

01. In E – R model, Y is the dominant entity and X is subordinate entity.

- (a) if X is deleted then Y is also deleted
- (b) if Y is deleted then X is also deleted
- (c) if Y is deleted then X is not deleted
- (d) none of the above

~~1 - Entity Relationship & Relational Model~~

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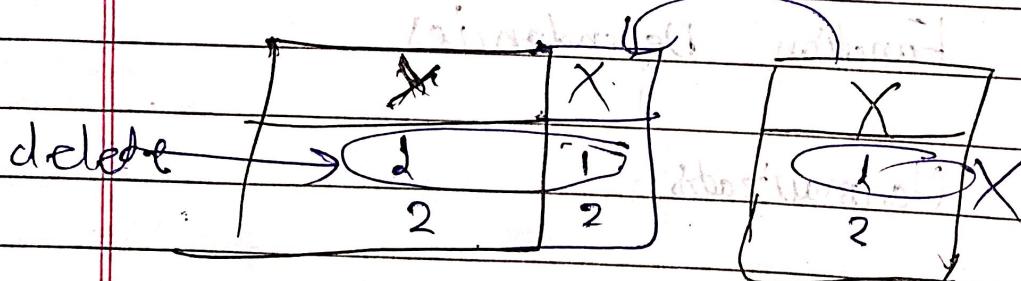
b) d In E-R model, Y is the domain dominant entity & X is subordinate entity.

- A) - if X is deleted then Y is also deleted
- B) - if Y is deleted then X is also deleted
- C) - if Y is deleted then X is not deleted
- D) - None

Sol

Y → dominant

X → Sub-ordinate



if Y delete then X also delete;

02. Consider the following assumptions for the relation employee(eid, ename, dept, grade, sal, age, address) and find the candidate key of the relation

- I. Each employee has unique id
 - II. An employee can work on one dept only
 - III. Employees salary depends on his age and grade
 - IV. Each employee has unique age and address
 - V. More than one employee can have the same salary or can be of same age
-
- (a) eid only
 - (b) eid, (age, address)
 - (c) (grade, age)
 - (d) eid dept

b) 2 Consider the following assumptions for the relation employee (eid, ename, dept, grade, sal, age, address) and find the C.R of relation

- I → Each employee has unique id
- II → An employee can work on one dept only
- III → Employee salary depends on his age & grade
- IV → Each employee has unique age \rightarrow address
- V → More than one employee can have the same salary all can be of same age.

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- A) - eid only
 B) - eid, (age, address)
 C) - (grade, age)
 D) - eid, dept

Sal

Employee

C

<u>Primary key</u>	<u>eid</u>	<u>name</u>	<u>dept</u>	<u>grade</u>	<u>sal.</u>	<u>age</u>	<u>address</u>
1	AB	A	-	8K	18	a	
2	BC	B	-	9K	19	b	
3	CD	C	-	2K	20	c	
4	DE	D	-	6K	21	d	
5	EF	E	-	2K	22	e	

So

Unique

ID

age \rightarrow address

Candidate key

03. 1-N relationships in E-R diagram is implemented in relational model as
- (a) Foreign keys are added on both sides
 - (b) Relation corresponding to '1' side is modified to include foreign key of the relation on the 'N' side
 - (c) Primary keys are added on both sides
 - (d) Relation corresponding to 'N' side is modified to include foreign key of the relation on the '1' side.

Q 33

1-N relationship in E-R diagram is implemented in relational model as

- A) - Foreign keys are added on both side.
- B) - Relation corresponding to '1' side is modified to include foreign key of the relation on the 'N' side
- C) - Primary key are added on both side.
- D) - Relation corresponding to 'N' side is modified to include foreign key of the relation on the '1' side.

04. Which of the following statements is True?

- (a) The Entity-Relationship data model is an example of implementation data models.
- (b) A logical schema can be defined using an E-R model.
- (c) E-R model is used in a phase called physical database design.
- (d) E-R model is used in a phase called conceptual database design.

