a) **Database** – shared collection of logically related data organized to meet information needs of an organization.

b) **Domain** – set of values that can be assigned to an attribute

      importance

      i) Ensures all columns and variables intended to hold values in a desired range or format hold only intended values.

c) **Tuple** – one record or one row

    Importance

    i) represent all information from each field associated with a single record

d)

    i)   Buffer pool and frames –

    Buffer pool --- in memory cache of pages read from a disk

    Frames --- consists of forms and menus

    ii)   Super key and foreign Key

o *Super key* - an attribute set that can uniquely identify a tuple

    foreign key - column of the table used to point to the primary key of another table.

    iii)   Domain integrity and referential integrity

    Domain integrity – encompasses rules and other processes restricting the format, type, and volume of data recorded in a database
- Specifies that all columns in a relation database must be declared upon a defined domain

    Referential integrity – relationship between tables

    iv)   Transaction and schedule

    Transaction – a sequence of logically related operations e.g., read and write

    Schedule – a sequence of instructions that specify the chronological order in which instructions of concurrent transaction are executed

e) Conceptual modelling 3 roles
   a. Data contained in databases (entities)
   b. Constraints on data
   c. Relationship between data items

f) Centralized db – Central Library
Distributed db. – data warehousing where large volumes of data, telephone and cellular networks.
Network db. – in a University Portal,
allows record for more than one table to be associated with a single owner record of another table

g)
Application metadata – is data that summarizes application traffic at a higher, abstracted level
e.g., analyze HTTP client errors
Database metadata – data about database data e.g.

Q2
a) Enables you to share attributes b2n objects such that a subclass inherits attributes from its parent class