating new attributes.
- Barring the relationships to the original entities. (*)
- Placing the UID attributes from the original entities into the intersection entity.
- None of the above.

2.Many-to-Many relationships are perfectly acceptable in a finished ERD. There is not need to do any more work on them. True or False?

- True
- False (*)

3.When you resolve a M-M by creating an intersection entity, this new entity will always inherit:

- The attributes of both related entities.
- A relationship to each entity from the original M-M. (*)
- The UID's from the entities in the original M-M.
- Nothing is inherited from the original entities and relationship.

Section 6 Lesson 1

1.A unique identifier can only be made up of one attribute. True or False?

- True
- False (*)

2.People are not born with “numbers,” but a lot of systems assign student numbers, customer IDs, etc. A shoe has a color, a size, a style, but may not have a descriptive “number”. So, to be able to uniquely and efficiently identify one instance of the entity SHOE, a/an _____ UID can be created.

- artificial (*)
- unrealistic
- structured
- identification

3.An entity can only have one UID. True or False?

- True
- False (*)

4.A UID can be made up from the following: (Choose Two)

(Choose all correct answers)

- Attributes (*)
- Entities
- Relationships (*)
- Synonyms

Section 6 Lesson 2

1. When data is stored in more than one place in a database, the database violates the rules of _____.

- Normalization (*)
- Replication
- Normalcy
- Decency

2. When all attributes are single-valued, the database model is said to conform to:

- 1st Normal Form (*)
- 2nd Normal Form
- 3rd Normal Form
- 4th Normal Form

3. The following entity is on 1st normal form: True or False?

ENTITY: VEHICLE

ATTRIBUTES:

REGISTRATION

MAKE

MODEL

COLOUR

DRIVER

PASSENGER 1

PASSENGER 2

PASSENGER 3

- True
- False (*)

4. An entity can have repeated values and still be in 1st Normal Form. True or False?

- True
- False (*)

Section 6 Lesson 3

1. What is the rule of Second Normal Form?

- All non-UID attributes must be dependent upon the entire UID (*)
- Some non-UID attributes can be dependent on the entire UID
- No non-UID attributes can be dependent on any part of the UID
- None of the Above

2. Examine the following entity and decide which attribute breaks the 2nd Normal Form rule:

ENTITY: CLASS

ATTRIBUTES:

 CLASS ID

 DURATION

 SUBJECT

 TEACHER NAME AND ADDRESS

- CLASS ID
- DURATION
- SUBJECT
- TEACHER NAME AND ADDRESS (*)

3. An entity can be on 2nd Normal Form even if it has repeated values. True or False?

- True
- False (*)

Section 6 Lesson 4

1. No databases in the world are ever truly on 3rd Normal Form. Everyone always stops after 2nd Normal Form. True or False?

- True
- False (*)

2. Examine the following Entity and decide which sets of attributes break the 3rd Normal Form rule: (Choose Two)

ENTITY: TRAIN (SYNONYM: ROLLING STOCK)

ATTRIBUTES:

TRAIN ID

MAKE

MODEL

DRIVER NAME

DEPARTURE STATION

NUMBER OF CARRIAGES

NUMBER OF SEATS

DATE OF MANUFACTURE

(Choose all correct answers)

- TRAIN ID, MAKE
- DEPARTURE STATION, DRIVER NAME (*)
- NUMBER OF CARRIAGES, NUMBER OF SEATS (*)
- MODEL, DATE OF MANUFACTURE

3.As a database designer it is your job to store data in only one place and the best place. True or False?

- True (*)
- False

Section 7 Lesson 1

1.To visually represent exclusivity between two or more relationships in an ERD you would most likely use an _____.

- Arc (*)
- UID
- Subtype
- Supertype

2.All parts of a UID are mandatory. True or False?

- True (*)
- False

3.Which of the following can be added to a relationship?

- an attribute
- an arc can be assigned (*)
- a composite attribute
- an optional attribute can be created

4.Secondary UID's are

- not permitted in data modeling
- mandatory in data modeling
- useful as an alternative means identifying instances of an entity (*)
- always comprised of numbers

5. Which of the following would best be represented by an arc?

- STUDENT (senior, junior)
- STUDENT (graduating, non-graduating)
- STUDENT (will-attend-university, will-not-attend-university)
- STUDENT (University, Trade School) (*)

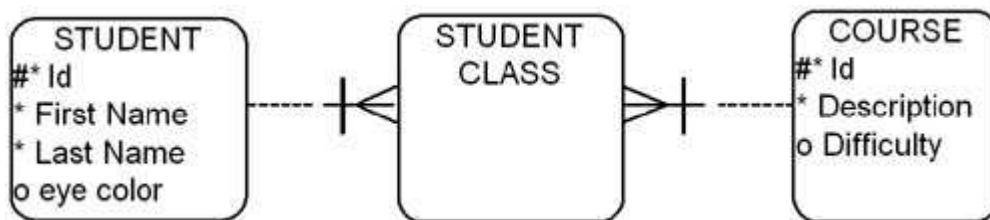
6. If the entity CD has the attributes: #number, *title, *producer, *year, o store name, o store address, this entity is in 3rd Normal Form ("no non-UID attribute can be dependent on another non-UID attribute). True or False?

- True
- False (*)

7. Which of the following is the definition for Third Normal Form?

- All attributes are single valued
- An attribute must be dependent upon entity's entire unique identifier
- No non-UID attribute can be dependent on another non-UID attribute (*)
- All attributes are uniquely doubled and independent

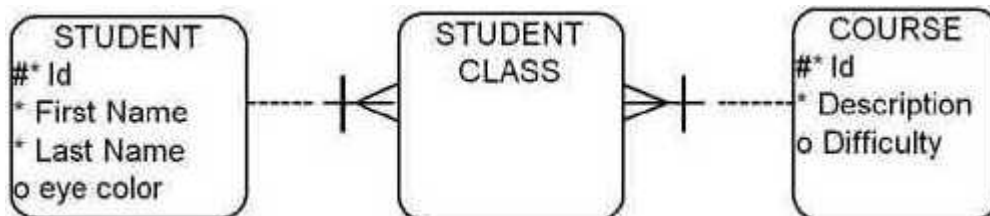
8. This diagram could also be expressed as a supertype/subtype construction. True or False?



