
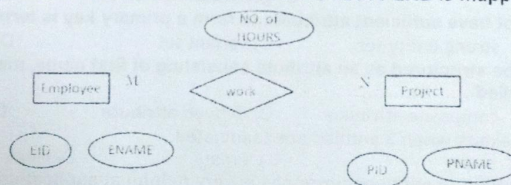


Tanta University Faculty of Commerce Total Grade: Max. 50 marks No. of pages: 3 pages	<div style="text-align: center;">  Final Exam </div>	Academic Year: 2021/2022 Date: 31/1/2022 Course Name: Database Level: 4 th year (BIS) Allowed Time: 120 min
Please, choose the correct answers and label them in your answer sheet (50 x 1 Marks)		
<ol style="list-style-type: none"> If an employee within an EMPLOYEE entity has a relationship with itself, that relationship is known as a Relationship. A) self B) recursive C) self-referring D) looping A weak entity type A) must have total participation in an identifying relationship B) does not have a key attribute(s) C) both (a) and (b) D) none of the above A many-to-many relationship from an ER diagram can be represented in the relational model by a A) a single attribute B) relation with two foreign keys C) primary key D) domain Which of the following do you create first when creating a database? A) Data dictionary B) Primary keys C) Relationships D) Relations In ANSC/SPARC, the deals with the physical storage of data. A) schema level B) conceptual level C) external level D) internal level In second normal form (2NF), A) all hidden dependencies are eliminated B) the possibility of insertion anomalies are eliminated C) tables have all non-key fields depend on the whole primary key D) tables have a composite key There are two functional dependencies with the same set of attributes on the left side of the arrow: $A \rightarrow BC$, $A \rightarrow B$. This can be combined as A) $B \rightarrow C$ B) $A \rightarrow BC$ C) $A \rightarrow B$ D) none of the mentioned Which of the following is a top-down approach in which the entity's higher level can be divided into two lower sub-entities? A) Specialization B) Aggregation C) Generalization D) Union A database schema can be written in A) TCL (Transaction Control Language) B) DML (Data Manipulation Language) C) DCL (Data Control Language) D) DDL (Data Definition Language) Which of the following data model is widely applied in many real world database applications? A) Hierarchical model B) Network model C) Flat file-based model D) Relational model An attribute A of datatype varchar(20) has the value "red". The attribute B of datatype char(20) has value "Appel". Here, attribute A has spaces and attribute B has spaces. A) 3, 20 B) 20, 20 C) 20, 5 D) 3, 5 Insert into employee (1002, 'Samy', 2500); A) table B) values C) relation D) field The union operation automatically unlike the select clause. A) adds tuples B) eliminates unique tuples C) adds common tuples D) eliminates duplicate The SQL statement to delete all rows in a table without deleting the table from the database is A) DELETE FROM table_name; B) DELETE TABLE table_name; C) DROP TABLE table_name; D) ALTER TABLE table_name; For each attribute of a relation, there is a set of permitted values, called the of that attribute. A) domain B) relation C) set D) schema For a , a subclass can be a subclass in more than one class/subclass relationship. A) specialization hierarchy B) specialization lattice C) generalization hierarchy D) generalization lattice An entity set that does not have sufficient attributes to form a primary key is termed a A) variable set B) strong entity set C) variant set D) weak entity set The attribute name could be structured as an attribute consisting of first name, middle initial, and last name. This type of attribute is called A) simple attribute B) composite attribute C) derived attribute D) multivalued attribute A relationship exists when 3 entities are associated. A) unary B) binary C) ternary D) weak Knowing the number of entity occurrences is very helpful at application software level. A) minimum B) maximum C) exact D) maximum and minimum is responsible for data resource management that plans, organizes, describes and controls data resources. A) Data Administrator (DA) B) Database Administrator (DBA) C) Database Designers D) End-Users 		

