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IST 659

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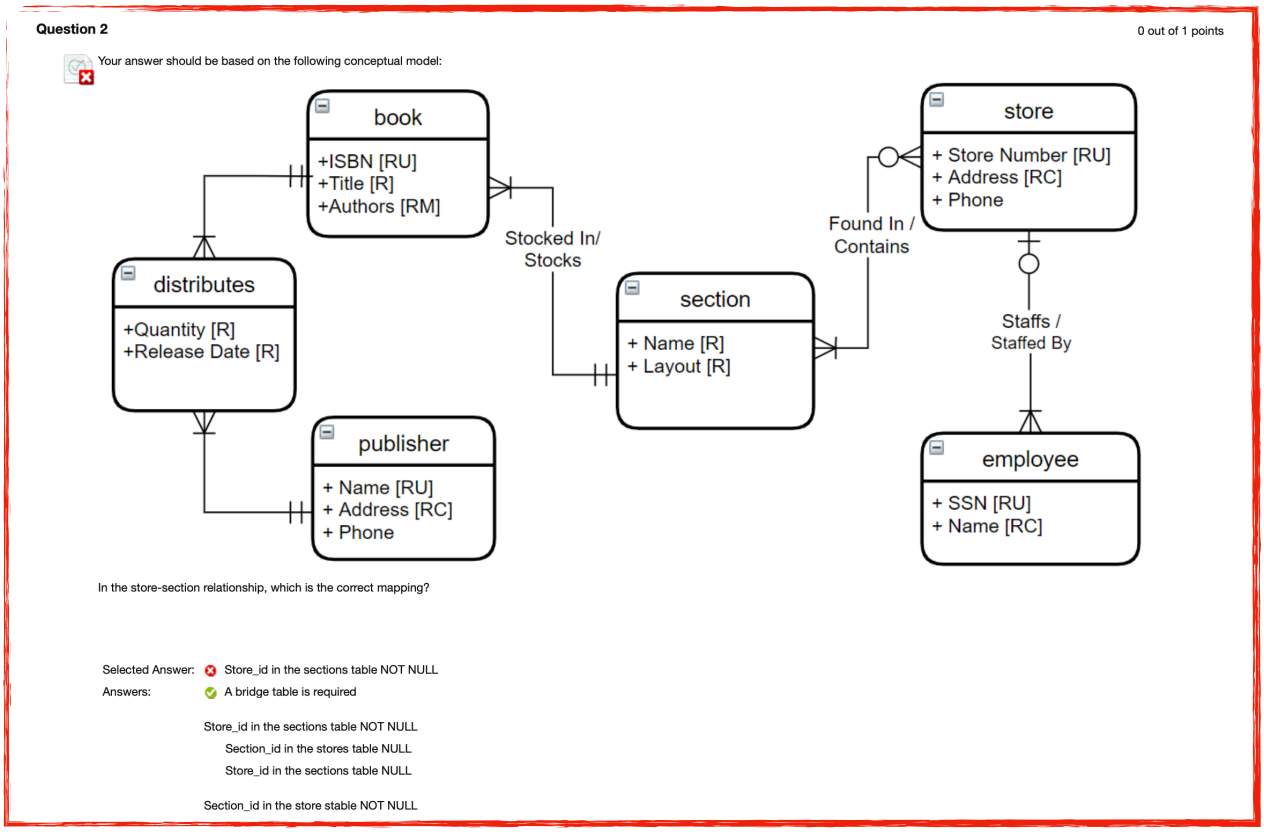
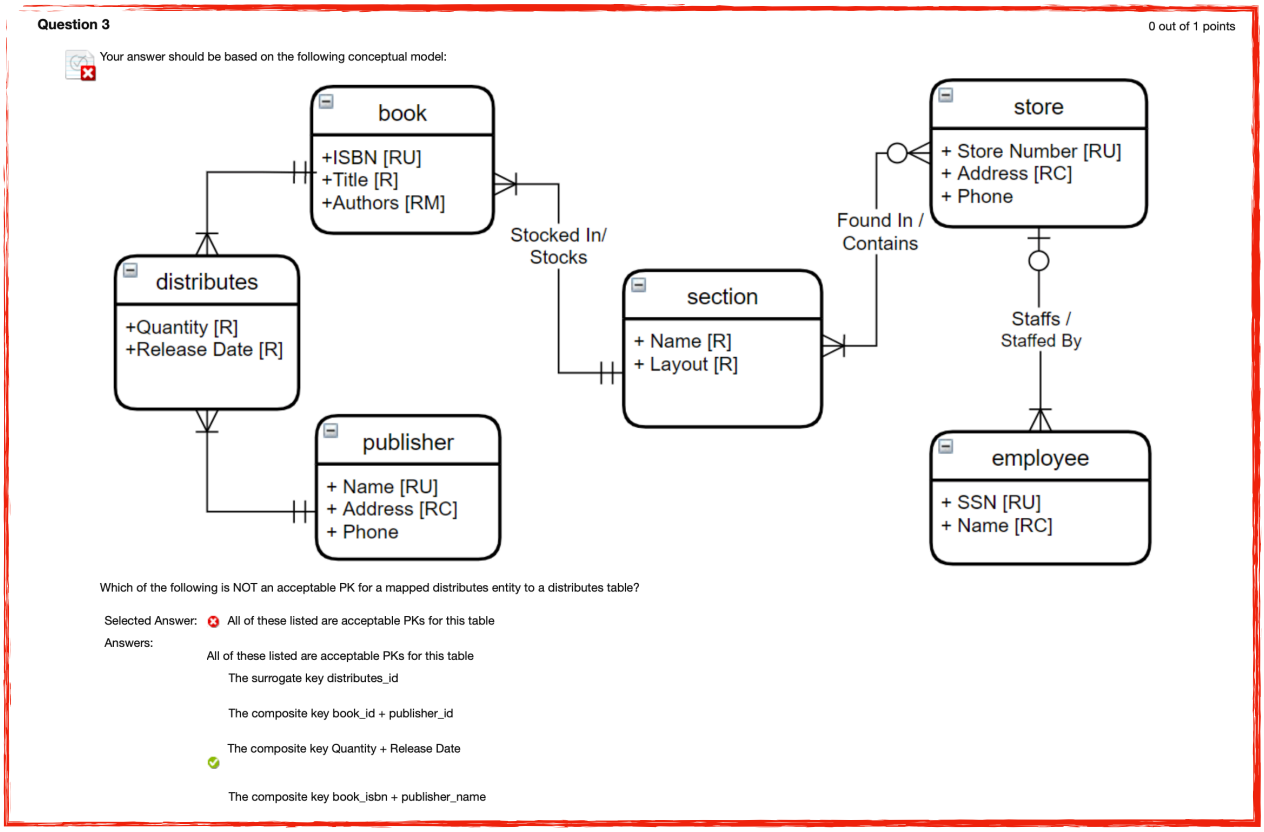
Q4- Makeup



