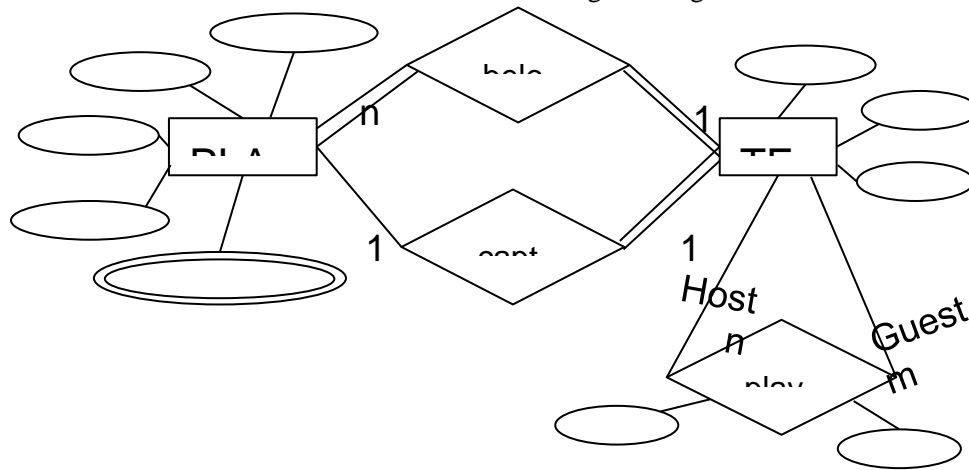


Practice Sheet
Chapter 7 (Relational Schema from ER/EER)

*Solutions are at the end of the document. SOLVE IT YOURSELF first.

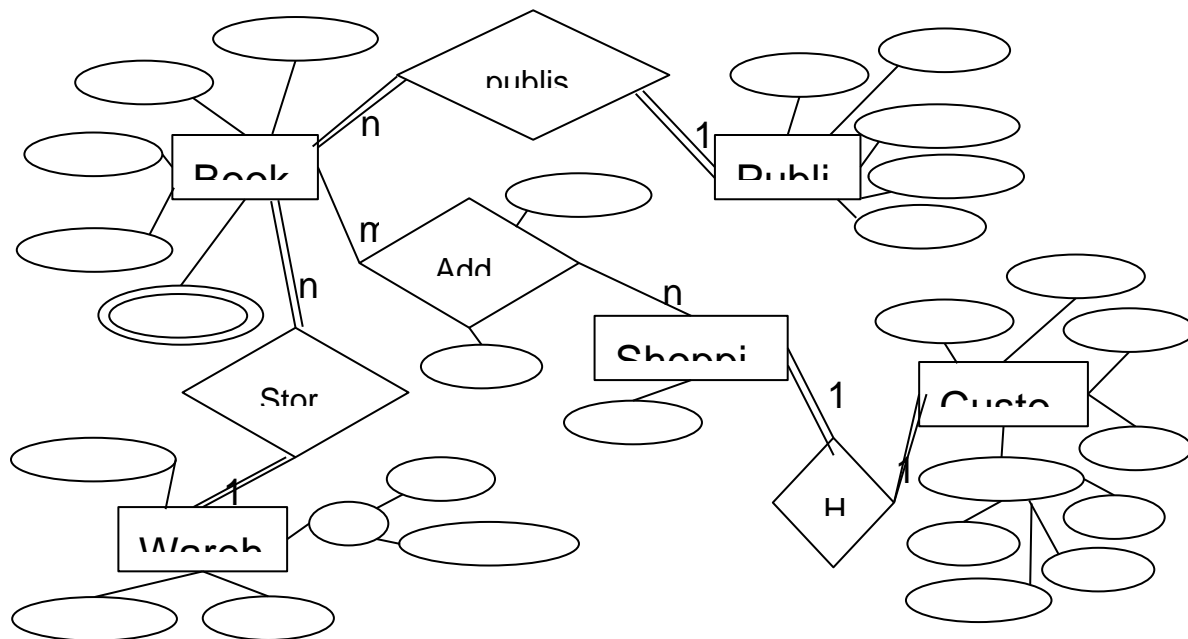
Question 1:

Construct a Relational Schema from the following ER diagram:



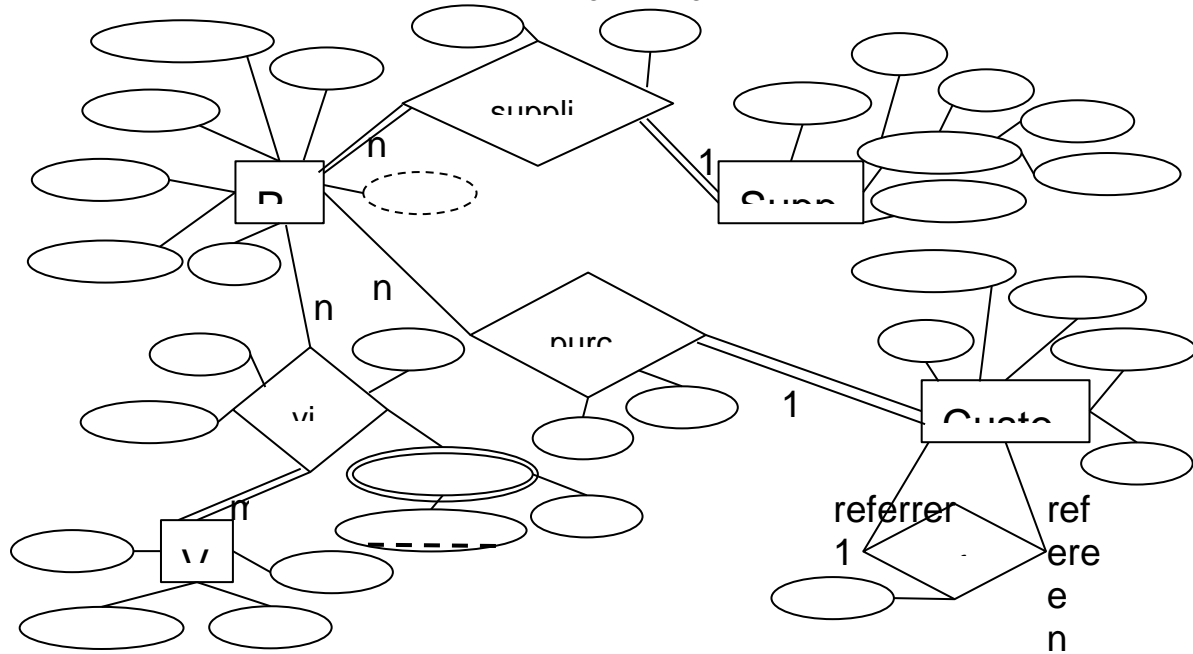
Question 2:

Construct a Relational Schema from the following ER diagram:



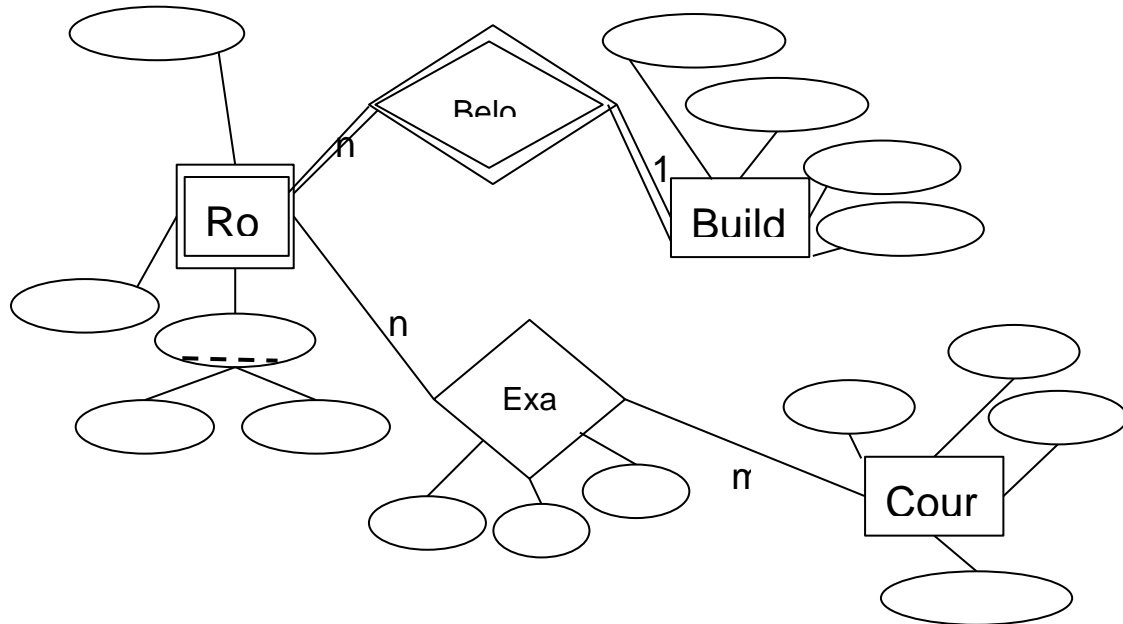
Question 3:

Construct a Relational Schema from the following ER diagram:



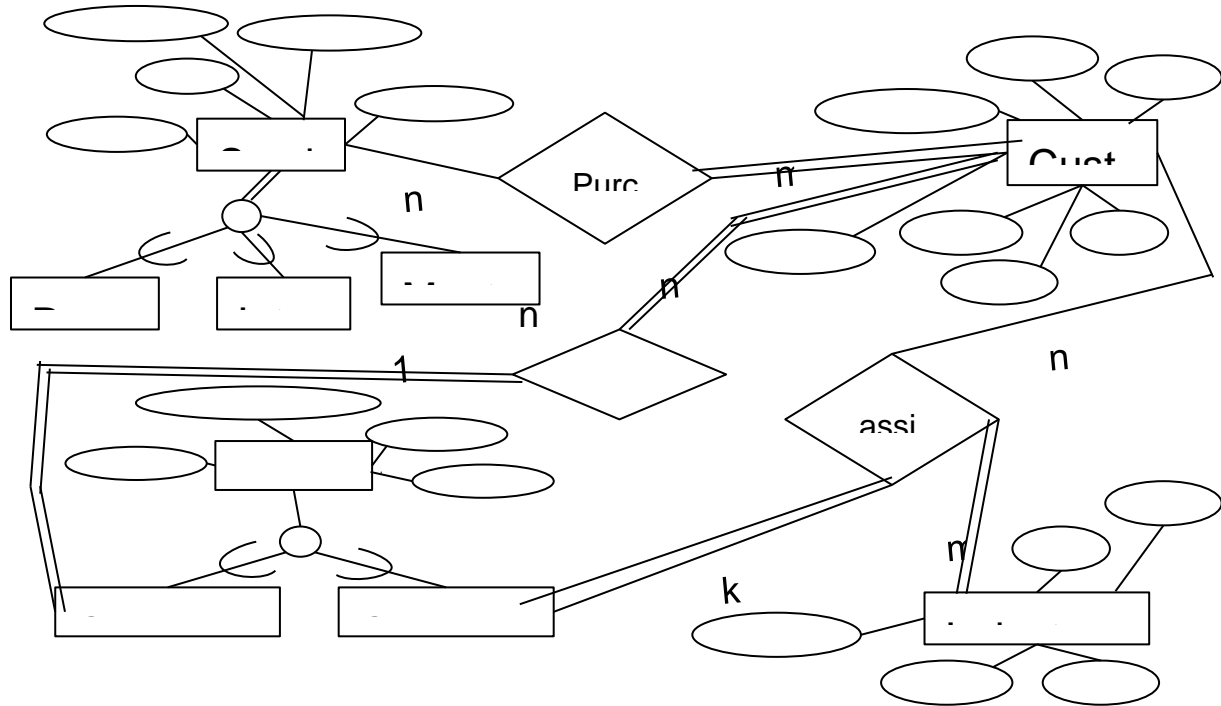
Question 4:

Construct a Relational Schema from the following ER diagram:



Question 5:

Construct a Relational Schema from the following EER diagram. For each of the subclasses/superclasses use any suitable option out of the 4 options.



