

Name	Jflikhar Ichan
ID	14693
class section	BS (SE) (B)
Paper	Data base
semester	4th
in structer	Rimsha Ichan

Ans: 1 → ①

NAME	schad key	Depart ment	cell
Sania Ajmal	1	CS	03334324234
Ronasa	1	CS	03335399123
Alina	1	CS	03150034224
Ayeza	3	CS	03455559822

⇒ CONDIDATE KEY →

- 1) condidate key is a set of attributes that uniquely identify tuples in a table.
- 2) condidate key is a super key with no repeated attributes.
- 3) The prim ary key should be selected from condidate keys.
- 4) Every table must have at least a single condidate key.
- 5) A Table can have multiple condidate keys but only a single primary key.

⇒ Properties of candidate keys:

- 1) It must contain unique values.
- 2) candidate key may have multiple attributes.
- 3) Must not contain null values.
- 4) It should contain minimum fields to ensure uniqueness.
- 5) uniquely identify each record in a table.

⇒ Example:

⇒ In the given table student ID, cell are candidate keys which helps us to uniquely identify the student record in the table.

← CANDIDATE KEY →

Name	semester	Department	cell
Sania	1	CS	0333432423 ⁴
Raimaisa	1	CS	0333599113
Alina	1	CS	03150034224
Ayasa	3	CS	03455559812

* ——— * ——— * ——— *

Ans 02 → ②
≡ ≡

Data Redundancy:-
≡ ≡ ≡

- Data Redundancy is a condition that can cause the same piece of data to be stored in multiple places of a database or a storage.
- Repetition or ~~sq~~superfluity of data
- Reduces data consistency.
- Negative Impact.

Data Integrity:-
≡ ≡

- Data integrity is the process of ensuring that the data is accurate, unchange and consistent over its whole life cycle.
- Maintenance and assurance of the accuracy and consistency of data over the entire life cycle.
- Helps to improve data consistency
- positive impact.

* ≡ ≡ * ≡ ≡ * ≡ ≡ *

(Page 04)

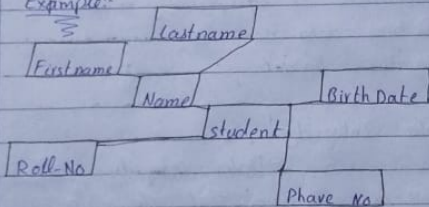
Ans 03 → ③

Multivalued attribute:

{ } { } { } { } { }

An Attribute that can hold multiple values is known as multivalued attribute.
→ It represented with double ovals in an ER-Diagram -eg A person can have more than one phone number. so the phone number attribute is Multivalued.

Example:-



→ composite attribute is represented in conceptual Model:

conceptual Model

* = * = * = * = *

(Page 05)

Ans 04: \rightarrow (4)

\rightarrow Doing rapid development of database applications in a busy corporate setting.

\hookrightarrow extensive constraints automated tests, error logs and defensive coding.

\hookrightarrow The maintenance task.

Fixing bugs and deploying the fixes.

\hookrightarrow cleaning up the data.

\hookrightarrow Dealing with concurrency queries/issue.

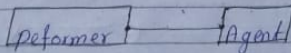
* \equiv * \equiv * \equiv *

Ans 05: \rightarrow (5)

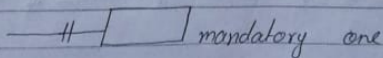
1) Mandatory one: \rightarrow

In a mandatory relationship every instance of one entity must participate in a relationship with another entity.

e.g



Relationship cardinality: (OR)

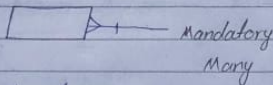
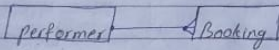


(Page 06)

ii) Mandatory Many:

In a mandatory relationship, every instance of more than one entity must participate in relationship with another entity.

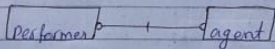
e.g.



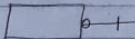
iii) Optional one:

In an optional relationship, any instance of one entity might participate in a relationship with another entity, but this is not compulsory.

e.g.



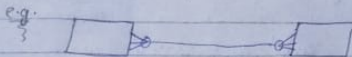
(or)



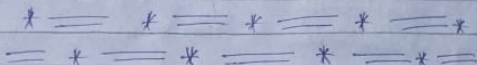
iv) optional Many: In an optional Many relationship any instance of more than one entity might participate

60

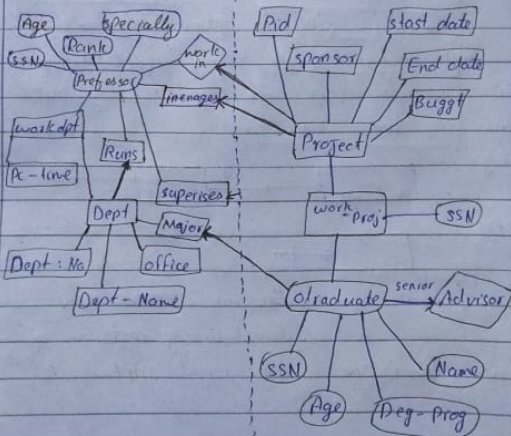
in a relationship with another entity:



(OR)



Ans: → 02



(Data base) (page 08)

Ans 03

