1D0-541

1D0-541

QUESTION NO: 1

With regard to databases, what is normalization?

A. The process of reducing the cardinality of a relation
B. The process of organizing and refining relations
C. The process of duplicating data to reduce the number of tables
D. The process of limiting data stored in a table to a specific range of values

Answer: B

QUESTION NO: 2

Which three pieces of information did E.F. Codd describe as necessary to retrieve a data value from a relational database?

A. Attribute, domain, and tuple
B. Entity, relation name, and domain
C. Table name, primary key, and entity
D. Attribute, relation name, and primary key

Answer: D

QUESTION NO: 3

What is a virtual table?

A. A virtual table is a relation created as the result of data manipulation; it exists only in computer memory, and is not a permanent part of the database.
B. A virtual table is a relation stored in the database; it is used when multiple users access the same relation in a database.
C. A virtual table is a relation derived from the database data dictionary; it contains metadata about a base relation. A virtual table is a relation derived from the database? data dictionary; it contains metadata about a base relation.
D. A virtual table is a relation that consists of primary and foreign keys for a particular set of relations in a database.

Answer: A

QUESTION NO: 4

Your enterprise has reached the conceptual design phase for a database project. What is the desired goal at the end of this design phase?

A. A set of normalized relations
B. A reviewed entity-relationship (ER) model
C. An entity-relationship (ER) model with no redundant data
D. A set of denormalized relations

Answer: B

QUESTION NO: 5

1D0-541

In which phase of database design do you identify entities, attribute domains, and relationships?

A. Logical
B. Physical
C. Application
D. Conceptual

Answer: D

QUESTION NO: 6

Consider the Dept1_Parts and Dept2_Parts relations shown in the exhibit. Which of the following SQL statements would create a set difference of the two relations with the widest variety of Structured Query Language dialects?

Part_ID	Part_Name	Description	Supp_ID
0312	bolt	hexagon bolt	221
0322	screw	capscrew	441
0332	socket screw	button head	551
0342	flange	blind flange	331
0352	socket screw	countersunk	441

Dept1_Parts Relation

Part_ID	Part_Name	Description	Supp_ID
0302	flange	slip-on flange	331
0322	screw	capscrew	441
0332	socket screw	button head	551
0362	bolt	studbolt	441

Dept2_Parts Relation

A. SELECT * FROM
    Dept1_Parts
    EXCEPT(SELECT
    PartJD FROM
    Dept2_Parts);
B. SELECT * FROM
    Dept1_Parts MINUS
    (SELECT Part_ID
    FROM Dept2_Parts);

C. SELECT * FROM
   Dept1_Parts
   DIFFERENCE
   (SELECT Part_ID
    FROM Dept2_Parts);
D. SELECT * FROM
   Dept1_Parts WHERE
   Part_ID NOT IN
   (SELECT Part_ID FROM
    Dept2_Parts);

Answer: D

QUESTION NO: 7

Consider the Information Engineering diagram shown in the exhibit. Building_ID, R_ID, Room_Count and Room_Num are integer numbers, whereas Bldg_Name, Location and Res_Name are all represented by variable-length strings with a maximum of 20 characters.

Which SQL statement best implements the RESIDENT relation shown in this diagram?

A.CREATE TABLE RESIDENT (
R_ID INTEGER NULL PRIMARY KEY,
Room_Num FLOAT,
Res_Name VARCHAR,
Building_ID INTEGER NULL,
FOREIGN KEY Building_ID REFERENCES BUILDING (Building_ID));

B.CREATE TABLE RESIDENT (
R_ID INTEGER NOT NULL PRIMARY KEY,
Room_Num BINARY,
Res_Name VARCHAR (20),
Building_ID INTEGER NOT NULL,
FOREIGN KEY Building_ID REFERENCES BUILDING (Building_ID));

C.CREATE TABLE RESIDENT (
R_ID INTEGER NOT NULL PRIMARY KEY,
Room_Num INTEGER,
Res_Name VARCHAR (20),
Building_ID INTEGER NOT NULL);

