Discuss the entity integrity and referential integrity constraints. Why is each considered important?

Entity integrity constraint: no primary key value can be NULL. Primary key value is used to identify individual tuples in a relation. Having NULL values for the primary keys implies some tuples cannot be identified. Example: if two or more tuples have NULL for their primary keys, they cannot be distinguished from each other if they are referenced from other relations. (p. 163)

Ensures there are no repetitions of data, helps retrieve data faster because each record has a unique primary key (<https://www.geeksforgeeks.org/difference-between-entity-constraints-referential-constraints-and-semantic-constraints/>)

Without a unique primary key, an individual tuple cannot be identified (https://opendsa.cs.vt.edu/ODSA/Books/Database/html/RDDConstraints.html#:~:text=Advantage%20of%20Using%20Integrity%20Constraints,to%20a%20reliable%20database%20design.)

Referential integrity constraint: specified between two relations and is used to maintain the consistency among tuples in the two relations. States that a tuple in one relation that refers to another relation must refer to an existing tuple in that relation

Maintains data relationships and references between tables (<https://www.geeksforgeeks.org/difference-between-entity-constraints-referential-constraints-and-semantic-constraints/>)

Consistency among tuples in two relations (https://opendsa.cs.vt.edu/ODSA/Books/Database/html/RDDConstraints.html#:~:text=Advantage%20of%20Using%20Integrity%20Constraints,to%20a%20reliable%20database%20design.)

Allows for cascading updates or deletes as that deletion of records from a parent table, which possesses the primary key, results in deletion of the data from the child table, which possesses the foreign key. (<https://www.geeksforgeeks.org/difference-between-entity-constraints-referential-constraints-and-semantic-constraints/> and https://www.ibm.com/docs/en/informix-servers/14.10?topic=integrity-referential)