

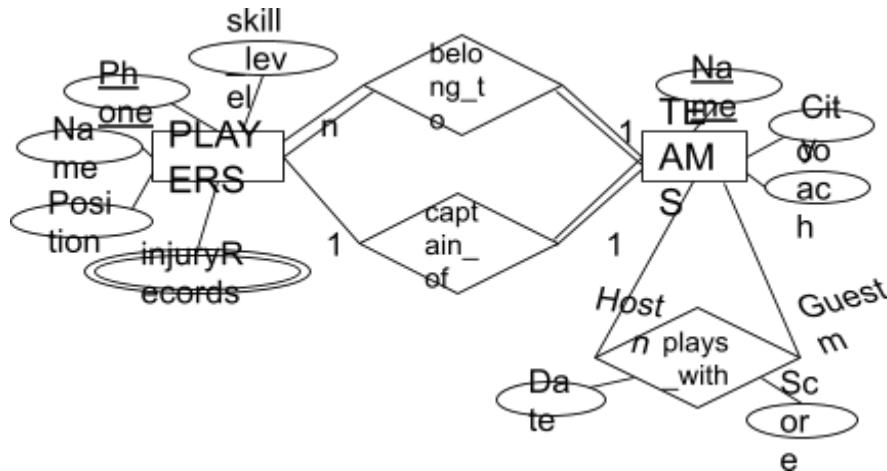
## Practice Sheet

### Chapter 7 (Relational Schema from ER/EER)

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

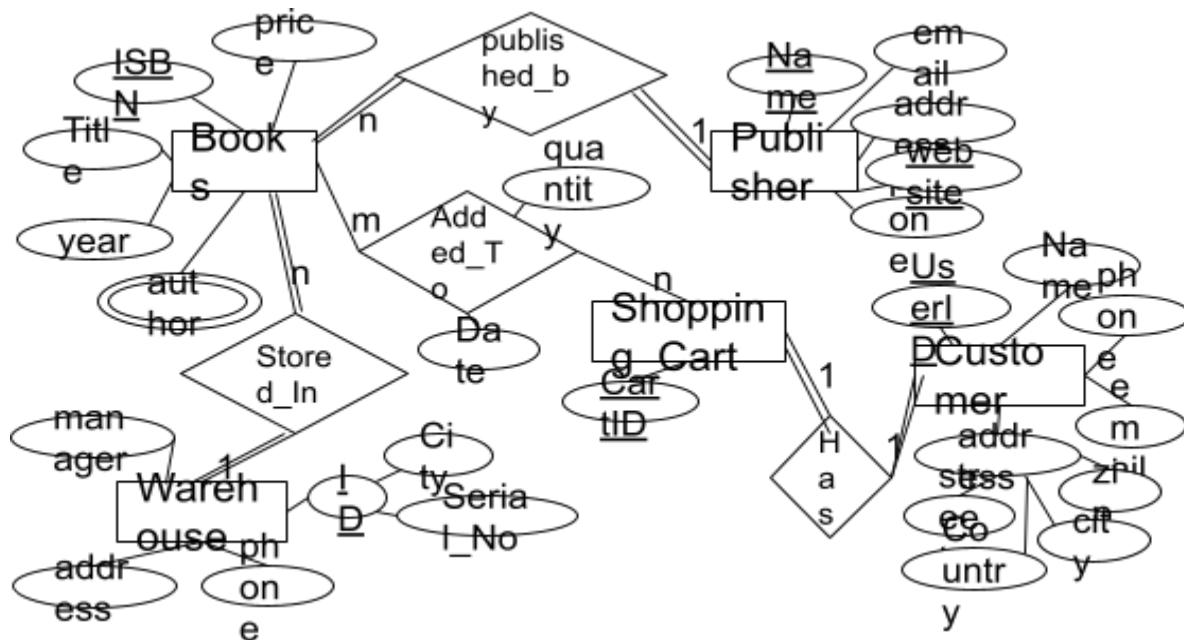
#### Question 1:

Construct a Relational Schema from the following ER diagram:



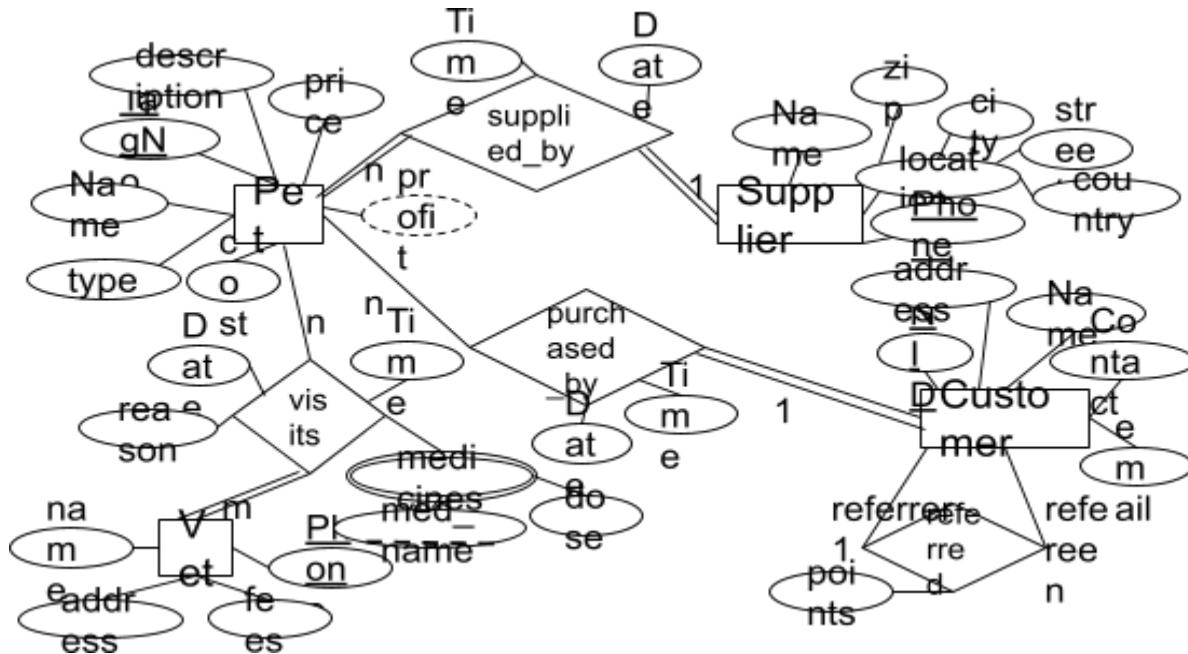
#### Question 2:

Construct a Relational Schema from the following ER diagram:



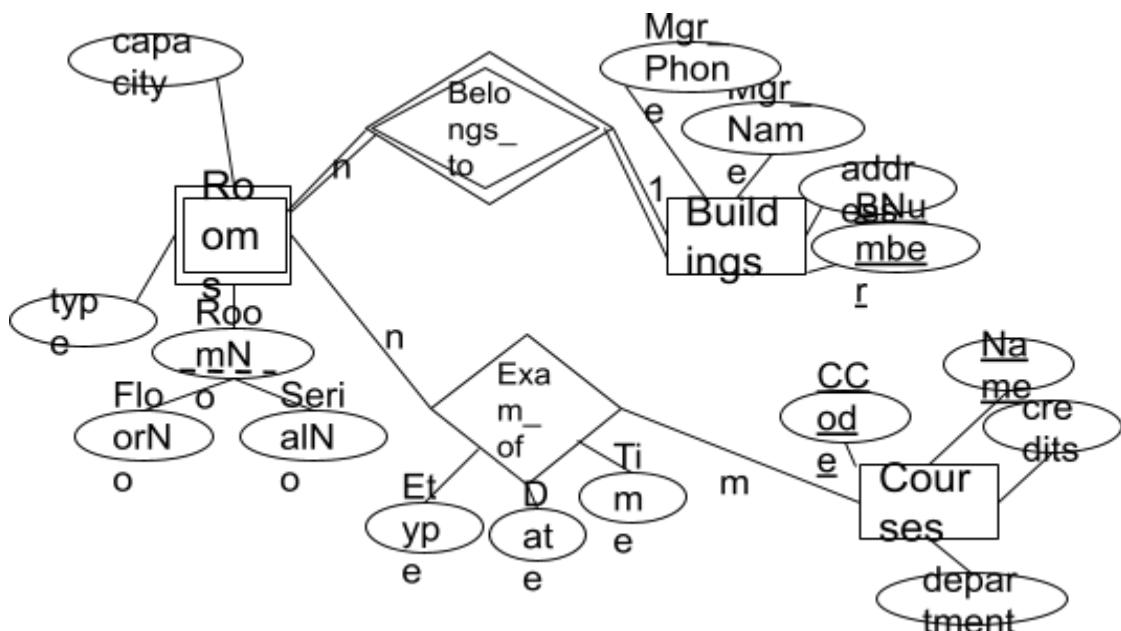
### Question 3:

Construct a Relational Schema from the following ER diagram:



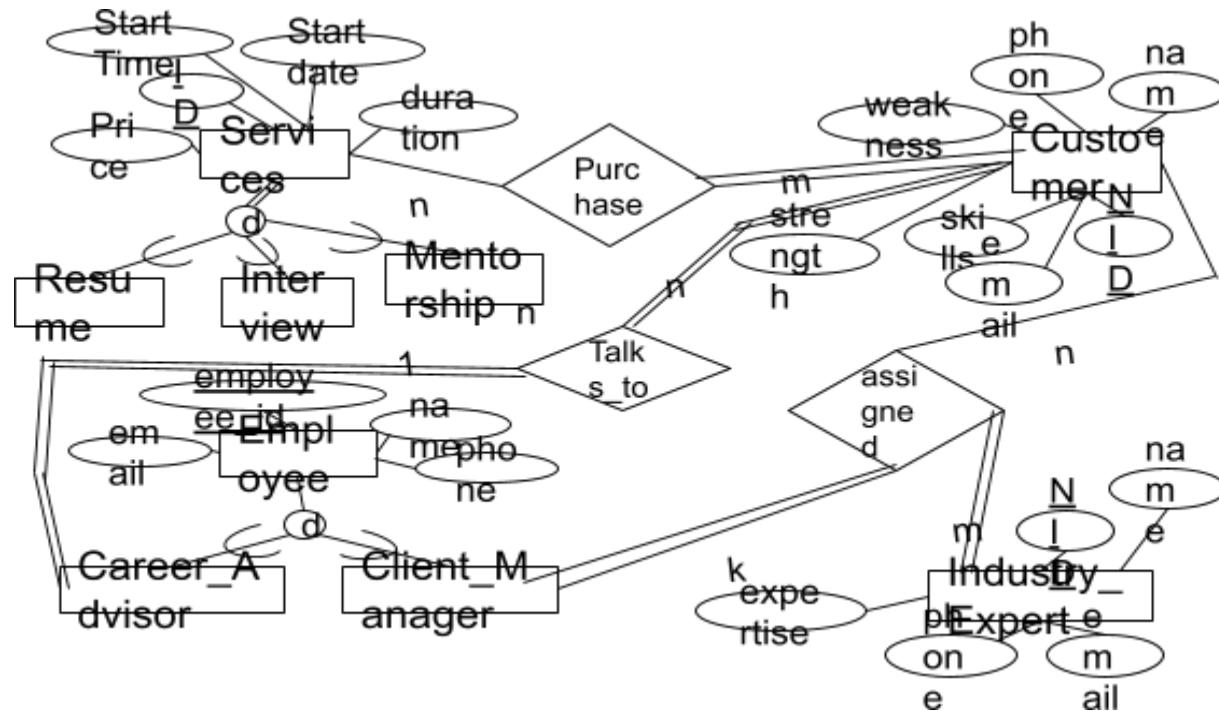
## Question 4:

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.