- True
- False (*)

Section 7 Lesson 2

1. In this simple diagram, what comprises the unique identifier for the student class entity?



- student id and class id
- student id, class id and course id
- course id
- student id and course id (*)

2. Which of the following would be a good Unique Identifier for its Entity? (Choose Two)

(Choose all correct answers)

- Identification Number for Person (*)
- Birthdate for Baby Which Includes Hour, Minute, and Seconds (*)
- Order date for Order
- Vehicle Type Number for Car

3. A relationship can be both recursive and hierarchical at the same time. True or False?

- True
- False (*)

4. A recursive relationship should not be part of a UID. True or False?

- True (*)
- False

Section 7 Lesson 3

1. Historical data should always be kept. True or False?

- True
- False (*)

2. Modeling historical data can produce a unique identifier that includes a date. True or False?

- True (*)
- False

3. Audit trail attributes cannot be placed in the entities they are auditing, they must be placed in separate, new entities, created just for that purpose. True or False?

- True
- False (*)

4. Which of the following scenarios should be modeled so that historical data is kept? (Choose two)

(Choose all correct answers)

- LIBRARY and BOOK (*)
- STUDENT and AGE
- STUDENT and GRADE (*)
- LIBRARY and NUMBER OF STAFF

Section 8 Lesson 1

1.How does the dictionary define "consultant"?

- A person who knows everything
- One responsible for knowing everything
- One who gives expert or professional advice (*)
- None of the Above

2.Which of the following skills are required for Consultants. (Choose Two)

(Choose all correct answers)

- Communication skills (*)
- Excellent drawing skills
- Must be able to speak at least two languages fluently, preferably four or more
- Team-working skills (*)

3.Only Consultants can develop new data models for a company, they are mandatory, so companies must find them and hire them. True or False?

- True
- False (*)

Section 8 Lesson 2

1.Which of the following is a valid technique for effective public speaking?

- Making eye contact
- Using familiar words when communicating technical information
- Being enthusiastic
- All of the Above (*)

2.Your appearance at a presentation is not important, you should just show up and give the presentation in whatever clothes makes you comfortable. So feel free to wear Jeans and old T-Shirts etc. Being comfortable is more important than anything else. True or False?

- True
- False (*)

3.When you are involved in a group presentation, your group should practice before hand and agree on who presents the various parts. You should all be involved somehow. True or False?

- True (*)
- False

Section 10 Lesson 1

1.How do you know when to use the different types of time in your design?

- The rules are fixed and should be followed
- It depends on the functional needs of the system (*)
- You would first determine the existence of the concept of time and map it against the Greenwich Mean Time
- Always model time, you can take it out later if it is not needed

2.It is desirable to have an entity called DAY with a holiday attribute when you want to track special holidays in a payroll system. True or False?

- True (*)
- False

3.When you add the concept of time to your data model, you are:

- Simplifying your model.
- Adding complexity to your model. (*)
- Just changing the model, but this does not change the complexity of it.
- None of the above.

4.What is the benefit to the users of a system that includes "time," e.g. Start Date and End Date for Employees?

- Increased usability and flexibility of a system; we can trace e.g. the different managers an employee had over time. (*)
- System becomes 100% unstable; allows users to log on and log off at will.
- Users are able to create complex programs in support of this component.
- Reporting becomes nearly impossible, users enjoy this.

5.If you are tracking employment dates for an employee, do you need to have an 'End Date' attribute?

- Yes, because you always need an end date when you have a start date
- No, because an end date is usually redundant
- Yes, if the company wants to track employee information, like multiple start and end dates (*)
- No, not if the company likes the employee

6.Which of the following would be a logical constraint when modeling time for a country entity?

- People have births and deaths in their countries that must be tracked by the system.
- If you are doing a system for France or Germany, you would need security clearance.
- Countries may need an end date in your system, because they can change fundamentally over time, e.g. Yugoslavia. (*)
- You need a constant record of countries, because they are still countries, even if leadership changes over time, e.g. France, USA and most other countries.

7. Modeling historical data produces efficient ways for a business to operate such as:

- Modeling historical data does not help a business.
- Providing valuable information via reports to management. (*)
- Keeping track of holiday dates.
- Employees can work in two time zones.

Section 10 Lesson 2

1. Why would you want to model a time component when designing a system that lets people buy bars of gold?

- The price of gold fluctuates and for determining price, you need to know the time of purchase (*)
- To allow the sales people to determine where the gold is coming from
- You would not want to model this, it is not important
- The Government of your country might want to be notified of this transaction.

2. What is the function of logging or journaling in conceptual data models?

- Allows you to track the history of attribute values, relationships and/or entire entities (*)
- Gives a timestamp to all entities
- Represents entities as time in the data model
- Creates a fixed time for all events in a data model

3. Which of the following is a logical constraint that could result from considering how time impacts an example of data storage?

- End Date must be before the Start Date.
- ASSIGNMENT periods can overlap causing the database to crash.
- An ASSIGNMENT may only refer to a COUNTRY that is valid at the Start Date of the ASSIGNMENT. (*)
- Dates can be valued only with Time.

4. You are doing a data model for a computer sales company, where the price goes down on a regular basis. If you want to allow them to modify the price and keep track of the changes, what is the best way to model this?

- A. Create a product entity and a related price entity with start and end dates, and then let the users enter the new price whenever required.
- B. Create a new item and a new price every day.
- C. Use a price entity with a start and end date.
- D. Allow them to delete the item and enter a new one.
- E. Both A and C (*)
- F. Both B and C

Test: Mid Term Exam - Database Design

Note your score.