(a)

45

True Statement →

(a) ~~Logical~~

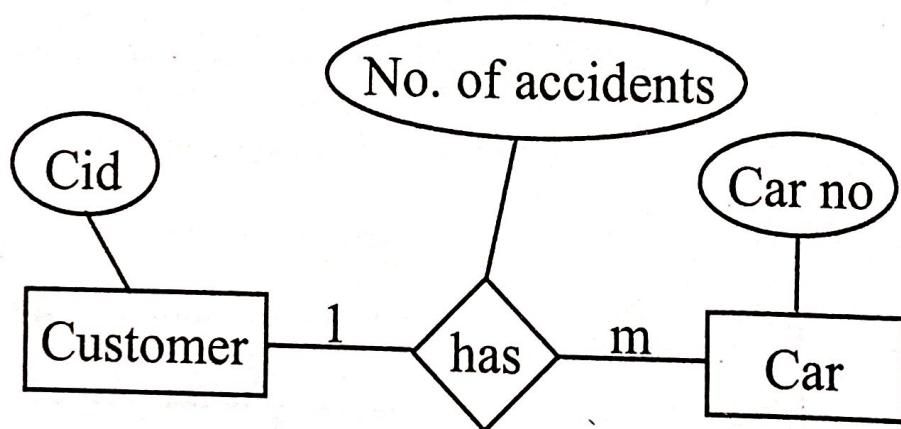
- A) The E-R data model is an example of implementation data models.
- B) A logical schema can be defined using an E-R model.
- C) E-R model is used in a phase called physical database design.
- D) E-R model is used in a phase called conceptual database design.

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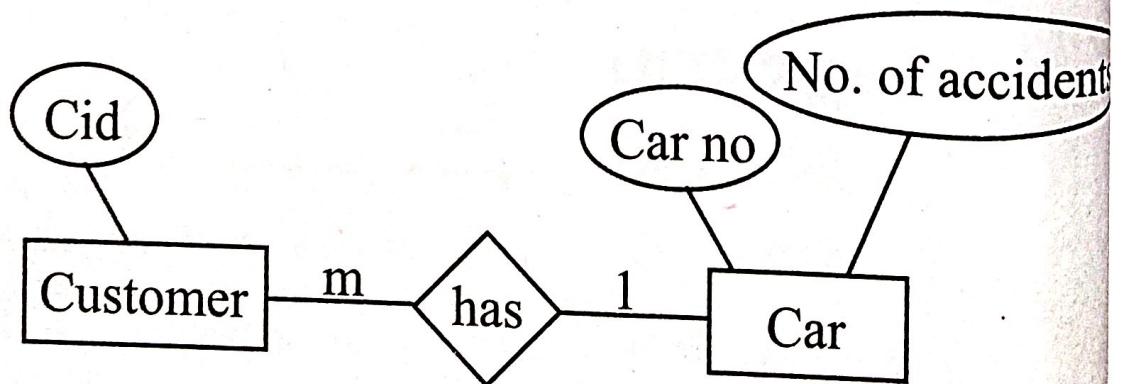
05. Construct an E-R model for a car-insurance company that has a set of customers, each of whom owns one or more cars. Each car has associated with it zero to any number of recorded accidents.

Which of the following E – R model satisfies the above business rules?

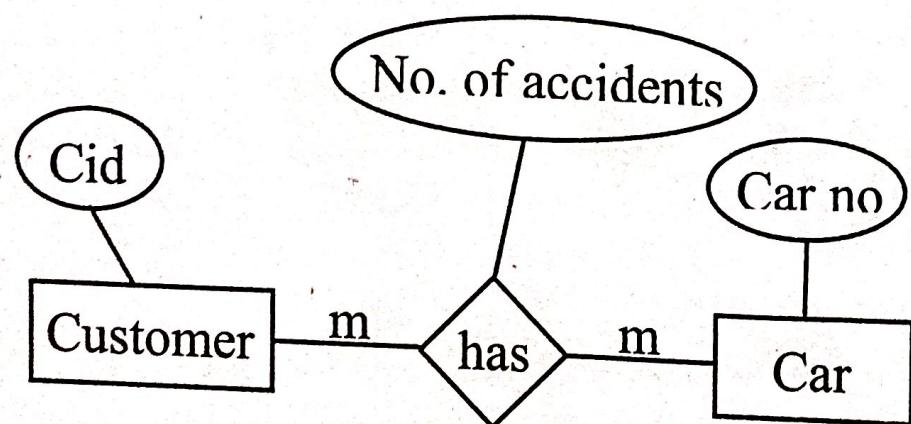
(a)