D.CREATE TABLE RESIDENT (
R_ID INTEGER NOT NULL PRIMARY KEY,

Room_Num INTEGER,
Res_Name VARCHAR (20),
Building_ID INTEGER NOT NULL,
FOREIGN KEY Building_ID REFERENCES BUILDING (Building_ID));
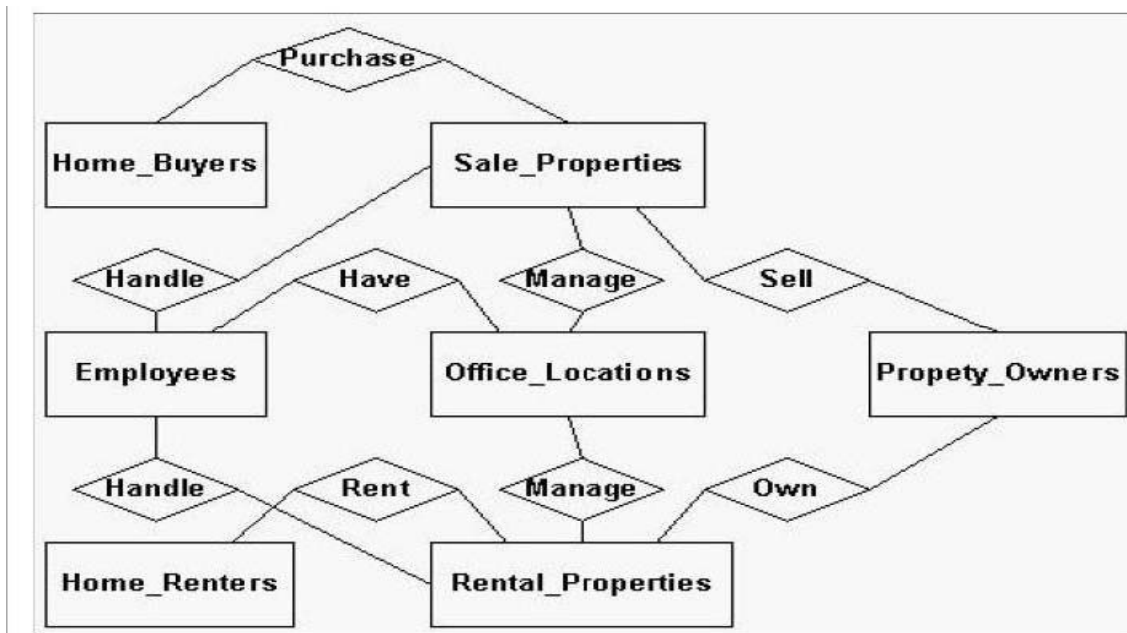
Answer: D

QUESTION NO: 8

Which term describes one or more database operations that are executed as a single unit?

A. Update
B. Transaction
C. Encapsulation
D. Operational group

Answer: B

QUESTION NO: 9

Your enterprise is involved in planning a database project. The exhibit shows the result of one phase of the database design life cycle. Which term best describes the diagram shown in the exhibit?

A. Information Engineering (IE) data model
B. Corporate data model
C. Database requirements model
D. ERD model

Answer: B

1D0-541

QUESTION NO: 10

Consider the following relations shown in the exhibit. Which of the following SQL statements would return the Customers2 relation from the Customers relation?

Cust_No	Cust_Name	Satisfaction_Rate	Sales_Office	Sales_Rep_No
1011	MicroWidget	75	Atlanta	1350
1012	MacroWidget	90	New York	7403
1013	Xyz Corp	78	Los Angeles	2457
1014	DayCo	95	Atlanta	1350
1015	DigiTech	85	Chicago	3303
1016	DataTech	92	Los Angeles	2457
1017	UniSort	81	New York	7403

Customers Relation

1015	DigiTech	85	Chicago	3303
1017	UniSort	81	New York	7403

Customers2 Relation

A. SELECT * FROM Customers
    WHERE Satisfaction_Rate <= 80
    OR Satisfaction_Rate >= 90;
B. SELECT * FROM Customers WHERE
    Satisfaction_Rate IN (80 AND 90);
C. SELECT *FROM Customers
    WHERE Satisfaction_Rate >= 80
    AND Satisfaction_Rate <= 89;
D. SELECT * FROM
    Customers WHERE
    Satisfaction_Rate
    BETWEEN (80, 90);

Answer: C

QUESTION NO: 11

Which statement is used to define a named group of related tables, views, domains and other database objects?

A. CREATE
B. CREATE TABLE
C. CREATE DOMAIN
D. CREATE SCHEMA

Answer: D

QUESTION NO: 12

Which of the following best describes the ON DELETE NO ACTION referential integrity constraint?

A. If a parent key is deleted, any child keys referenced by the parent key are automatically deleted.
B. If a parent key is deleted, no test is made for referential integrity.
C. If any child key references a parent key, the record containing the parent key cannot be deleted.
D. If a parent key is deleted, all child keys are automatically set to a specified value.