Note your score. To return to your home page, click Home in the player navigation bar.

Score: 40 out of 50

Percentage Scored: 80 %

Mastery Score: 60 %

View Feedback

Se ignoră elementele de navigare în conținutul paginii

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1

(Answer all questions in this section)

1. The main subject areas taught by the Oracle Academy are: Mark for

Review

(1) Points

Computer Repairs

Database performance tuning.

Data Modeling, SQL and PL/SQL (*)

Systems programming and computer architecture

Correct

Correct

Section 1 Lesson 2

(Answer all questions in this section)

2. What is the difference between "information" and "data"? Mark for

Review

(1) Points

Data is held and understood only by Users

Information is held and understood only by users

Information and data have no differences - they are two words for the same thing

Data turns into information when it is stored in a database and accessed by systems and users (*)

Correct

Correct

3. Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information? Mark for Review
(1) Points

Data (*)

Information

Both

Neither

Incorrect

Incorrect. Refer to Section 1.

Section 1 Lesson 3
(Answer all questions in this section)

4. Entities are transformed into Tables during the Database Design process? True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 1 Lesson 4
(Answer all questions in this section)

5. Businesses involved in any of the following typically use databases to handle their data: Finance, Logistics, Commerce, Procurement and Distribution? True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

(1) Points

6. Databases were invented in 1989. True or False?

Mark for Review

True

False (*)

Correct

Correct

Section 2 Lesson 2
(Answer all questions in this section)

Review
(1) Points

7. An entity can have many Unique Identifiers. True or False?

Mark for

True (*)

False

Correct

Correct

(1) Points

8. Relationship names are usually verbs. True or False? Mark for Review

True (*)

False

Incorrect

Incorrect. Refer to Section 2

Mark for Review
(1) Points

9. Which of the following statements about relationships are true? (Choose Two)

(Choose all correct answers)

They become Foreign Keys in the database. (*)

They Must be Mandatory to be created in the database.

They can be either mandatory or optional. (*)

They must exist between two different Entities.

Incorrect

Incorrect. Refer to Section 2

10. All of the following could be attributes of an ENTITY called PERSON except one. Select the incorrect one: Mark for Review
(1) Points

Haircolor

Weight

Gender

Natacha Hansen (*)

Correct

Correct

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Se ignoră elementele de navigare în conținutul paginii

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 2 Lesson 2

(Answer all questions in this section)

11. All of the following would be instances of the entity ANIMAL SPECIES except which? Mark for Review
(1) Points

Dog

Bird

Elephant

Leaf (*)

Correct

Correct

12. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review
(1) Points

(Choose all correct answers)

Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed

Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

Incorrect

Incorrect. Refer to Section 2

13. An entity is instantiated as a ? Mark for Review
(1) Points

experience

instance

table (*)

none of the above

Incorrect

Incorrect. Refer to Section 2

Section 3 Lesson 1
(Answer all questions in this section)

14.

Relationship Names are optional. True or False?

Mark for Review
(1) Points

True
False (*)

Correct

Correct

15. One Relationship can be both mandatory and optional at different ends. True or False? (1) Points Mark for Review

True (*)

False

Correct

Correct

Section 3 Lesson 2
(Answer all questions in this section)

16. To identify an attribute as part of a unique identifier on an ER diagram, the # symbol goes in front of it. True or False? (1) Points Mark for Review

True (*)

False

Correct

Correct

17. The single end of a Relationship is called: (1) Points Mark for Review

Single Toe (*)

Big Toe

Single Foot

Crows Foot

Correct

Correct

Section 3 Lesson 3

(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False?

Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. All instances of the supertype must be an instance of one of the subtypes.

True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

20. Which of the following are suitable Entity names? (Choose Two)

Mark

for Review
(1) Points

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Correct

Correct

Previous

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Summary

Se ignoră elementele de navigare în conținutul paginii

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 4 Lesson 1

(Answer all questions in this section)

21. The "Other" subtype is mandatory. True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

22. When creating entities you must follow these rules: (Choose Two) Mark
for Review
(1) Points

(Choose all correct answers)

Name them in Plural

Name them in Singular (*)

Exclude Attributes

Include Attributes (*)

Correct Correct

23. You can only create relationships to a Supertype, not to a Subtype. True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. A new system would have a mixture of both Procedural and Structural Business Rules as part of the documentation of that new system. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

25. Why is it important to identify and document structural rules? Mark for Review
(1) Points

Ensures we know what data to store and how that data works together. (*)

Ensures nothing. There is no benefits to be gained from documenting your Structural Business Rules. We need to concentrate on the Procedural Business Rules only.

Ensures we know what Information to store and how that Information works together.

All of the Above.

Incorrect

Incorrect. Refer to Section 4

26. Can all constraints be modeled on an ER diagram? Mark for Review
(1) Points

No, in which case you should let the database administrator handle them

No, but you just explain them to the users so they can enforce them

Yes, all constraints must be modeled and shown on the ER diagram

No, so you should list them on a separate document to be handled programmatically (*)

Correct

Correct

27. "Only teachers may supervise exams" is an example of which of the following?

Mark for Review

(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct

Correct

Section 5 Lesson 1

(Answer all questions in this section)

28. A Diamond on a relationship indicates the Relationship as Non-Tranferrable.

True or False? Mark for Review

(1) Points

True (*)

False

Correct

Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Which of the following pairs of entities is most likely to be modeled as a M:M

relationship? Mark for Review

(1) Points

CAR and WHEEL

TREE and BRANCH

PERSON and FINGERPRINT

TEACHER and SUBJECT AREA (*)

Correct

Correct

relationship.
(1) Points

30. A relationship from an entity back to itself is called a _____
Mark for Review

Mandatory

Recursive (*)

Many to Many Optional

Transferrable

Correct

Correct

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Se ignoră elementele de navigare în conținutul paginii

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2
(Answer all questions in this section)

(1) Points

31. Relationships can be Redundant. True or False? Mark for Review

True (*)

False

Correct

Correct

(1) Points

32. Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False? Mark for Review

True

False (*)

Correct

Correct

Section 6 Lesson 1
(Answer all questions in this section)

33.