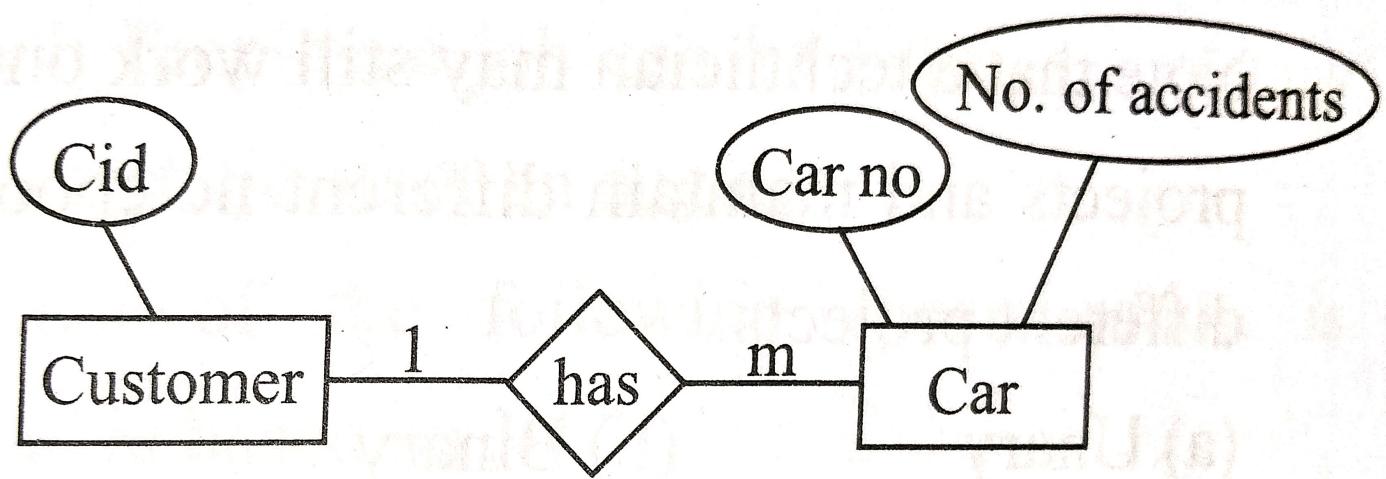
(b)



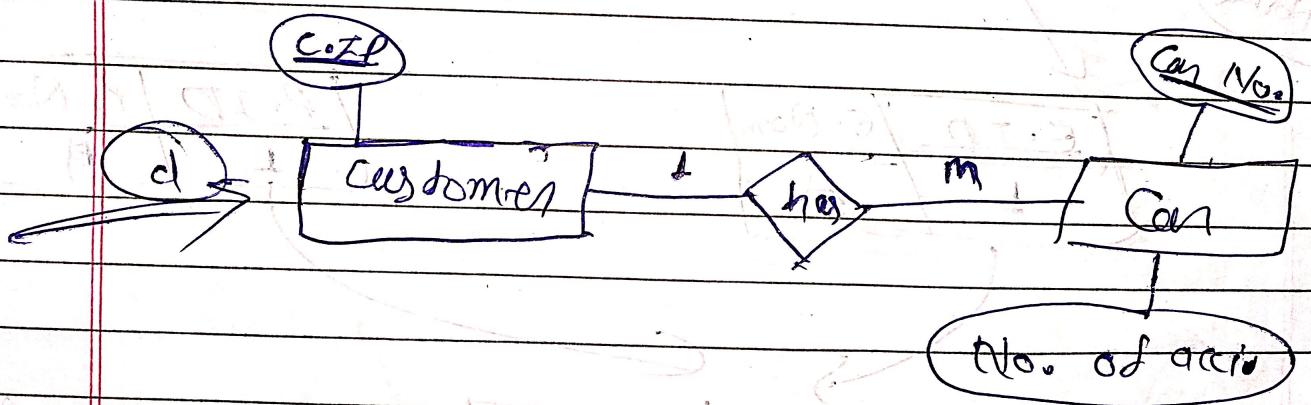
(c)