Answer: C

QUESTION NO: 13

Consider the following relational algebraic expression: Which of the following SQL statements is equivalent to this relational algebraic expression?

$$(\pi_{Cust\_No, Cust\_Name} (Customers)) \bowtie_{Customers.Sales\_Rep\_No = Employees.Sales\_Rep\_No} (\pi_{Emp\_Name, Emp\_Loc} (Employees))$$

A. SELECT * FROM Customers,
    Employees WHERE Sales_Rep_No
     = Cust_No;
B. SELECT Cust_No, Cust_Name, Emp_Name, Emp_Loc FROM
    Customers, Employees WHERE Customers.Sales_Rep_No =
    Employees.Sales_Rep_No;
C. SELECT Cust_No, Cust_Name, Emp_Name, Emp_Loc FROM
    Customers, Employees WHERE Employees.Sales_Rep_No =
    Customers.Sales_Rep_No;
D. SELECT * FROM Customers, Employees WHERE
    Customers.Sales_Rep_No = Employees.Sales_Rep_No;

Answer: B

QUESTION NO: 14

What is a domain?

A. A normalized set of data applicable to a particular relation
B. A combination of attributes for a relation
C. A definition of permissible values for one or more attributes
D. A set of permissible values for one or more relations

Answer: C

QUESTION NO: 15

For the Employee relation shown in the exhibit, which set of column value holds the complete tuple for the employee named James Smith?

Emp_ID	First_Name	Last_Name	Birth_Date	
0001	Helen	Lee	12-05-75	
0002	James	Smith	10-25-76	
0003	Eliza	Perez	02-15-80	
0004	Samuel	Hayes	11-07-71	

Employee Relation

A. 0002, James, Smith
B. 0002, James, Smith, 10-25-76
C. First_Name, James, Last_Name, Smith
D. Emp_ID, 0002, First_Name, James, Last_Name, Smith

Answer: B

QUESTION NO: 16

Which pair of relational algebraic operations requires union compatibility?

A. Union and join
B. Selection and projection
C. Intersection and difference
D. Cartesian product and intersection

Answer: C

QUESTION NO: 17

Consider the following table as well as the Dept1_Parts and Dept2_Parts relations shown in the exhibit: Which of the following relational algebraic expressions would result in the given table?

$$Dept1\_Parts - \pi_{Part\_ID} (Dept2\_Parts)$$

1D0-541

Part_ID	Part_Name	Description	Supp_ID
0312	bolt	hexagon bolt	221
0322	screw	capscrew	441
0332	socket screw	button head	551
0342	flange	blind flange	331
0352	socket screw	countersunk	441

Dept1_Parts Relation

Part_ID	Part_Name	Description	Supp_ID
0302	flange	slip-on flange	331
0322	screw	capscrew	441
0332	socket screw	button head	551
0362	bolt	studbolt	441

Dept2_Parts Relation

Part_ID	Part_Name	Description	Supp_ID
0302	flange	slip-on flange	331
0312	bolt	hexagon bolt	221
0322	screw	capscrew	441
0332	socket screw	button head	551
0342	flange	blind flange	331
0352	socket screw	countersunk	441
0362	bolt	studbolt	441

A.   Dept1_Parts ∪ Dept2_Parts

B.   Dept2_Parts – Dept1_Parts

C.   Dept1_Parts ∩ Dept2_Parts

D.   Dept1_Parts X Dept2_Parts

A. A
B. B
C. C
D. D

Answer: A

QUESTION NO: 18

What is the most important service provided by a database management system?

A. Provides support for a data manipulation language
B. Allows users to store data in a distributed data repository
C. Provides support for data formatting language commands
D. Translates procedural commands into non-procedural commands

Answer: A

QUESTION NO: 19

Consider the table for an employee database shown in the exhibit. What is the cardinality of the table?

Emp_ID	First_Name	Last_Name	SSN	Birth_Date
0001	Helen	Lee	001-01-6001	12-05-75
0002	James	Smith	002-12-7002	10-25-76
0003	Eliza	Perez	003-21-9003	02-15-80
0004	Samuel	Hayes	004-04-1004	11-07-71

Employee Relation

A. 6
B. 20
C. 4
D. 25

Answer: C

QUESTION NO: 20

What is a relational database domain?

A. A group of attributes
B. A set of permissible tuple values
C. A collection of related data items
D. A set of permissible attribute values