All entities must be given a new artificial UID. True or False?

Mark for Review
(1) Points

True
False (*)

Correct

Correct

Section 6 Lesson 2
(Answer all questions in this section)

34. Until all attributes are single-valued, the database model is said to be: Mark
for Review
(1) Points

Normalized

Not Normalized (*)

1st Normal Form

2nd Normal Form

Correct

Correct

Section 6 Lesson 3
(Answer all questions in this section)

35. Would it be a good idea to model age as an attribute of STUDENT Mark
for Review
(1) Points

Yes

Maybe it could stop us having to calculate someones age every time we need it

Sometimes

No - it breaks the Normalization rules (*)

Correct

Correct

Section 7 Lesson 1
(Answer all questions in this section)

36. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review
(1) Points

True (*)

False

Correct

Correct

37. Arcs are Mandatory in Data modelling. All ERD's must have at least one Arc.
True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

38. Which of the following would best be represented by an arc? Mark for
Review
(1) Points

TEACHER (Female, Bob)

DELIVERY ADDRESS (Home, Office) (*)

PARENT (Girl, Bob)

STUDENT (Grade A student, Average Student)

Correct Correct

39. No parts of a UID are mandatory. True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

40. All relationships participating in an arc must be mandatory. True or False? Mark for Review
(1) Points

True

False (*)

Incorrect Incorrect. Refer to Section 7

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Se ignoră elementele de navigare în conținutul paginii

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2
(Answer all questions in this section)

31. Relationships can be Redundant. True or False? Mark for Review
(1) Points

True (*)

False

Correct Correct

32. Many to many relationships must be left in the Model. It is important to have them documented as M-M. True or False? Mark for Review

(1) Points

True

False (*)

Correct

Correct

Section 6 Lesson 1
(Answer all questions in this section)

33.

All entities must be given a new artificial UID. True or False?

Mark for Review

(1) Points

True
False (*)

Correct

Correct

Section 6 Lesson 2
(Answer all questions in this section)

34. Until all attributes are single-valued, the database model is said to be: Mark
for Review
(1) Points

Normalized

Not Normalized (*)

1st Normal Form

2nd Normal Form

Correct

Correct

Section 6 Lesson 3
(Answer all questions in this section)

35. Would it be a good idea to model age as an attribute of STUDENT Mark

for Review
(1) Points

Yes

Maybe it could stop us having to calculate someones age every time we need it

Sometimes

No - it breaks the Normalization rules (*)

Correct Correct

Section 7 Lesson 1
(Answer all questions in this section)

36. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review
(1) Points

True (*)

False

Correct Correct

37. Arcs are Mandatory in Data modelling. All ERD's must have at least one Arc.
True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

38. Which of the following would best be represented by an arc? Mark for
Review
(1) Points

TEACHER (Female, Bob)

DELIVERY ADDRESS (Home, Office) (*)

PARENT (Girl, Bob)

STUDENT (Grade A student, Average Student)

Correct Correct

39. No parts of a UID are mandatory. True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

40. All relationships participating in an arc must be mandatory. True or False?
Mark for Review
(1) Points

True

False (*)

Incorrect Incorrect. Refer to Section 7

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2
(Answer all questions in this section)

41. A recursive relationship must Mandatory at both ends. True or False? Mark
for Review
(1) Points

True

False (*)

Correct

Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Which of the following scenarios should be modeled so that historical data is kept? (Choose two) Mark for Review
(1) Points

(Choose all correct answers)

BABY and AGE

CUSTOMER and PAYMENTS (*)

TEACHER and AGE

CUSTOMER and ORDERS (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Consultants often use their experience in ensuring projects stay on track and delivers within the timescales set out for the project. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Your apperance at a presentation is important. You need to look smart and presentable. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 10 Lesson 1
(Answer all questions in this section)

45. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review
(1) Points

True

False (*)

Incorrect

Incorrect. Refer to Section 10

46. Modeling historical data is Optional. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

47. There is only one way to model time in a Data Model. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

48. What do users of a system without the concept of time loose? Mark for Review
(1) Points

Journalling becomes much easier.

Journalling becomes slightly harder.

The ability to track data over time. (*)

Nothing is lost if a system does not track time.

Incorrect Incorrect. Refer to Section 10

Section 10 Lesson 2
(Answer all questions in this section)

49. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review
(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shared were bought and therefore at what price. (*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

Incorrect Incorrect. Refer to Section 10

50. All systems must include functionality to provide logging or journaling in conceptual data models. True or False? Mark for Review
(1) Points

True

False (*)

Correct Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 2 Lesson 2

(Answer all questions in this section)

11. A/an _____ is a picture of all the information that will form the basis for the finished system. Mark for Review
(1) Points

ERD (*)

Process

Table

Attribute

Correct Correct

12. An entity can have many Unique Identifiers. True or False? Mark for Review
(1) Points

True (*)

False

Correct Correct

13. Which of the following entities most likely contains valid attributes? (Choose two) Mark for Review
(1) Points

(Choose all correct answers)

Entity: Home. Attributes: Number of Bedrooms, Owner, Address, Date Built (*)

Entity: Pet. Attributes: Name, Birthdate, Owner (*)

Entity: Car. Attributes: Owner Occupation, Owner Salary, Speed

Entity: Mother. Attributes: Name, Birthdate, Occupation, Salary

Correct

Correct

Section 3 Lesson 1

(Answer all questions in this section)

14. In a business that sells pet food choose the best relationship name between FOOD TYPE and ANIMAL (e.g. dog, horse or cat). (Choose Two) Mark for Review
(1) Points

(Choose all correct answers)

Each FOOD TYPE must be suitable for one or more ANIMALs. (*)

Each ANIMAL must be the seller of one or more FOOD TYPES.