(d)



(d) ~~5~~ Constructed an E-R model for a car insurance company that has a set of customers, each of whom owns one or more cars. Each car has associated with it (zero to many) number of recorded accidents.



06. Match the following with most appropriate type of attributes.

List-I

- (P) Name of the dependent
- (Q) Degree of a person
- (R) Telephone number
- (S) Date of birth

List-II

- (1) Stored attribute
- (2) Composite attribute
- (3) Multivalued attribute
- (4) Discriminator attribute

Codes:

- (a) P - 4, Q - 3, R - 2, S - 1
- (b) P - 4, Q - 2, R - 3, S - 1
- (c) P - 4, Q - 1, R - 2, S - 3
- (d) P - 4, Q - 1, R - 3, S - 2

Q 6

List - I

- P) Name of the dependent
- Q) Degree of a person
- R) Telephone Number
- S) Date of Birth

List - II

- 1) Stared Attributes
- 2) Composite
- 3) Multivalued
- 4) Discriminatory

(P) \rightarrow 4
(Q) \rightarrow 2
(R) \rightarrow 3
(S) \rightarrow 1

Date of Birth

Stared attribute

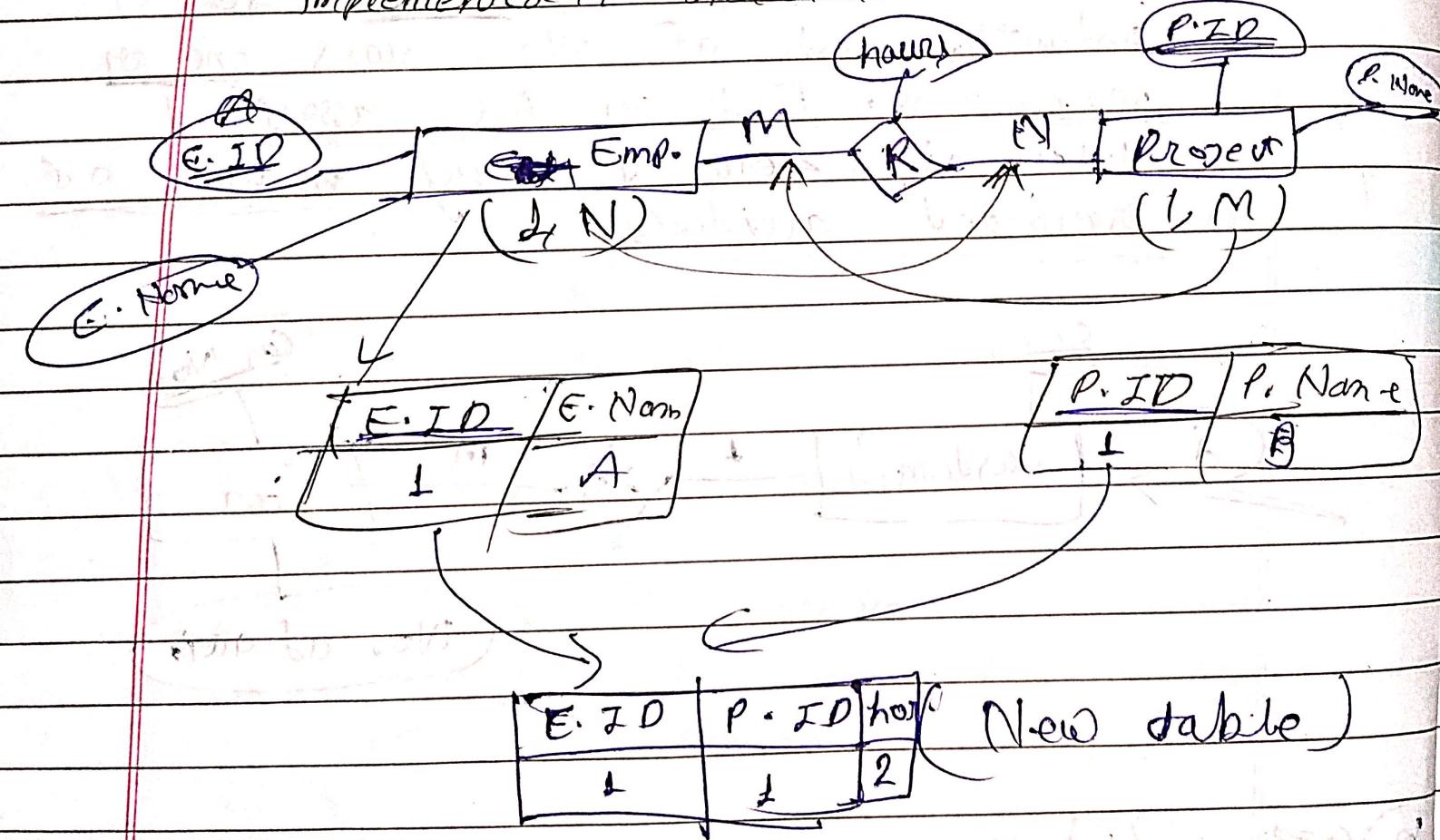
But Age \rightarrow Drive Attribute

Age = Today - Date of Birth