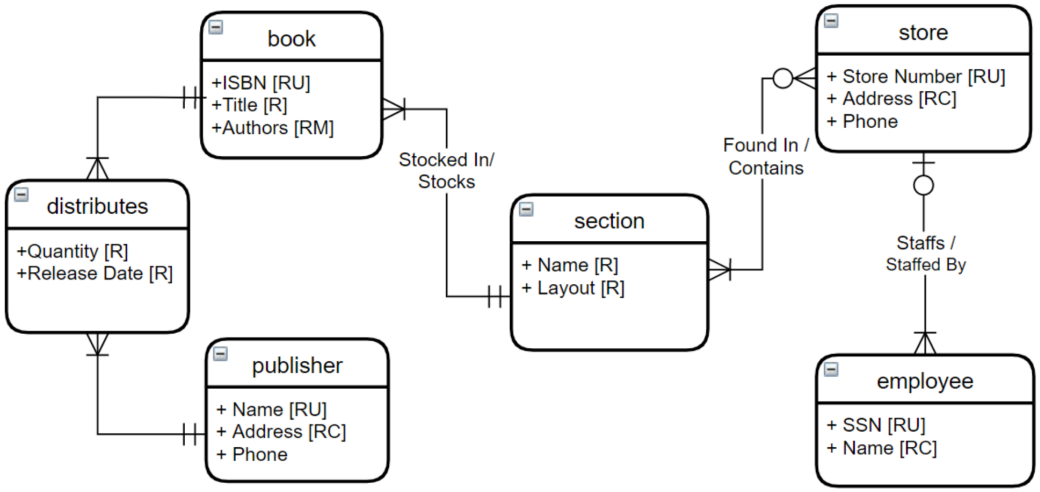
For this question, I completely overlooked the relationship and thought about their selection of primary keys. I rather looked at the answers first and assumed we were selecting a primary key. After re-reading the question, it asked about its correct mapping. The store-section relationship is a many to many relationship which means it cannot be mapped without an intermediary table, or a bridge table. A bridge table includes a composite primary key that is made up of each foreign key added to the table from the participants in the relationship. This relationship reads that there are zero or more sections found in a store and a store contains one or more sections, hence being a many to many relationships and the correct answer is that it requires a bridge table when mapping.