Each FOOD TYPE may be made from one or more ANIMALs.

Each FOOD TYPE may be given to one or more ANIMALs. (*)

Correct

Correct

15.

Relationship Degree/Cardinality is important. True or False?

Mark for Review
(1) Points

True (*)
False

Correct

Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. The many end of a Relationship is called: Mark for Review
(1) Points

Gulls Foot

Pigs Ear

Crows Ear

Crows Foot (*)

Correct

Correct

17. All the Attributes in a system are just written on the ERD, and they all go in the Top Left Hand Corner of the paper. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

Section 3 Lesson 3
(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 1
(Answer all questions in this section)

19. Which of the following is true about subtypes? Mark for Review
(1) Points

One instance may belong to two subtypes of the same supertype.

Subtypes must be mutually exclusive. (*)

Subtypes must not be mutually exclusive.

Subtype entities may not have relationships to the other subtype entities, only the supertype itself.

Correct

Correct

20. You can only create relationships to a Supertype, not to a Subtype. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1
(Answer all questions in this section)

1. The main subject areas taught by the Oracle Academy are: Mark for Review
(1) Points

Computer Repairs

Database performance tuning.

Data Modeling, SQL and PL/SQL (*)

Systems programming and computer architecture

Correct

Correct

Section 1 Lesson 2

(Answer all questions in this section)

2. What is the difference between "information" and "data"? Mark for Review
(1) Points

Data is held and understood only by Users

Information is held and understood only by users

Information and data have no differences - they are two words for the same thing

Data turns into information when it is stored in a database and accessed by systems and users (*)

Correct Correct

3.

Information which was gained from data is the same as: (Choose Two)

Mark for Review
(1) Points

(Choose all correct answers)

Knowledge (*)

Raw Materials

Intelligence (*)

There is no difference between data and information.

Correct Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. The first step in system development is to document the requirements. Why? Mark for Review
(1) Points

Wrong. A blueprint for the database design is not needed. We can just start coding straight away.

It clarifies what a business wants to accomplish, and provides measures for deciding if the system delivers all that is required. (*)

It allows application development to be conducted without having to consider database design.

It keeps businesses honest.

Correct

Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Oracle Database Software provides which of the following functionality?
(Choose two) Mark for Review
(1) Points

(Choose all correct answers)

Graphical User Interface (*)

Internet Browser

Server (*)

Operating Systems

Incorrect

Incorrect. Refer to Section 1.

6. Databases were invented in 1989. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

Section 2 Lesson 2

(Answer all questions in this section)

7. The entity/relationship model is created before the physical database design model. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

8. Volatile entities have special requirements and need special attention when you are doing data modelling. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

9. An entity is instantiated as a ? Mark for Review
(1) Points

experience

instance

table (*)

none of the above

Correct

Correct

10. Primary Unique Identifiers... (Choose Two) Mark for Review
(1) Points

(Choose all correct answers)

Are Required. The data model is not complete until all entities have a Primary UID. (*)

Distinguish each instance of an entity from all others (*)

Are not required

You may create more than one Primary Unique Identifier for an entity

Correct

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 4 Lesson 1

(Answer all questions in this section)

21. Which of the following are suitable Entity names? (Choose Two) Mark
for Review
(1) Points

(Choose all correct answers)

DOGS

ANIMAL (*)

ANIMALS

DOG (*)

Correct

Correct

22. A supertype can only have two subtypes and no more. True or False? Mark
for Review
(1) Points

True

False (*)

Correct

Correct

23. A Supertype can have only one subtype. True or False? Mark for
Review
(1) Points

True

False (*)

Correct

Correct

Section 4 Lesson 2
(Answer all questions in this section)

24. A new system would have a mixture of both Procedural and Structural Business Rules as part of the documentation of that new system. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

25. A business rule such as "We only ship goods after customers have completely paid any outstanding balances on their account" is best enforced by: Mark for Review
(1) Points

Making the payment attribute null.

Making the payment attribute optional.

We need to trust our customers, and we know they will pay some day.

Hiring a programmer to create additional programming code to verify no goods are shipped until the account has been settled in full. (*)

Correct

Correct

26. "Only teachers may supervise exams" is an example of which of the following? Mark for Review
(1) Points

A procedural business rule (*)

An attribute that should be stored on the PERSON entity

A structural business rule

An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

Correct Correct

(1) Points 27. Can all constraints be modeled on an ER diagram? Mark for Review

No, in which case you should let the database administrator handle them

No, but you just explain them to the users so they can enforce them

Yes, all constraints must be modeled and shown on the ER diagram

No, so you should list them on a separate document to be handled programmatically (*)

Correct Correct

Section 5 Lesson 1
(Answer all questions in this section)

(1) Points 28. Transferable relationships can only be mandatory, not optional. True or False? Mark for Review

True

False (*)

Correct Correct

Section 5 Lesson 2
(Answer all questions in this section)

(1) Points 29. A relationship from an entity back to itself is called a _____ relationship. Mark for Review

Mandatory

Recursive (*)

Many to Many Optional

Transferrable

Correct

Correct

30. If two entities have two relationships between them, these relationships can be either _____ or _____? Mark for Review
(1) Points

Redundant or Required (*)

Replicated or Required

Resourced and Really Good

Redundant and Replicated

Correct

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2

(Answer all questions in this section)

31. What uncommon relationship is described by the statements: "Each DNA SAMPLE may be taken from one and only one PERSON and each PERSON may provide one and only one DNA SAMPLE" Mark for Review
(1) Points

One to Many Optional

One to Many Mandatory

One to One Optional (*)

Many to Many Mandatory

Correct Correct

32. Relationships can be Redundant. True or False? Mark for Review
(1) Points

True (*)

False

Correct Correct

Section 6 Lesson 1 (Answer all questions in this section)

33.