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07. All M-N relationships in E-R model are implemented in relational model as
- (a) Relation corresponding to M side is modified to include Foreign key of the relation on the 'N' side.
 - (b) Relation corresponding to 'N' side is modified to include Foreign key of the relation on the 'M'side.
 - (c) Separate relation is created and primary keys of both M and N are included in the new relation as Foreign keys
 - (d) Separate relation is created and Foreign keys of both M and N are included in the new relation as Primary keys

Q) All M-N relationships in ER model are implemented in relational model as —



08. “Every student has to register a course, every course does not have to have student”, what constraint to be used in ER diagram to implement above requirement.

- (a) Key constraint
- (b) Total participation constraint
- (c) Covering constraint
- (d) Overlap constraint.

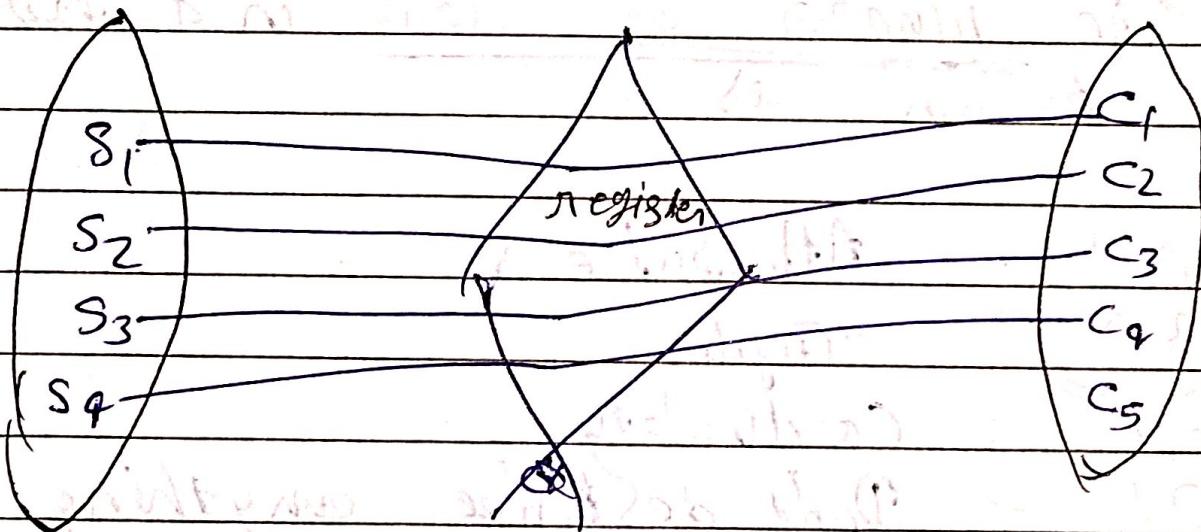
⑥ Every student has to register a course, every course does not have to have a student