Question 6:

There are four options for mapping subclasses and superclasses:

8A: separate tables for each subclass and superclass

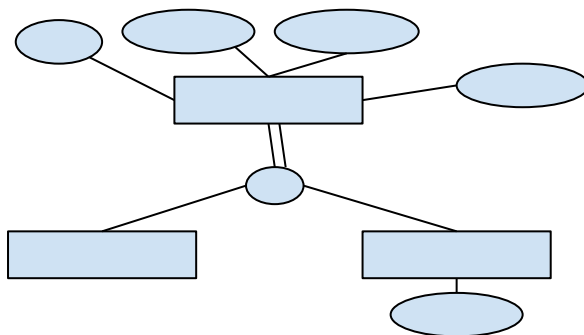
8B: tables for only subclasses

8C: 1 table with 1 type attribute

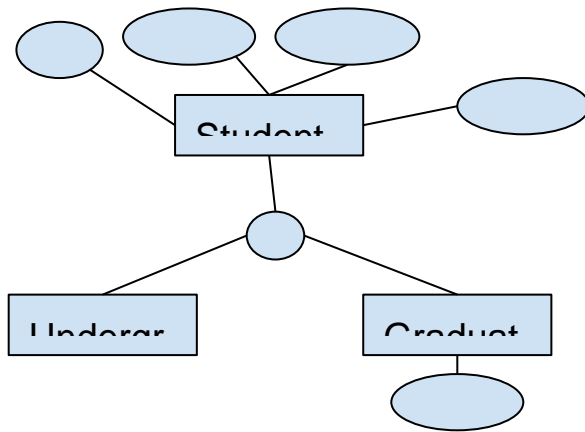
8D: 1 table with many type/flag attributes

State which of the above options are not applicable for the following diagrams and explain why. If all 4 options are applicable then simply state “all options are applicable”.

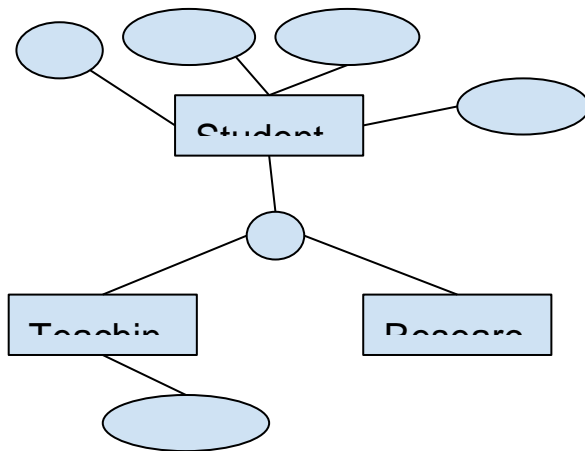
A.



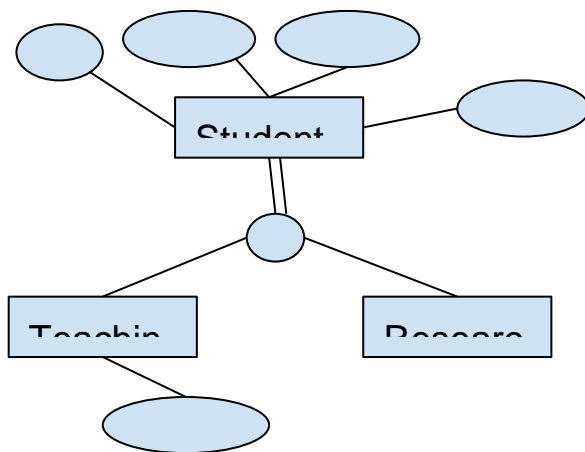
B.



C.



D.



