Database Management Systems
UNIT-04_(MCQ)

1. The relational algebra is………………
   A. **a procedural query language.**
   B. theory that not uses algebraic structures
   C. is a non procedural query language.
   D. Both a&b

2. σ salary>90000 (instructor) is…………………
   A. **Select instructor whose salary is above 90000**
   B. Select instructor whose salary is less than 90000
   C. Delete instructor whose salary is above 90000
   D. Delete instructor whose salary is less than 90000

3. σ dept name = "Physics" ∧ salary >90000 (instructor)
   A. **Select instructor in physics dept whose salary is greater than 90000**
   B. Select instructor in physics dept whose salary is less than 90000
   C. Remove instructor in physics dept whose salary is greater than 90000
   D. Remove instructor in physics dept whose salary is less than 90000

4. Π ID, name, salary (instructor)
   A. Finds all the name in list
   B. Finds all the salary in the list
   C. Finds all the id in the list
   D. **Project operation list-id, name, salary**

5. Π course id (σ semester = "Fall" ∧ year=2009 (section))
   A. **Select all the courses taught in fall 2009**
   B. Remove all the courses taught in fall 2009
   C. Select the section in fall 2009
   D. None of the above

6. r-s is relational algebra meaning………..
   A. Set difference finds the tuple that are in one relation but are not in another
   B. s produces a relation containing those tuples in r but not in s.
   C. **Both a&b**
   D. None of the above

7. ⋈ mean for…………
   A. Right outer join
   B. **Left outer join**
   C. Right inner join
   D. Right outer join

8. account ← account – σ branch-name = "Perryridge" (account) is………..
   A. **Delete all count record in Perryridge branch**
   B. Insert all count record in Perryridge branch
   C. Update all count record in Perryridge branch
   D. None of the above

9. r ← r ∪ E is meant for…………

   A. **Used to insertion of a single tuple which is expressed by relational algebra E**
   B. Used to deletion of a single tuple which is expressed by relational algebra E
   C. Used to update of a single tuple which is expressed by relational algebra E
   D. Both a&b

10. Bad relational database design will result:
    A. Repetition of information
    B. Inability to represent certain information
    C. **Both a & b**
    D. None of the above

11. Consider relations schema is lending-schema=(branch-name, branch-city, assets, customer-name, loan number, amount) the redundancy in these is:
    A. **Branch-name, branch-city, assets**
    B. Customer-name, loan number, amount
    C. Branch-name, loan number, amount
    D. Branch-city, assets, amount

12. Functional dependency…….
    A. Avoid data redundancy
    B. Used to identify bad design
    C. Help to maintain quality of database
    D. **All of the above**

13. Normalization is a……….
    A. Method to organize a data to avoid data redundancy
    B. Method to avoid insertion/update/deletion anomaly
    C. **Both a&b**
    D. None of the above

14.

Emp-no	Emp-name	Salary	City
1	DANA	50000	LONDON
2	ANDREW	25000	TOKYO

In the above table ………. is functional dependent on …………..
   A. Emp-name, emp-no
   B. Salary, emp-no
   C. City, emp-no
   D. **All of the above**

15. Insert anomaly …………
   A. **This refers to the situation when it is impossible to insert certain types of data into the database.**
   B. The deletion of data leads to unintended loss of additional data, data that we had wished to preserve.
   C. This refers to the situation where updating the value of a column leads to database inconsistencies
   D. All of the above

16. Update anomaly is ………….
   A. **This refers to the situation where updating the value of a column leads to database inconsistencies**
   B. The deletion of data leads to unintended loss of additional data, data that we had wished to preserve.
   C. This refers to the situation when it is impossible to insert certain types of data into the database.
   D. All of the above

17. The condition for the first norm is……
   A. Contains only atomic values
   B. There are no repeating groups
   C. **Both a&b**
   D. None of the above

18. Condition for second norm form :
   A. It must be in first norm form
   B. All non key attributes are fully functional dependent on primary key
   C. **Both a&b**

D. None of the above

19. The condition for BOYCE-CODD Normal for every dependency x->y:
    A. Y is subset of x
    B. X is super key from schema
    C. **Both a & b**
    D. None of the above