22. The collection of information stored in a database at a particular moment is called as
 A) schema B) data domain C) independent D) instance of the database
23. Data independence allows
 A) extensive modification of applications B) no data sharing between applications
 C) elimination of several application programs D) sharing the same database by several applications
24. By data integrity, we mean
 A) integrated data values B) maintaining consistent data values
 C) not leaking data values D) banning improper access to data
25. An attribute that can be broken down into smaller parts is called a(n) attribute.
 A) simple B) associative C) composite D) complex
26. All answers are correct, except
 A) The current state of a relationship type is the relationship set
 B) Relationship type identifies the relationship name and the participating entity types
 C) Relationship type identifies certain relationship constraints
 D) Relationship type is grouped by the same type of relationship instances.
27. In an E-R, Y is the dominant entity and X is a subordinate entity. Then which of the following is incorrect.
 A) Operationally, if X is deleted, so is Y.
 B) Operationally, if X is deleted, Y remains the same.
 C) Operationally, if Y is deleted, so is X.
 D) Existence is dependent on Y.
28. When an E-R diagram is mapped to tables, the representation is redundant for
 A) strong entity sets B) strong relationship sets C) weak relationship sets D) weak entity sets
29. A relationship is an association between
 A) databases B) objects C) fields D) entities
30. Making sure all are identified is a very important part of a database designer's job.
 A) cardinalities B) business rules C) relationships D) derived attributes
31. command can be used to modify a column in a table.
 A) alter B) update C) set D) create
32. SELECT name instructor_name, course_id FROM instructor, teaches WHERE instructor.ID= teaches.ID;
 Which keyword must be used here to rename the field name?
 A) From B) Join C) As D) Rename
33. SELECT dept_name, ID, avg(salary) FROM instructor GROUP BY dept_name;
 This statement is erroneous because
 A) Avg(salary) should not be selected B) Dept_name should not be used in group by clause
 C) Misplaced group by clause D) Group by clause is not valid in this query
34. The clause is used to combine rows from two or more tables based on a related column between them.
 A) MATCH B) UNION C) JOIN D) PATTERN
35. The aggregate functions must be written in the statement.
 A) CREATE B) SELECT C) UPDATE D) INSERT
36. In the on two relations R and S, the common attributes have the same names in R and S.
 A) Natural join B) Outer join C) Equijoin D) Full Outer join
37. In the on two relations R and S, a tuple is included in the result only if a matching tuple exists in the other relation.
 A) Full outer join B) Right outer join C) Left outer join D) Inner join
38. Which of the following possible relations will not hold if the above ERD is mapped into a relation model?



- A) Employee (EID, ENAME) B) EMP-PROJ (EID, PID, NO. of HOURS)
 C) Project (PID, PNAME) D) Employee (EID, PID, ENAME)
39. From the last figure, the degree of the relationship is
 A) unary B) binary C) ternary D) recursive

40. UPDATE instructor salary= salary * 1.05;
A) WHERE B) SET C) IN D) SELECT
41. To eliminate duplicate rows is used.
A) NODUPLICATE B) ELIMINATES C) DISTINCT D) None of them
42. CREATE TABLE employee (id INTEGER, name VARCHAR(20), salary NOT NULL);
INSERT INTO employee VALUES (1007, Ross,);
This insert statement is
A) true B) violate integrity constraints C) cause syntax error D) insert wrong values
43. Delete FROM R WHERE P>5; This command
A) deletes a particular tuple from the relation. B) clears all entries from the relation.
C) deletes the relation. D) All of them.
44. SELECT name FROM emp WHERE phone IS NULL;
This query will retrieve
A) tuples with null value. B) tuples with any value.
C) tuples with no null values. D) All of them.
45. In an employee table to include the attributes whose value always have some value which of the following constraint must be used?
A) Null B) Not Null C) Unique D) Distinct
46. The predicate in a where clause can involve Boolean operations such as and. The result of true and unknown is, false and unknown is, while unknown and unknown is
A) unknown, unknown, false B) true, false, unknown
C) true, unknown, unknown D) unknown, false, unknown
47. The primary key must be
A) Unique B) Not null C) Both Unique and Not null D) Either Unique or Not null
48. The sequence followed in designing a DBMS are
A) physical model -> conceptual model -> logical model B) logical model -> physical model -> conceptual model
C) conceptual model -> logical model -> physical model D) conceptual model -> physical model -> logical model
49. The metadata is created by the
A) DML compiler B) DML pre-processor
C) DDL interpreter D) Query interpreter
50. Data independence means
A) data is defined separately and not included in programs
B) programs are not dependent on the physical attributes of data
C) programs are not dependent on the logical attributes of data
D) both (b) and (c)

Good Luck.

Prof. Dr. Mohammed Elmaghrabi