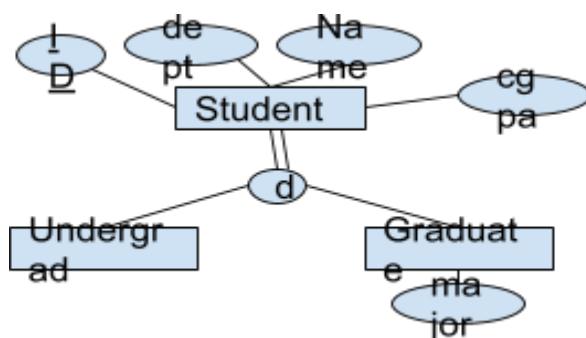
**Question 6:**

There are four options for mapping subclasses and superclasses:

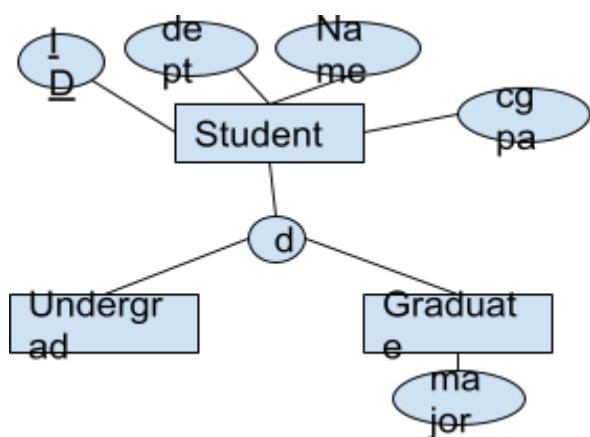
- separate tables for each subclass and superclass
- tables for only subclasses
- 1 table with 1 type attribute
- 1 table with many type/flag attributes

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”.

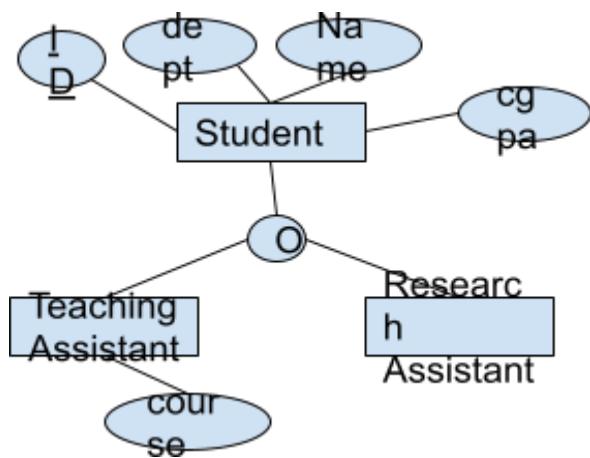
A.



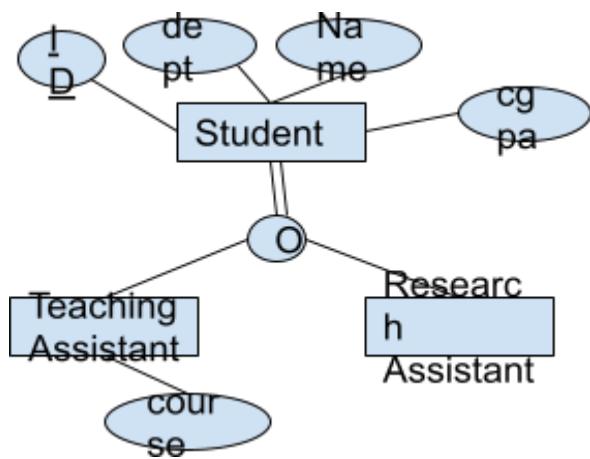
B.



C.



D.