All entities must be given a new artificial UID. True or False?

Mark for Review
(1) Points

True
False (*)

Correct Correct

Section 6 Lesson 2 (Answer all questions in this section)

34. When data is stored in one place in a database, the database conforms to the rules of _____. Mark for Review
(1) Points

Normality

Reduction

Normalization (*)

Multiplication

Correct

Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. Any Non-UID must be dependant on the entire UID. True or False? Mark
for Review
(1) Points

True (*)

False

Correct

Correct

Section 7 Lesson 1

(Answer all questions in this section)

36. Which of the following would best be represented by an arc? Mark for
Review
(1) Points

TEACHER (Female, Bob)

DELIVERY ADDRESS (Home, Office) (*)

PARENT (Girl, Bob)

STUDENT (Grade A student, Average Student)

Correct

Correct

37. Consider the entity ADDRESS with the attributes:

ADDRESS:

House Number

* Street

* Town

* City

* Year of Build

o City Population

This entity is NOT in 3rd Normal Form ("no non-UID attribute can be dependent on another non-UID attribute). True or False?

Mark for Review
(1) Points

True (*)

False

Correct Correct

38. Arcs are used to visually represent _____ between two or more relationships in an ERD. Mark for Review
(1) Points

Sameness

Differencies

Exclusivity (*)

An Arc is what Noah sailed on with all the animals.

Correct Correct

39. Which of the following is NOT a relationship type? Mark for Review
(1) Points

Some to None (*)

One to One

One to Many

Many to Many

Correct Correct

40. An arc can be modelled as Supertype and Subtypes. True or False? Mark
for Review
(1) Points

True (*)

False

Correct

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2

(Answer all questions in this section)

41. A particular problem may be solved using either a Recursive Relationship or a Hierarchy, though not at the same time. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Which of the following scenarios should be modeled so that historical data is kept? (Choose two) Mark for Review
(1) Points

(Choose all correct answers)

BABY and AGE

CUSTOMER and PAYMENTS (*)

TEACHER and AGE

CUSTOMER and ORDERS (*)

Correct

Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Consultants often use their experience in ensuring projects stay on track and delivers within the timescales set out for the project. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Which of the following are NOT valid techniques for effective public speaking?
(Choose Two) Mark for Review
(1) Points

(Choose all correct answers)

Whispering (*)

Using specialist language and technical abbreviations when communicating technical information (*)

Being enthusiastic

All of the Above

Correct

Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False? Mark for Review
(1) Points

True

False (*)

Incorrect

Incorrect. Refer to Section 10

46. When you add the concept of time to your data model, your model becomes more complex. True or False? Mark for Review
(1) Points

True (*)

False

Correct

Correct

47. Which of the following would be a logical constraint when modeling time for a City entity? Mark for Review
(1) Points

People are born in the city and people die in the city.

Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)

If you are doing a system for any French City, you would need security clearance

You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor

Incorrect

Incorrect. Refer to Section 10

48. There is only one way to model time in a Data Model. True or False? Mark for Review
(1) Points

True

False (*)

Correct

Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Which of the following is a logical constraint, that could result from considering how time impacts data storage? Mark for Review
(1) Points

An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)

EMPLOYEE periods can overlap causing the database to crash.

End Date must be before the Start Date.

Dates must be stored with Time.

Correct

Correct

50. Why would you want to model a time component when designing a system that lets people buy shares via the Internet? (Choose Two) Mark for Review
(1) Points

(Choose all correct answers)

This would only be required in the US to allow the New York Stock Exchange to be notified of this information.

To allow the sales people to determine when the shares were bought and therefore at what price. (*)

You would not want to model this, it is not important.

The price of shares fluctuates and for determining price, you need to know the time of purchase (*)

Correct

Correct

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Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 1 Lesson 1

(Answer all questions in this section)

1. The main subject areas taught by the Oracle Academy are:

☐ Mark for Review
(1) Points

- ☒ Computer Repairs
- ☒ Database performance tuning.
- ☒ Data Modeling, SQL and PL/SQL (*)
- ☒ Systems programming and computer architecture

☒ Correct

Section 1 Lesson 2

(Answer all questions in this section)

2. Consider your school library. It will have a database with transaction details of which student borrows which books. Is a record of one student borrowing one book Data or Information?

☐ Mark for Review
(1) Points

- ☒ Data (*)
- ☒ Information
- ☒ Both
- ☒ Neither

☒ Correct

3. Information which was gained from data is the same as: (Choose Two)

☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☒ Knowledge (*)
- ☐ Raw Materials
- ☒ Intelligence (*)
- ☐ There is no difference between data and information.

☒ Correct

Section 1 Lesson 3

(Answer all questions in this section)

4. Databases are used in most countries and by most governments. Life, as we know it, would change drastically if we no longer had access to databases. True or False?

☐ Mark for Review
(1) Points

- ☒ True (*)
- ☒ False

☒ Correct

Section 1 Lesson 4

(Answer all questions in this section)

5. Which of the following are types of databases?

☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☒ Hierarchical (*)
- ☒ Relational (*)
- ☒ SQL
- ☐ Network (*)

 Incorrect. Refer to Section 1

6. Software cannot operate without Hardware. True or False?

☐ Mark for Review
(1) Points

- ☐ True (*)
- ☐ False
- ☒ Correct

Section 2 Lesson 2

(Answer all questions in this section)

7. All of the following would be instances of the entity ANIMAL SPECIES except which?

☐ Mark for Review
(1) Points

- ☐ Dog
- ☐ Bird
- ☐ Elephant
- ☐ Leaf (*)

☒ Correct

8. A/an _____ is a picture of all the information that will form the basis for the finished system.

☐ Mark for Review
(1) Points

- ☐ ERD (*)
- ☐ Process
- ☐ Table
- ☐ Attribute

☒ Correct

9. All of the following are examples of ENTITY: Instance except two. Select the answers that are ENTITY: Instance. (Choose Two)

☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☒ TRANSPORTATION METHOD: Car (*)
- ☒ ANIMAL: Dog (*)
- ☐ MEAT PRODUCT: Lettuce
- ☐ BODY PART: Larry Ellison

☒ Correct

10. Volatile entities have special requirements and need special attention when you are doing data modelling. True or False?