What constraint to be used in ER diagram to implement above requirement.

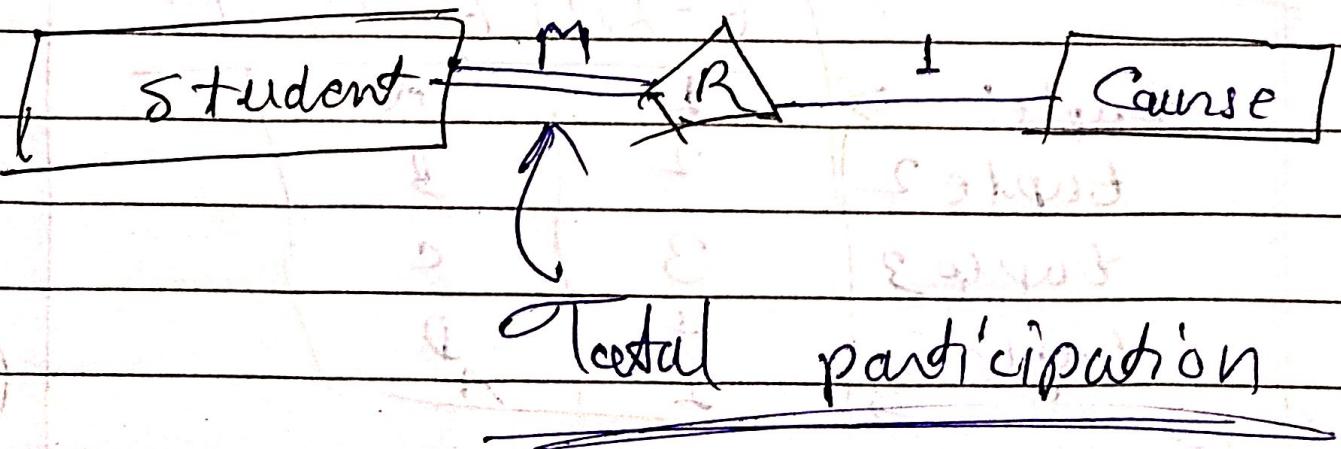
- A) - Key constraint
- B) - Total Participation constraint
- C) - Covering constraint
- D) - Overlap constraint

Student

Cause



OR



09. The collection of information stored in a database of a particular moment is _____.
- (a) view
 - (b) schema
 - (c) instance
 - (d) subschema

C) 9 → The collection of information stored in a database at a particular moment is _____?

- A) view
- B) schema
- C) instance
- D) subschema

Tuple "present at particular moment if relation instance"

10. The number of rows in a table is known as

- (a) Attribute
- (b) Tuple
- (c) Cardinality
- (d) Doesn't describe anything

10 → The number of rows in a table is known as

A) - Attribute
 ✓ B) - Tuple
 ✓ C) - Cardinality
 D) - Don't describe anything.

Solⁿ

	E-ID	E-Name	No. of repeat
tuple 1	1	A	2
tuple 2	2	B	1
tuple 3	3	C	1
tuple 4	4	D	1
tuple 5	1	A	1

max
 No. of repeat
 Tuple = ~~2~~ 2

2 is cardinality