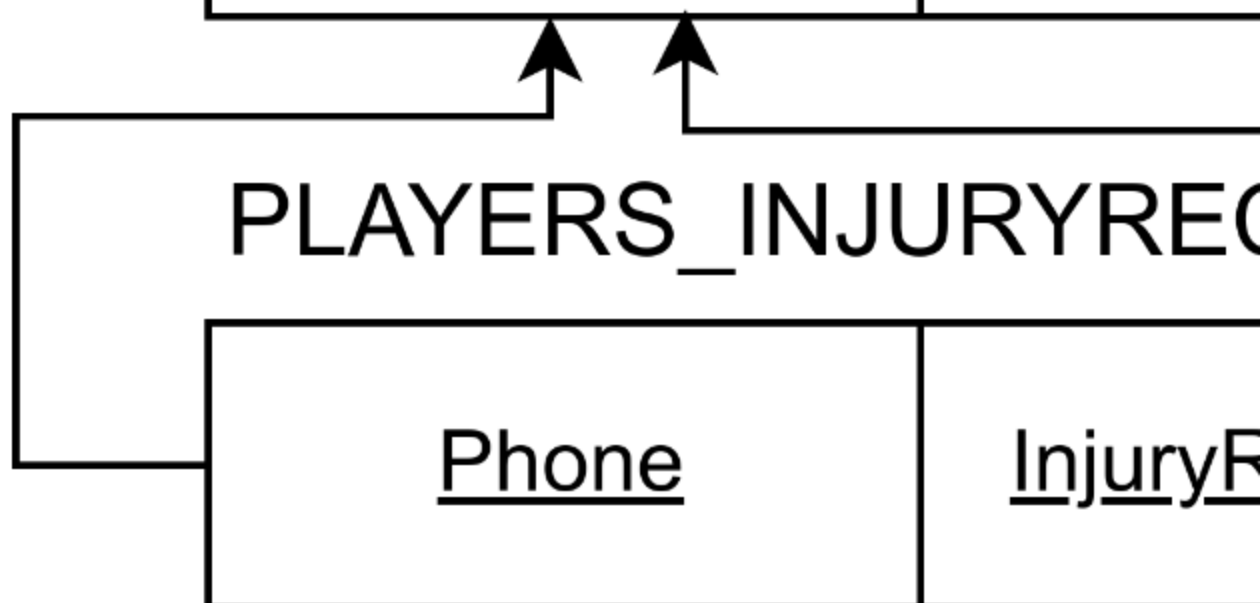
**** Note some questions may have more than one solution.**

SOLUTIONS:

Answer 1:

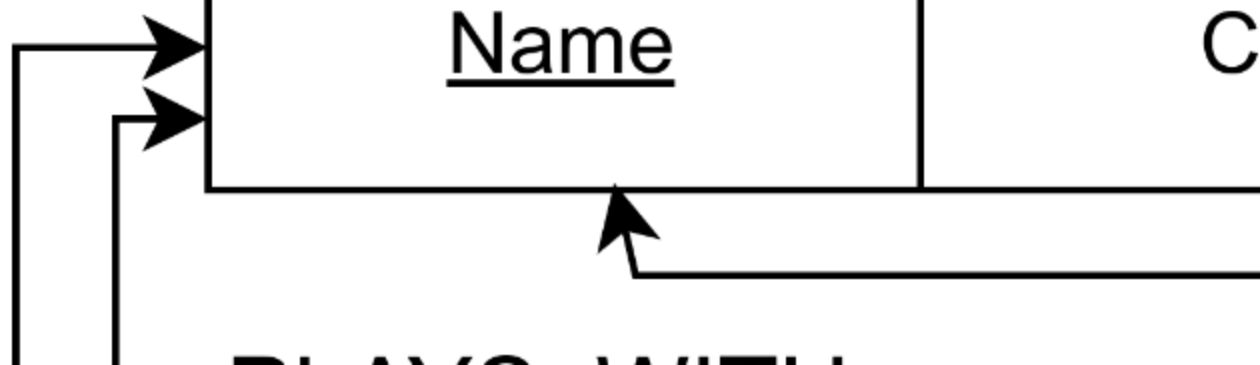
PLAYERS

<u>Phone</u>	Na
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TEAMS

<u>Name</u>	C
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Answer 2:

Books

<u>ISBN</u>	Title	Year	
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Books_Author

<u>ISBN</u>	<u>Author</u>
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Publisher

<u>Name</u>	Email	Address	
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Shopping_Cart

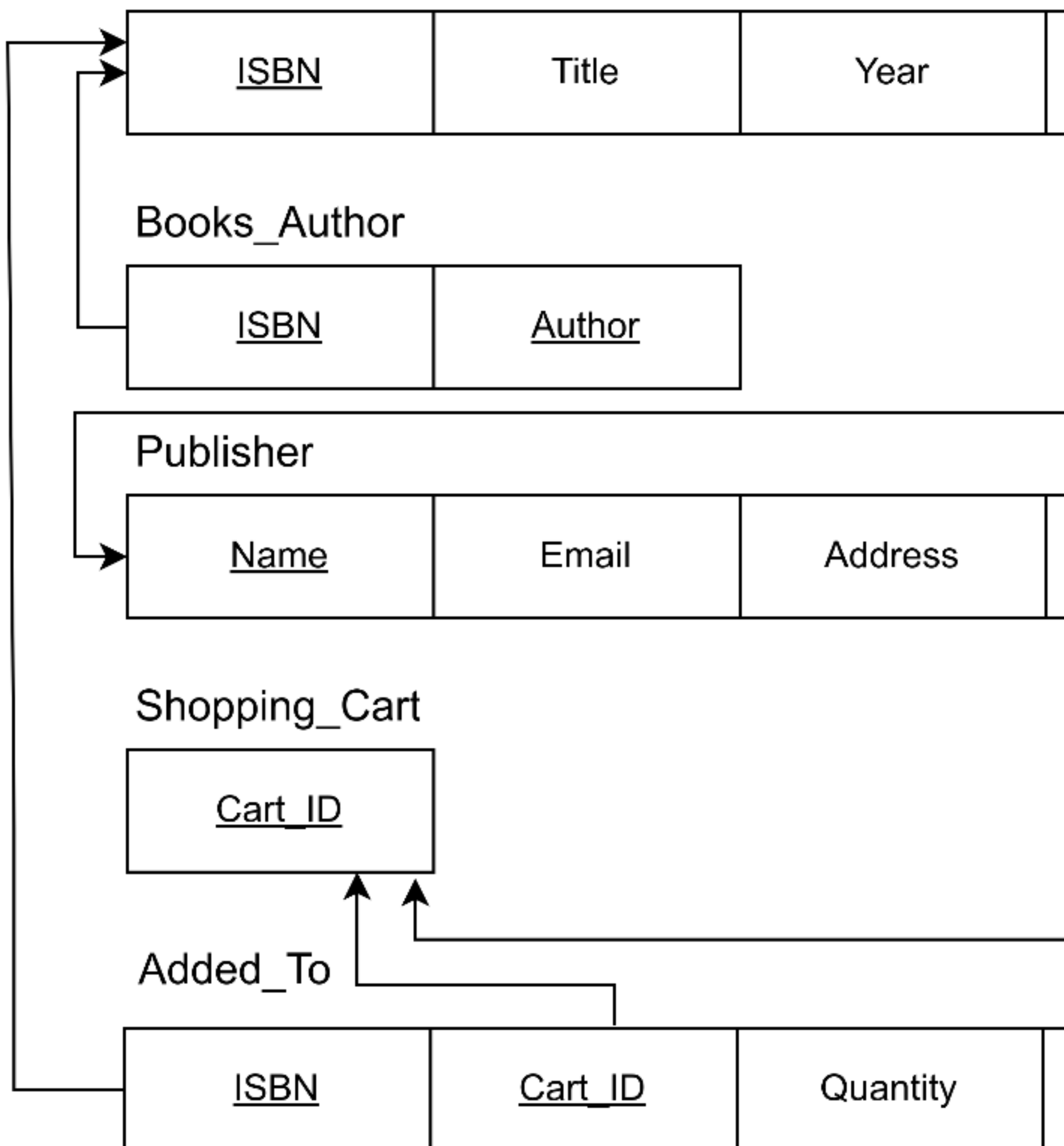
<u>Cart_ID</u>

Added_To

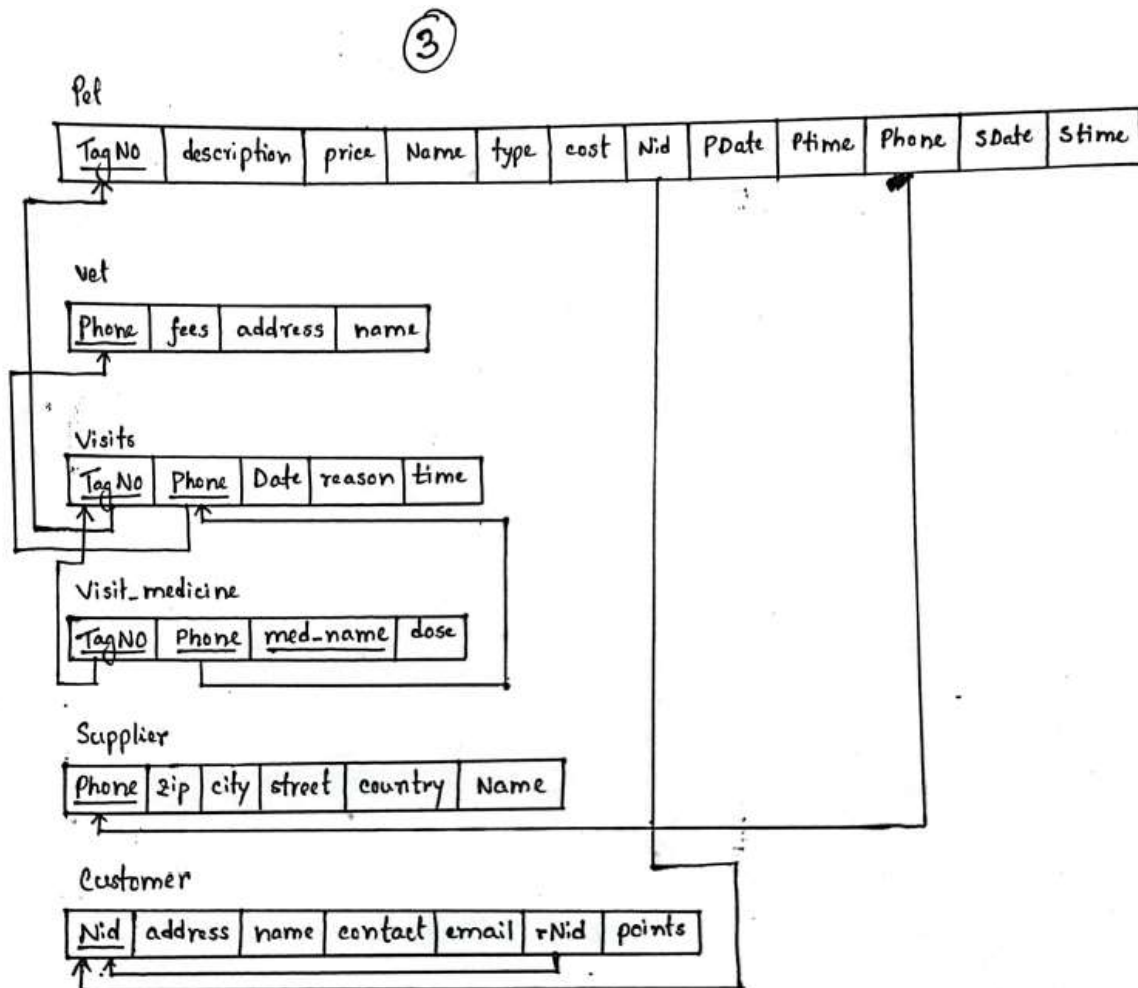
<u>ISBN</u>	<u>Cart_ID</u>	Quantity	
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Customer

<u>User_iD</u>	Name	Phone	
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Answer 3:



Answer 4:

④

BUILDINGS

<u>BNumber</u>	Address	Mgr_Name	Mgr_Phone
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ROOMS

<u>BNumber</u>	<u>Floor No</u>	<u>Serial No</u>	Type	Capacity
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EXAM of

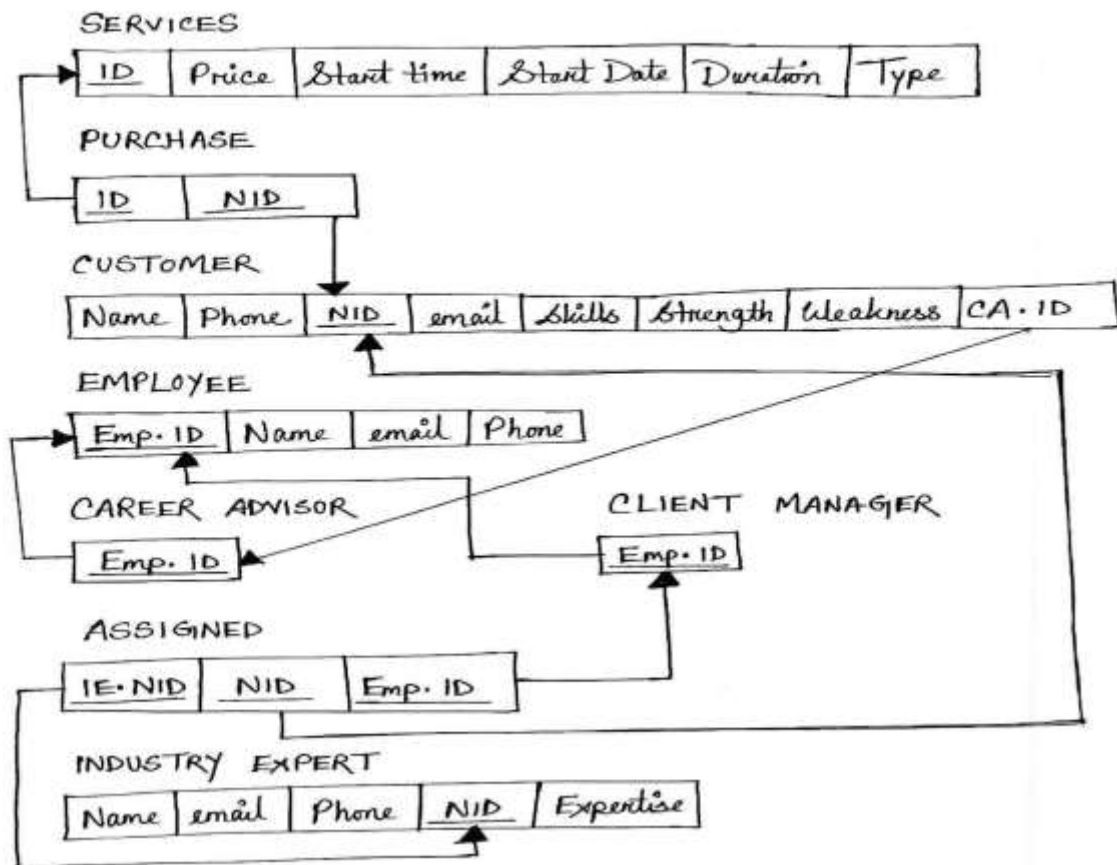
<u>BNumber</u>	<u>Floor No</u>	<u>Serial No</u>	<u>CCode</u>	Etype	Date	Time
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COURSES

<u>CCode</u>	Name	Credits	Department
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Answer 5:

5



Answer 6:

- A. All options are applicable
- B. Option 8B is not applicable. The specialization/generalization is partial and 8B is not applicable for partial. Because in 8B we only have tables for subclasses, so if a superclass entity does not belong to any of the subclasses the data for that entity will be lost.
- C. Option 8B and 8C not applicable. 8B reason same as above. 8C not applicable for overlapping as only 1 type attribute is not sufficient to store complete information if an entity belongs to multiple subclasses.
- D. 8C not applicable. Reason same as above.