**Rogationist College**

**SCORE**

(St. Anthony’s Boys Village)

km.52 Emilio Aguinaldo Highway Lalaan II, Silang, Cavite

**DIRECTORATE FOR ACADEMIC AFFAIRS**

**COLLEGE DEPARTMENT**

COMPUTER STUDIES CLUSTER

**ITP55 – Advanced Database Systems**

**Midterm Examination**

**Name (Surname, Firstname, Middle Initial)**

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**Student Number Course and Section Date (dd-mm-yyyy)**

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**MULTIPLE CHOICE.**

On a separate answer sheet, shade the box that corresponds to the letter of the BEST answer.

ANY FORM OF ERASURES NULLIFY YOUR ANSWER.

1. Given these two tables, which query generates a listing showing student names and the department office location where you could reach each student?

1. SELECT Students.first\_name, Students.last\_name, Departments.office\_location FROM Students, Departments;
2. SELECT Students.first\_name, Students.last\_name, Departments.office\_location FROM Students JOIN Departments ON Students.department = Departments.department;
3. SELECT Students.first\_name, Students.last\_name, Departments.office\_location FROM Students JOIN Departments;
4. SELECT Students.first\_name, Students.last\_name, Departments.office\_location FROM Students ON Students.department = Departments.department;

2. You need to write a query that returns all Employees that have a LastName starting with the letter A. Which WHERE clause should you use to fill in the blank in this query?

1. WHERE LastName = A\*
2. WHERE LastName = LIKE '%A%'
3. WHERE LastName LIKE 'A%'
4. WHERE LastName IN ('A\*')

3. Which is the best approach to update the last name of the student Donette Figgins to Smith

1. UPDATE Students SET last\_name = 'Smith' WHERE email = 'dfiggins@rouxacademy.com';
2. UPDATE Students SET last\_name = 'Figgins' WHERE email = 'dfiggins@rouxacademy.com';
3. UPDATE Students SET last\_name = 'Figgins' WHERE last\_name = 'Smith' AND first-name = 'Donette';
4. UPDATE Students SET last\_name = 'Smith' WHERE last\_name = 'Figgins' AND first-name = 'Donette';

4. How many rows does the result of a CROSS JOIN between a table with 4 rows, and one with 5 rows give?

1. 1024
2. 20
3. 0
4. 9

5. When no join type between multiple tables in a query's FROM clause is specified, what type of join is assumed?

1. INNER
2. RIGHT
3. LEFT
4. FULL

6. What does a RIGHT JOIN ensure?

1. that only records from the rightmost table will be displayed
2. that no records from the rightmost table are displayed if the records dont have corresponding records in the left table
3. that records from the rightmost table will be displayed only if the records have a corresponding value in the leftmost table
4. that all records from the rightmost table are represented in the result, even if there are no corresponding records in the left table

7. What role does "inventory" play?

select bookid, boooktitle, bookauthor,quantityonhand from inventory.books;

1. you only want to see results from books currently in inventory
2. it instructs the query engine to find the books table in the inventory schema
3. it instructs the query engine to find the books table in the inventory database
4. it instructs the query engine to join the books table to the inventory schema

8. What is the result of an INNER JOIN between table1 and table2?

1. only records that have corresponding entries in table1 and table2 are displayed.
2. no records from table1 are ever displayed.
3. all records from table1 are displayed, regardless of whether the records have a corresponding row in table2
4. only records that have no corresponding records in table1 or table2 are displayed.

9. To combine the results of two or more SELECT statements, removing duplicates, which keyword can you use?

1. INSERT
2. SELECT
3. MERGE
4. UNION

10. Is there an error with this query? If so, which statement best describes the problem?

SELECT OrderID, SUM(LineTotal) AS SubTotal

FROM Sales

WHERE SUM(LineTotal) > 1000

GROUP BY OrderID

ORDER BY OrderID;

1. Yes, a WHERE clause cannot be used with an aggregate function.
2. Yes, you cannot GROUP BY and ORDER BY the same field.
3. No, there is nothing wrong with this query.
4. Yes, the WHERE clause should use the SubTotal alias.

11. Which is the best approach to update the last name and email address of a student with ID 56295?

1. UPDATE Students SET last\_name='Smith', email = 'dsmith@rouxacademy.com' WHERE id='56295';
2. UPDATE Students SET last\_name='Smith', email = 'dsmith@rouxacademy.com' WHERE id=56295;
3. UPDATE Students SET last\_name='Smith' AND email = 'dsmith@rouxacademy.com' WHERE id=56295;
4. UPDATE Students SET last\_name='Smith' AND email = 'dsmith@rouxacademy.com' WHERE id='56295';

12. When you have a subquery inside of the main query, which query is executed first?

1. the subquery is never executed. Only the main query is executed.
2. they are executed at the same time
3. the main query
4. the subquery

13. Which of the following is not included in DML (Data Manipulation Language)?

1. UPDATE
2. CREATE
3. INSERT
4. DELETE

14. SQL Views are also known as

1. simple tables
2. virtual tables
3. complex tables
4. actual Tables

15. Which operator is used to compare a value to a specified list of values?

1. ANY
2. BETWEEN
3. ALL
4. IN

16. This join operation that allows you to specify an explicit join clause.

1. left outer join
2. right outer join
3. inner join
4. cross join

17. This join operation preserves the unmatched rows from the first (left) table, joining them with a NULL row in the shape of the second (right) table.

