ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution

FOR GOD AND COUNTRY

WORKSHEET – 29

Topic : Relational Algebra

Subject: COMPUTER SCIENCE **Class - 12** **F.M:15**

Chapter: Database Management System **Date: 13/07/2020**

Choose the correct answer for each question: 15x1=15

1. Which of the following is used to denote the selection operation in relational algebra?
   a) Pi (Greek)
   b) Sigma (Greek)
   c) Lambda (Greek)
   d) Omega (Greek)
2. If T1 and T2 are two relations, then which of the following is not a valid relational algebra expression?
   a) T1 ∪ T2
   b) T1 ∩ T2
   c) T1 - T2
   d) None of these
3. Which of the following is used to denote the projection operation in relational algebra?
   a) Pi (Greek)
   b) Sigma (Greek)
   c) Lambda (Greek)
   d) Omega (Greek)
4. Which of the following is not valid unary operation in the relational algebra?
   a) select
   b) min
   c) rename
   d) project
5. If E1 and E2 are relational algebra expressions, then which of the following is NOT a relational algebra expression?
   a) E1 ∪ E2
   b) E1 / E2
   c) E1 - E2
   d) E1× E2
6. The operation of a relation X, produces Y, such that Y contains only selected attributes of X. Such an operation is :
   a) Projection
   b) Intersection
   c) Union
   d) Difference

7. Which of the following is not valid binary operation in the relational algebra?
   a) union
   b) select
   c) set-difference
   d) Cartesian product
8. Which of the following is a fundamental operation in relational algebra?
   a) Set intersection
   b) Natural join
   c) Assignment
   d) None of the mentioned
9. The intersect operation:
   a) Automatically eliminates duplicates
   b) Automatically eliminates duplicates, if we provide all clause with intersect
   c) Never eliminates duplicates
   d) None of these
10. Relational Algebra is a _____ query language that takes two relations as input and produces another relation as an output of the query.
    a) Relational
    b) Structural
    c) Procedural
    d) Fundamental
11. In relational algebra, the select, project, and rename operations are:
    a) Dimensional operations
    b) Multi-dimensional operations
    c) Binary operations
    d) Unary operations
12. The assignment operator is denoted by
    a) ->
    b) <-
    c) =
    d) ==
13. Which of the following is used to denote the rename operation in relational algebra?
    a) Pi (Greek)
    b) Sigma (Greek)
    c) Lambda (Greek)
    d) rho (Greek)
14. For select operation the _____ appear in the subscript and the _____ argument appears in the parenthesis after the sigma.
    a) Predicates, relation
    b) Relation, Predicates
    c) Operation, Predicates
    d) Relation, Operation

15. The _____ operation, denoted by "-", allows us to find tuples that are in one relation but are not in another.
    a) union
    b) set-difference
    c) intersection
    d) none of these

Phalguni Pramanik