

Unit-V: Enhanced ER Model & ER-to-Relational Mapping – PYQ-Based MCQs (1-30)

1. The process of converting ER diagrams into tables is known as:

- A) Mapping
- B) Transformation
- C) Normalization
- D) Aggregation

Answer: A

2. Which of the following is used to represent a "has-a" relationship?

- A) Aggregation
- B) Generalization
- C) Specialization
- D) Association

Answer: A

3. In EER, an entity that is a member of a subclass is also a member of the:

- A) Relationship
- B) Superclass
- C) Attribute
- D) Weak entity

Answer: B

4. Which of the following is used to represent inheritance in EER diagrams?

- A) Aggregation
- B) Specialization
- C) Association
- D) Mapping

Answer: B

5. A weak entity set always has:

- A) Its own primary key
- B) A multivalued attribute
- C) A discriminator or partial key
- D) Derived attribute

Answer: C

6. Mapping a many-to-many relationship requires:

- A) A separate relation
- B) Foreign key in both relations
- C) Only one relation
- D) Embedding

Answer: A

7. Which type of constraint defines the number of entities to which another entity can be associated?

- A) Participation
- B) Mapping cardinality
- C) Key constraint
- D) Referential constraint

Answer: B

8. In mapping EER to relations, a subclass is mapped to:

- A) Separate table
- B) Same table
- C) Parent table
- D) Relationship table

Answer: A

9. Disjointness constraint refers to:

- A) Entities belonging to multiple subclasses
- B) Subclasses having common attributes
- C) An entity belonging to at most one subclass
- D) None of the above

Answer: C

10. Total participation constraint means:

- A) Some entities participate in a relationship
- B) All entities participate in a relationship
- C) Weak entities are independent
- D) All attributes must have values

Answer: B

11. In specialization, which type of attribute is used to distinguish subclasses?

- A) Multivalued
- B) Derived
- C) Discriminator
- D) Composite

Answer: C

12. Which of the following is not true about weak entities?

- A) They do not have a primary key
- B) They depend on a strong entity
- C) They can exist independently
- D) They have a partial key

Answer: C

13. When mapping a weak entity, what must be included in its relation?

- A) Only its attributes
- B) Only foreign key
- C) Primary key of owner + its partial key
- D) All derived attributes

Answer: C

14. A relationship with attributes is mapped as a:

- A) Column in one table
- B) Separate relation
- C) Constraint
- D) Subclass

Answer: B

15. In generalization, the relationship between superclass and subclass is:

- A) One-to-one
- B) One-to-many
- C) ISA
- D) HAS-A

Answer: C

16. The process of extracting common features from two or more classes is:

- A) Aggregation
- B) Specialization
- C) Generalization
- D) Normalization

Answer: C

17. Mapping a multivalued attribute requires:

- A) Storing in same table
- B) Creating a separate relation
- C) Ignoring the attribute

D) Creating a view

Answer: B

18. The default mapping for a binary 1:N relationship is:

- A) Merge both entities
- B) Foreign key in many side
- C) Separate table
- D) Foreign key in one side

Answer: B

19. Which of these allows an entity to belong to more than one subclass?

- A) Disjoint specialization
- B) Overlapping specialization
- C) Total participation
- D) Generalization

Answer: B

20. The ISA relationship in EER refers to:

- A) Aggregation
- B) Association
- C) Generalization/Specialization
- D) Mapping

Answer: C

21. Which of the following ensures that subclass entities must exist in the superclass?

- A) Total participation
- B) Partial participation
- C) Specialization
- D) Aggregation

Answer: A

22. Which of the following is used to convert an EER diagram to tables?

- A) Logical design
- B) Mapping rules
- C) Physical schema
- D) Conceptual model

Answer: B

23. Mapping composite attributes involves:

- A) Ignoring sub-attributes
- B) Creating a separate table
- C) Storing only derived attribute
- D) Including all simple attributes

Answer: D

24. When mapping a 1:1 relationship, the foreign key can be placed in:

- A) Any one of the participating entities
- B) A new relation
- C) Both entities
- D) Only weak entity

Answer: A

25. An EER diagram is an extension of:

- A) Relational model
- B) ER model
- C) Network model
- D) Hierarchical model

Answer: B

26. In a relational schema, how is a multivalued attribute stored?

- A) As a derived column
- B) As a single column with multiple values
- C) In a separate relation with foreign key
- D) Ignored during mapping

Answer: C

27. The specialization process results in:

- A) Deletion of entity sets
- B) Breaking down a higher entity into lower entities
- C) Merging of tables
- D) Dropping foreign keys

Answer: B

28. A generalization represents:

- A) Bottom-up approach
- B) Top-down approach
- C) Horizontal mapping
- D) Decomposition

Answer: A

29. Which mapping technique ensures that subclass attributes are not duplicated?

- A) Table-per-subclass
- B) Table-per-hierarchy
- C) Table-per-concrete-class
- D) Table-per-superclass

Answer: A

30. The process of representing entities and relationships in tabular form is:

- A) Entity resolution
- B) Schema generation
- C) Logical mapping
- D) Relational mapping

Answer: D