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

**SOLUTIONS:**

Answer 1:

## PLAYERS

Phone

Name

## PLAYERS\_INJURYREC

Phone

InjuryE

## TEAMS

Name

C



Answer 2.

## Books

ISBN

Title

Year

## Books\_Author

ISBN

Author

## Publisher

Name

Email

Address

## Shopping\_Cart

Cart\_ID

## Added\_To

ISBN

Cart\_ID

Quantity

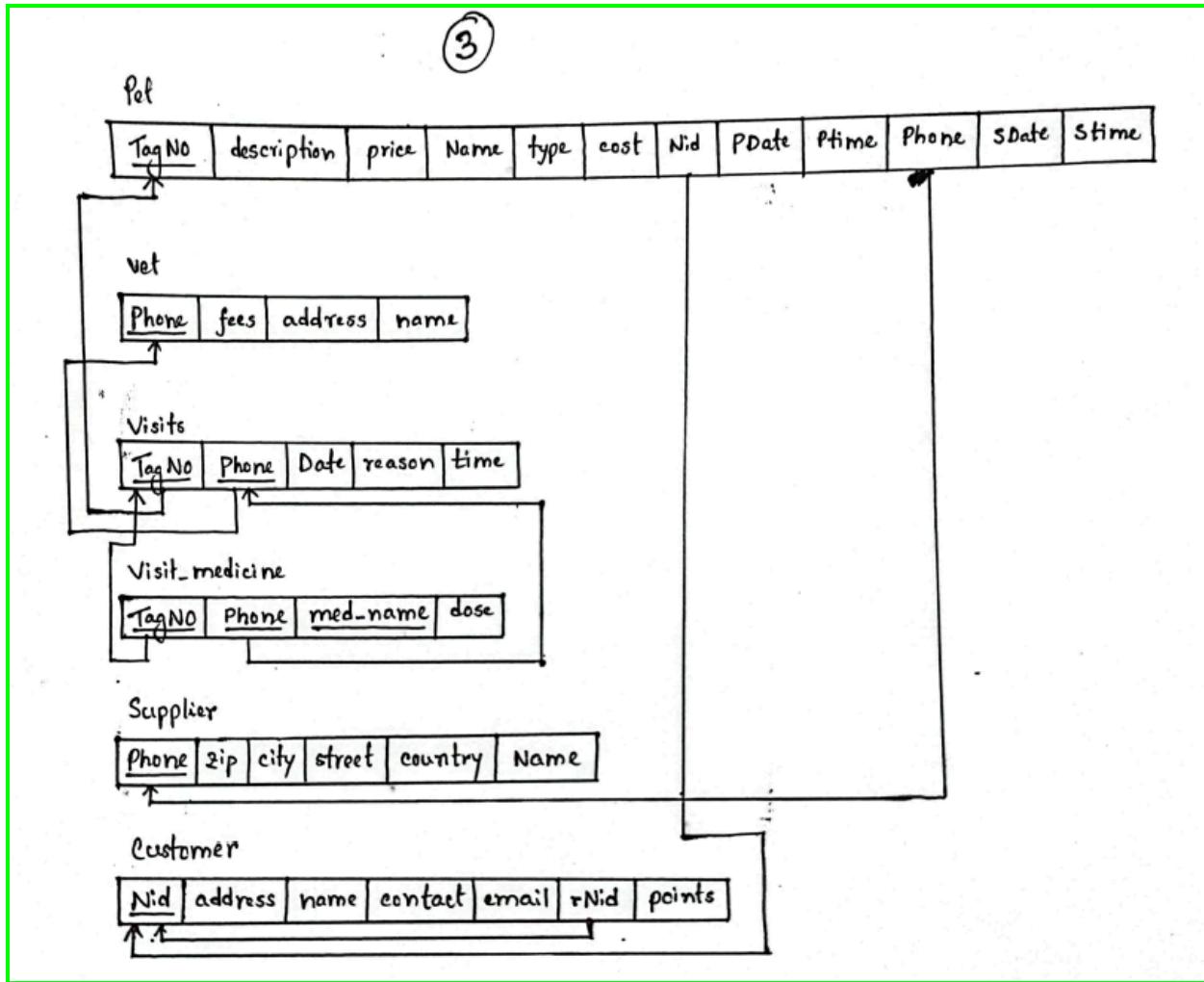
## Customer

User\_iD

Name

Phone

Answer 3:



Answer 4:

①

BUILDINGS

BNumber	Address	Mgr_Name	Mgr_Phone
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ROOMS

BNumber	Floor No	Serial No	Type	Capacity
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EXAM of

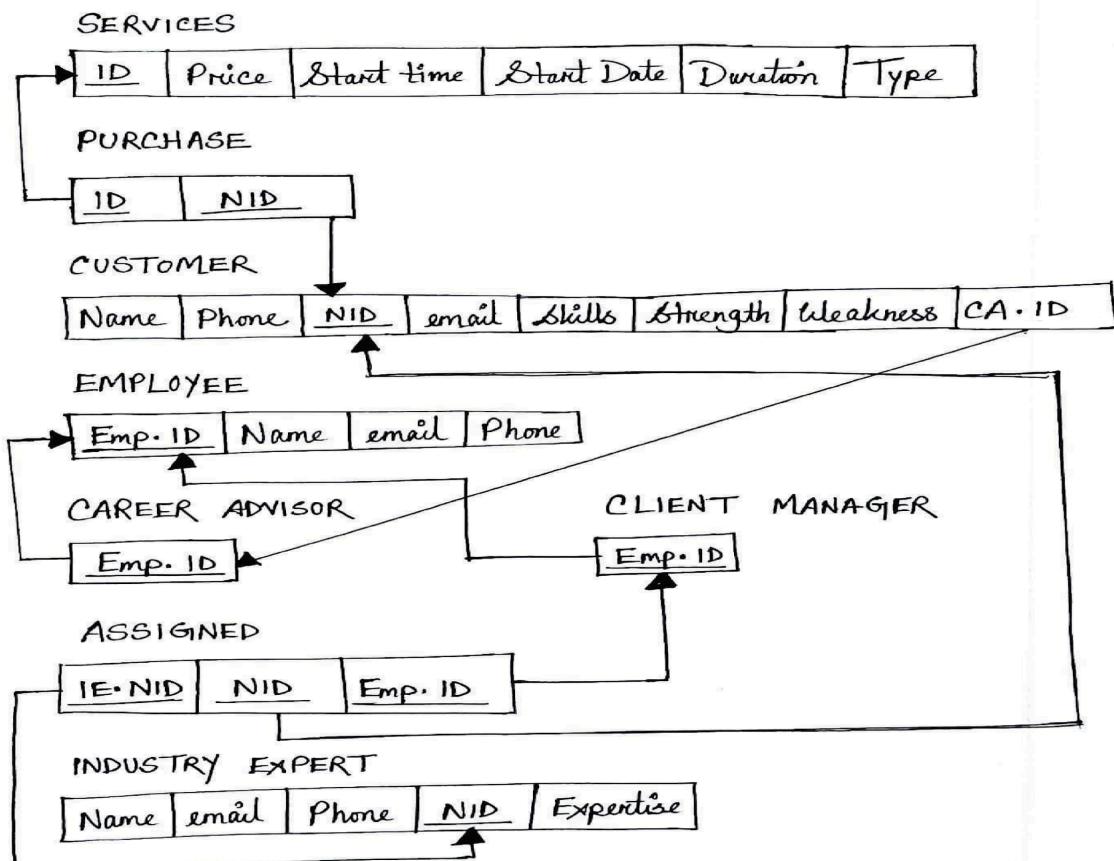
BNumber	Floor No	Serial No	CCode	Etype	Date	Time
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COURSES

CCode	Name	Credits	Department
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Answer 5.

(5)



Answer 6:

- All options are applicable
- 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.
- 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.
- 8C not applicable. Reason same as above.