☐ Mark for Review
(1) Points

- ☒ True (*)
- ☐ False

☒ Correct

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 2 Lesson 2

(Answer all questions in this section)

11. In a physical data model, a relationship is represented as a?

☐ Mark for Review
(1) Points

- ☐ Column
- ☐ Row
- ☐ Instance
- ☒ Foreign Key (*)

☒ Correct

12. Relationship names are usually verbs. True or False?

☐ Mark for Review
(1) Points

- ☒ True (*)
- ☐ False

☒ Correct

13. Which of the following statements about relationships are true? (Choose Two)

☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☒ They become Foreign Keys in the database. (*)
- ☐ They Must be Mandatory to be created in the database.
- ☒ They can be either mandatory or optional. (*)
- ☐ They must exist between two different Entities.

☒ Correct

Section 3 Lesson 1

(Answer all questions in this section)

14. Relationship Names are optional. True or False?

☐ Mark for Review
(1) Points

- ☐ True
- ☐ False (*)
- ☒ Correct

15. Which of the following are valid relationship degrees? (Choose two)

☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☒ 1:1 (*)
- ☒ 1:M (*)
- ☐ 1:O
- ☐ O:O
- ☒ Correct

Section 3 Lesson 2

(Answer all questions in this section)

16. Entity Boxes are drawn with 90 degree angles, also known as Hard Boxes. True or False?

☐ Mark for Review
(1) Points

- ☐ True
- ☐ False (*)
- ☒ Correct

17. Entity names are always singular. True or False?

☐ Mark for Review
(1) Points

- ☐ True (*)
- ☐ False
- ☒ Correct

Section 3 Lesson 3

(Answer all questions in this section)

18. Matrix Diagrams are mandatory when doing data modelling. True or False?

☐ Mark for Review
(1) Points

- ☐ True
- ☐ False (*)
- ☒ Correct

Section 4 Lesson 1

(Answer all questions in this section)

19. When creating entities you must follow these rules: (Choose Two) ☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☐ Name them in Plural
- ☒ Name them in Singular (*)
- ☐ Exclude Attributes
- ☒ Include Attributes (*)

☒ Correct

20. The "Other" subtype is mandatory. True or False? ☐ Mark for Review
(1) Points

- ☐ True
- ☒ False (*)

☒ Correct

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 4 Lesson 1

(Answer all questions in this section)

21. A Supertype can have only one subtype. True or False? ☐ Mark for Review
(1) Points

- ☐ True
- ☒ False (*)

☒ Correct

22. All instances of a subtypes may be an instance of the supertype but does not have to. True or False? ☐ Mark for Review
(1) Points

- ☐ True
- ☒ False (*)

☒ Correct

23. Which of the following are suitable Entity names? (Choose Two) ☐ Mark for Review
(1) Points

(Choose all correct answers)

- ☐ DOGS

- ☒ ANIMAL (*)
- ☐ ANIMALS
- ☒ DOG (*)

☒ Correct

Section 4 Lesson 2

(Answer all questions in this section)

24. "Only teachers may supervise exams" is an example of which of the following? ☐ Mark for Review (1) Points

- ☒ A procedural business rule (*)
- ☐ An attribute that should be stored on the PERSON entity
- ☐ A structural business rule
- ☐ An attribute that is not be inherited from the PERSON supertype and is unique to the TEACHER subtype

☒ Correct

25. Why is it important to identify and document structural rules? ☐ Mark for Review (1) Points

- ☒ Ensures we know what data to store and how that data works together. (*)
- ☐ Ensures nothing. There is no benefits to be gained from documenting your Structural Business Rules. We need to concentrate on the Procedural Business Rules only.
- ☐ Ensures we know what Information to store and how that Information works together.
- ☐ All of the Above.

☒ Correct

26. A new system would have a mixture of both Procedural and Structural Business Rules as part of the documentation of that new system. True or False? ☐ Mark for Review (1) Points

- ☒ True (*)
- ☐ False

☒ Correct

27. How would you model a business rule that states that girls and boys may not attend classes together? ☐ Mark for Review (1) Points

- ☐ Use a supertype
- ☒ Use two subtypes with relationships from class to student gender (*)
- ☐ Make the attribute Gender mandatory
- ☐ You cannot model this. You need to document it.

☒ Correct

Section 5 Lesson 1

(Answer all questions in this section)

28. A Diamond on a relationship indicates the Relationship as Non-Tranferable. True or False? ☐ Mark for Review (1) Points

☐ True (*)

☐ False

☒ Correct

Section 5 Lesson 2

(Answer all questions in this section)

29. Which of the following pairs of entities is most likely to be modeled as a M:M relationship? ☐ Mark for Review (1) Points

☐ CAR and WHEEL

☐ TREE and BRANCH

☐ PERSON and FINGERPRINT

☐ TEACHER and SUBJECT AREA (*)

☒ Correct

30. Relationships can be Redundant. True or False? ☐ Mark for Review (1) Points

☐ True (*)

☐ False

☒ Correct

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 5 Lesson 2

(Answer all questions in this section)

31. What uncommon relationship is described by the statements: "Each DNA SAMPLE may be taken from one and only one PERSON and each PERSON may provide one and only one DNA SAMPLE" ☐ Mark for Review (1) Points

☐ One to Many Optional

☐ One to Many Mandatory

☐ One to One Optional (*)

☐ Many to Many Mandatory

☒ Correct

32. How do you include a relationship as part of the UID for an entity?

☐ Mark for Review
(1) Points

- ☐ By barring the relationship in question (*)
- ☐ By reporting it in an external document
- ☐ By including the UID from the parent entity as an attribute in the entity
- ☐ You cannot model that.