I assumed these were all valid primary keys and also to be quite honest, because of the time constraint I did not look deeply into the answer choices. From a glimpse, they seemed to be appropriate. However, after looking into, I could see why the composite key Quantity + Release Date was not acceptable. A composite key is a key that has more than one attribute, a combination of two or more columns. They are used in combination to identify an entity and when combined, it grantees uniqueness. For example, in a students table, a composite key could combine three attributes, ID, Firstname, Lastname, to makeup a unique identifier and create a primary key. The composite key Quantity + Release Date is not acceptable because those attributes are not unique; they do not have a unique property and therefore cannot guarantee a unique identity when combined to make a primary key. There could be multiple quantities or multiple books released on the same day in an occurrence, so this does not provide uniqueness.

Question 4 0 out of 1 points

Your answer should be based on the following conceptual model:



How many tables are in the fully mapped logical model?

Selected Answer: 7

Answers: 9

7

10

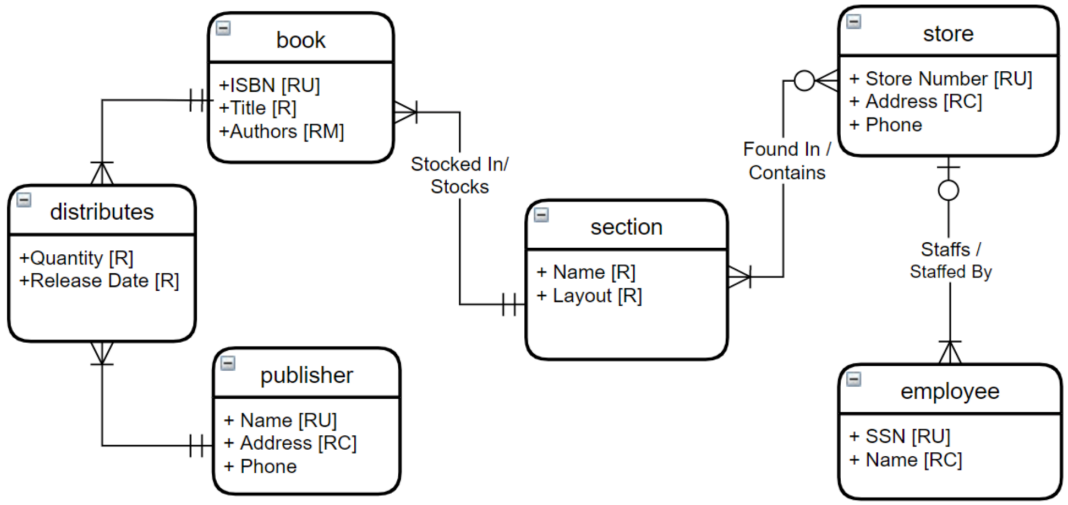
8

6

I chose 7 as my answer because at first, I considered all 6 of these entities to be tables, and then a bridge table for section and store. However, I did not pay attention to the attribute with the many property, authors, in the book entity. Whenever you are mapping the [M] attribute property, it should be considered a many to many relationship and so in addition to a bridge table, you also need to add a table that stores the attribute itself to be the lookup table or a table with a surrogate key or unique constraint. We would need to include an 'authors' table that will store the author's name, and then a bridge table for book_authors to connect that many to many relationship. That adds two more table and so the correct answer is that this logical model contains 9 tables in total.

Question 5 0 out of 1 points

Your answer should be based on the following conceptual model:



Which of the following foreign keys should be NOT NULL?