1. left outer join
2. right outer join
3. natural join
4. cross join

18. What join operation that produces the Cartesian product of two tables?

1. left outer join
2. right outer join
3. natural join
4. cross join

19. This constraint prohibits the insertion of a null value for the attribute

1. unique
2. check
3. not null
4. referential integrity

20. What constraint can be used to specify a wide range of rules for the contents of a table?

1. unique
2. check
3. not null
4. referential integrity

21. This constraint defines a set of columns that uniquely identify rows in a table only if all the key values are not NULL

1. unique
2. check
3. not null
4. referential integrity

22. This SQL data type contains year, month, and day of the month.

1. date
2. time
3. varchar2
4. default

23. This keyword allows an attribute to set default value.

1. clob
2. blob
3. default
4. none of the above

24. This refers to a data structure that allows the database system to find those tuples in the relation that have a specified value for that attribute efficiently, without scanning through all the tuples of the relation

1. clob
2. blob
3. schema
4. index

25. Which of the following is not a privilege?

1. read data
2. insert new data
3. delete data
4. none of the above

26. This keyword is used in a statement to confer authorization.

1. role
2. privilege
3. grant
4. revoke

27. This refers to a set or group of privileges that can be granted to users or another role.

1. role
2. privilege
3. grant
4. revoke

28. This standard defines an application program interface (API) that Java programs can use to connect to database servers.

1. ODBC
2. JDBC
3. dynamic SQL
4. embedded SQL

29. This allows the program to construct an SQL query as a character string at runtime, submit the query, and then retrieve the result into program variables a tuple at a time.

1. ODBC
2. JDBC
3. dynamic SQL
4. embedded SQL

30. This is a C-based API that is platform-independent and can be used on Windows, macOS, and Linux systems.

1. ODBC
2. JDBC
3. dynamic SQL
4. embedded SQL

31. This is a statement that the system executes automatically as a side effect of a modification to the database.

1. prepared statement
2. triggers
3. functions
4. procedures

32. This term refers to a pre-compiled SQL statement.

1. prepared statement
2. triggers
3. functions
4. procedures

33. This design phase characterize fully the data needs of the prospective database users.

1. initial
2. second
3. final
4. none of the above

34. This design phase refers to moving from an abstract data model to the implementation of the database

1. initial
2. second
3. final
4. none of the above

35. This design approach models an enterprise as a collection of entities and relationships

1. normalization
2. ORM
3. data flow diagram
4. none of the above

36. In the entity relationship data model, what symbol defines an entity?

1. rectangle
2. line
3. crow’s foot
4. none of the above

37. Cardinality is represented by which symbol in an entity relationship data model?

1. rectangle
2. line
3. crow’s foot
4. none of the above

38. Lines in entity relationship data model represents \_\_\_\_\_\_\_\_\_\_\_\_\_.

1. primary key
2. foreign key
3. relationship
4. cardinality

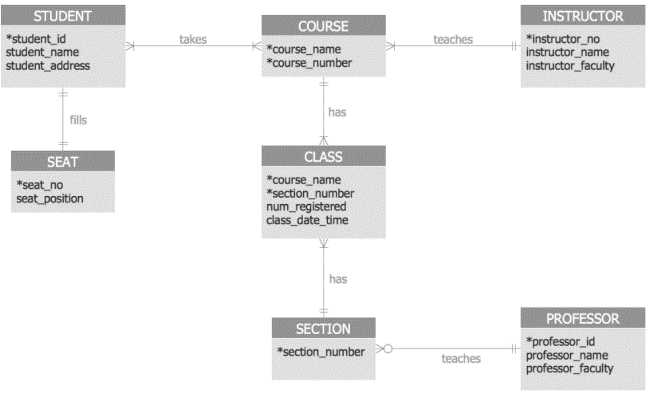
39. Which of the following is not a cardinality in entity relationship data model?

1. one
2. zero or many
3. many only
4. zero or one

40. Which relationship best describes the relation between a student and his student number?

1. one to one
2. one to many
3. many to many
4. zero to many

For items 41 – 50, refer to the figure below. Note that \* are candidate keys.



41. What best describes student and set relationship?

1. one student fills one seat
2. one student fills one or many seats
3. one student fills one and only one seat
4. one student fills many seats

42. How many section/s can a professor teach?

1. only one
2. one
3. many
4. zero or many

43. What is the primary key in the student entity?

1. student\_id
2. student\_name
3. student\_address
4. none of the above

44. What is the minimum number of class that a course can have?

1. zero
2. one
3. many
4. none of the above

45. Which of the following is not an entity?

1. student
2. teaches
3. seat
4. instructor

46. Which of the following is not a relationship?

1. seat
2. fills
3. teaches
4. takes

47. Suppose a classroom entity is to be created, which entity can this be related?

1. student
2. professor
3. seat
4. class

48. In the classroom entity, what can be used as primary key?

1. room\_id
2. room\_number
3. capacity
4. none of the above

49. In the classroom entity, what should be its relationship with the course?

1. one to one
2. one to many
3. zero to one
4. none of the above

50. What is the best label for the relationship of class to classroom entities?

1. uses
2. has
3. fills
4. none of the above