☒ Correct

Section 6 Lesson 1

(Answer all questions in this section)

33. There is no limit to how many UID's an entity can have. True or False?

☐ Mark for Review
(1) Points

- ☐ True (*)
- ☐ False

☒ Correct

Section 6 Lesson 2

(Answer all questions in this section)

34. Until all attributes are single-valued, the database model is said to be:

☐ Mark for Review
(1) Points

- ☐ Normalized
- ☐ Not Normalized (*)
- ☐ 1st Normal Form
- ☐ 2nd Normal Form

☒ Correct

Section 6 Lesson 3

(Answer all questions in this section)

35. When is an entity in 2nd Normal Form?

☐ Mark for Review
(1) Points

- ☐ When all non-UID attributes are dependent upon the entire UID. (*)
- ☐ When no attributes are mutually independent and fully independent on the primary key.
- ☐ When no attributes are mutually independent and all are fully dependent on the primary key.
- ☐ None of the Above.

☒ Correct

Section 7 Lesson 1

(Answer all questions in this section)

36. Arcs are Mandatory in Data modelling. All ERD's must have at least one Arc. True or False? ☐ Mark for Review (1) Points

- ☐ True
- ☒ False (*)

☒ Correct

37. All relationships participating in an arc must be mandatory. True or False? ☐ Mark for Review (1) Points

- ☐ True
- ☒ False (*)

☒ Correct

38. Which of the following would best be represented by an arc? ☐ Mark for Review (1) Points

- ☐ TEACHER (Female, Bob)
- ☒ DELIVERY ADDRESS (Home, Office) (*)
- ☐ PARENT (Girl, Bob)
- ☐ STUDENT (Grade A student, Average Student)

☒ Correct

39. Arcs are used to visually represent _____ between two or more relationships in an ERD. ☐ Mark for Review (1) Points

- ☐ Sameness
- ☐ Differences
- ☒ Exclusivity (*)
- ☐ An Arc is what Noah sailed on with all the animals.

☒ Correct

40. An arc can be modelled as Supertype and Subtypes. True or False? ☐ Mark for Review (1) Points

- ☒ True (*)
- ☐ False

☒ Correct

Test: Mid Term Exam - Database Design

Review your answers, feedback, and question scores below. An asterisk (*) indicates a correct answer.

Section 7 Lesson 2

(Answer all questions in this section)

41. A recursive relationship must be Mandatory at both ends. True or False?

☐ Mark for Review
(1) Points

- ☐ True
☐ False (*)
☒ Correct

Section 7 Lesson 3

(Answer all questions in this section)

42. Historical data must never be kept. True or False?

☐ Mark for Review
(1) Points

- ☐ True
☐ False (*)
☒ Correct

Section 8 Lesson 1

(Answer all questions in this section)

43. Consultants often use their experience in ensuring projects stay on track and deliver within the timescales set out for the project. True or False?

☐ Mark for Review
(1) Points

- ☐ True (*)
☐ False
☒ Correct

Section 8 Lesson 2

(Answer all questions in this section)

44. Your appearance at a presentation is important. You need to look smart and presentable. True or False?

☐ Mark for Review
(1) Points

- ☐ True (*)
☐ False
☒ Correct

Section 10 Lesson 1

(Answer all questions in this section)

45. All systems must have an entity called WEEK with a holiday attribute, so you know when to give your employees a holiday. True or False?

☐ Mark for Review
(1) Points

- ☐ True
- ☐ False (*)
- ☒ Correct

46. If a system includes the concept of time, and it stores Start Dates, then End Dates becomes Mandatory. For each Start Date attribute you create, you MUST create an End Date attribute and it must be mandatory. True or False? ☐ Mark for Review
(1) Points

- ☐ True
- ☐ False (*)
- ☒ Correct

47. Which of the following would be a logical constraint when modeling time for a City entity? ☐ Mark for Review
(1) Points

- ☐ People are born in the city and people die in the city.
- ☐ Cities may change their name and/or which country they are placed in, if the borders of a country change. (*)
- ☐ If you are doing a system for any French City, you would need security clearance
- ☐ You need a constant record of cities because they are still cities, even if leadership changes over time, e.g. they get a new Mayor
- ☒ Correct

48. When you add the concept of time to your data model, your model becomes more complex. True or False? ☐ Mark for Review
(1) Points

- ☐ True (*)
- ☐ False
- ☒ Correct

Section 10 Lesson 2

(Answer all questions in this section)

49. Which of the following is a logical constraint, that could result from considering how time impacts data storage? ☐ Mark for Review
(1) Points

- ☐ An ASSIGNMENT may only refer to an EMPLOYEE with a valid employee record at the Start Date of the ASSIGNMENT. (*)
- ☐ EMPLOYEE periods can overlap causing the database to crash.
- ☐ End Date must be before the Start Date.
- ☐ Dates must be stored with Time.
- ☒ Correct

50. You are doing a data model for a computer sales company, where the price of postage is dependant on what day of the week goods are shipped. So shipping is more expensive if the customer wants a delivery to take place on a Saturday or Sunday. What would be the best way to model this?



Mark for Review
(1) Points

- ☐ Use a Delivery Day entity, which holds prices against week days, and ensure we also have an attribute for the Requested Delivery Day in the Order Entity. (*)
- ☐ Email current price to all employees whenever the prices change.
- ☐ Update the prices in the system, print out the current prices when they change and pin them on the company noticeboard
- ☐ Allow them to enter whatever delivery charge they want.

☒ Correct

Au Redactat:

Iercosan

Zacoi

Oancea

Matei

Dronca