Selected Answer: Store_id in the employees table

Answers:
Store_id in the employees table

None of these should be NOT NULL

Distributes_is in the books table

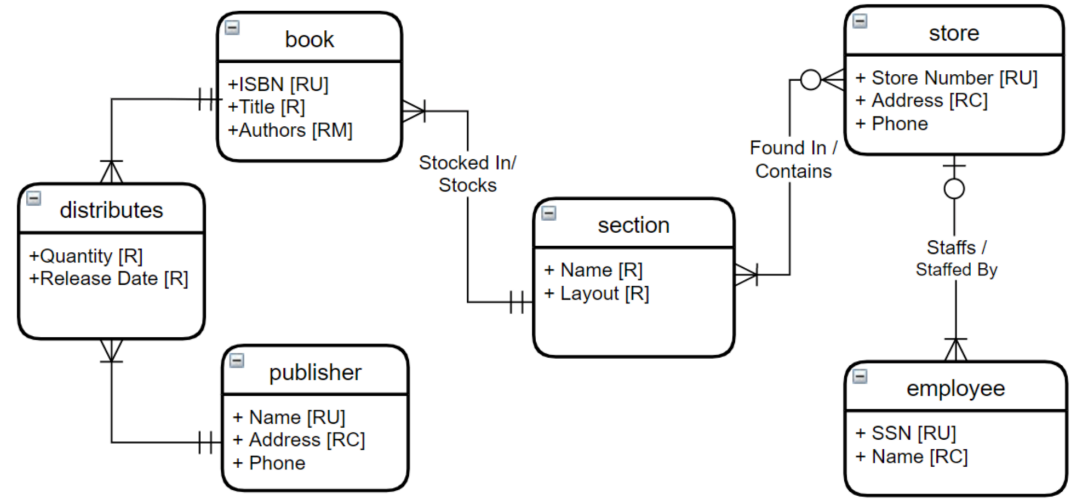
Distributes_id in the publishers table

Section_id in the books table

I chose store_id in the employees table to be a not null foreign key because I assumed each store_id an employee works in would be unique as in each store has its own ID. However, the relationship is that an employee is staffed by zero or one store and that relationship allows NULL in the foreign key. Looking at the section_id foreign key in the books table, it is a one and only one relationship (book is stocked in one and only section), so the answer is that this foreign key, section_id, should be NOT NULL in the books table as there cannot be no duplicates, or a book stocked in more than one section.

Question 6 0 out of 1 points

Your answer should be based on the following conceptual model:



Which of the following entities is weak?

Selected Answer: Section

Answers:

Publisher

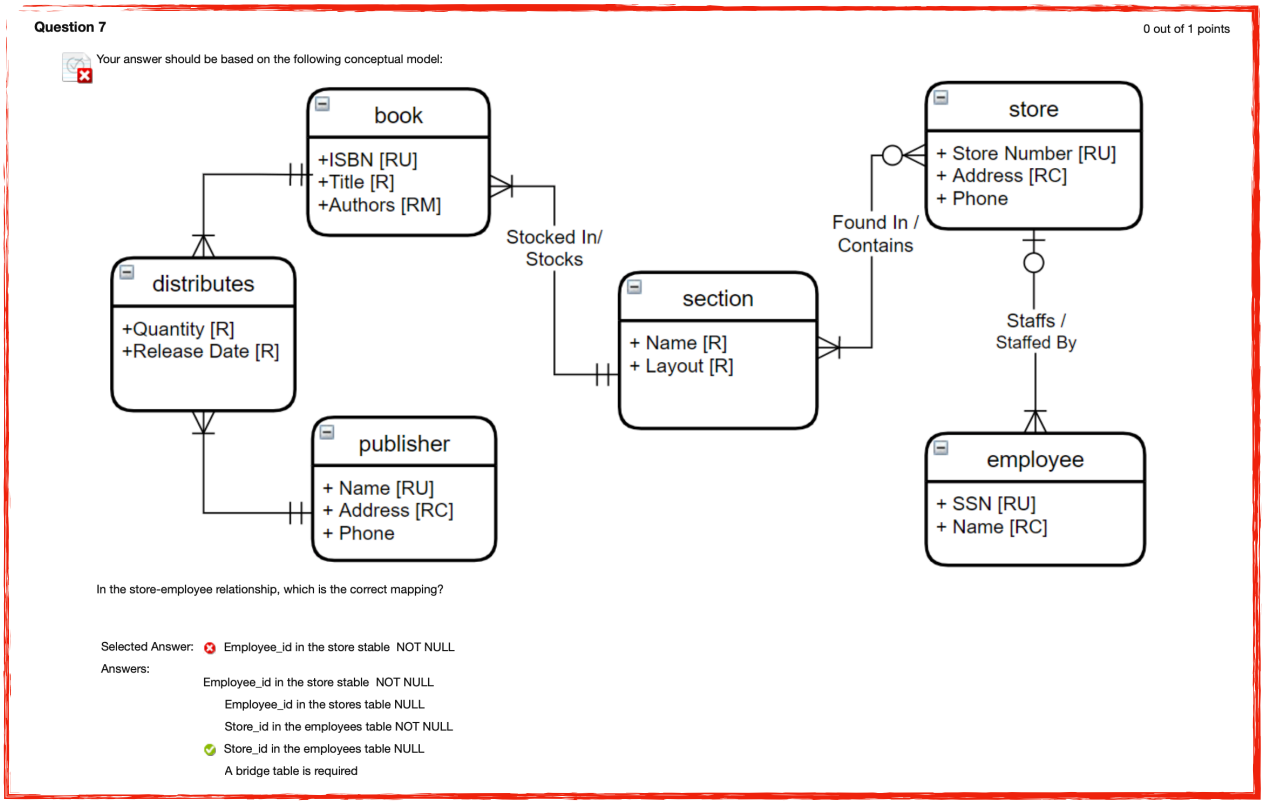
Store

Employee

Section

Book

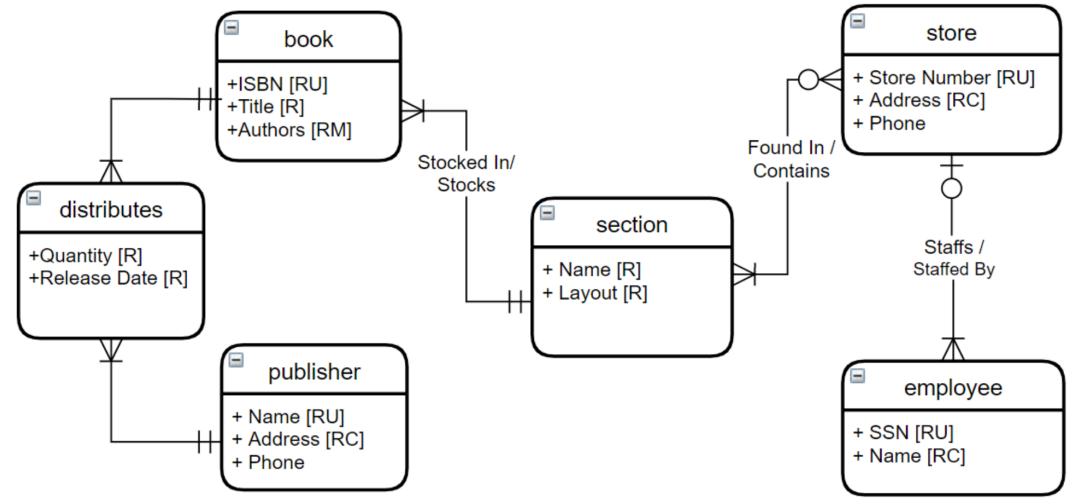
Weak entities cannot exist without their one-side counterpart. They depend with the entity on the one side of the relationship. I picked section to be a weak entity because I thought a section cannot exist without books. However, I read it wrong and it's really that the book cannot exist without the entity on the one side of the relationship, which is section. Therefore, the answer is that the book a weak entity because it cannot exist without a section.



I chose employee_id in the store table NOT NULL to be the correct mapping because I thought the primary key of employees would be employee_id and it would be a foreign key in the store table and must be NOT NULL as its a unique value. This is not the case because it is the employee table that's on the many side, where the foreign key should be place, and not the store table. A foreign key is always placed on the many side. When looking at the store-employee relationship, they have a zero to one relationship (employee is staffed by and zero to one relationships have a NULL value. Hence, the correct mapping would be that store_id, the primary key of the store table, would be in the employees table, on the many side, and is NULL because of its zero to one relationship.

Question 8 0 out of 1 points

Your answer should be based on the following conceptual model:



Which of the following entities is associative?

Selected Answer: Section

Answers: Book
Distributes
Store
Section
Employee

An associative entity associates two other tables in a many to many relationship. They have attributes on the many to many relationship, or a combination of a relationship and entity in simple terms. They have their own unique identifier. I chose section because I confused myself and thought an associative entity was an entity that can't exist without another entity and so I thought a section cannot exist without a store or a book. However, that's just what a weak entity is. The correct answer is that distributes is an associative entity because one, its a many to many relationship and two, it's between two tables, the book entity, and the publisher entity in which it associates with.