

Database Technologies (DBT)

Date:

Question generated by: Ashok Pate

Topic / Module: DBT (Session 1)

Q. No.1

A relational database consists of a collection of _____ .

Answer Choices

- A. Tables
- B. Fields
- C. Records
- D. Keys

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Which term is used to refer to a row?

Answer Choices

- A. Attribute
- B. Tuple
- C. Field
- D. Columns

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 2)

Q. No.1

In E-R Diagram derived attribute are represented by?

Answer Choices

- A. Ellipse
- B. Dashed ellipse
- C. Rectangle
- D. Triangle

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

What is TRUE about Strong Entity Set?

Answer Choices

- A. It is represented by a rectangle symbol.
- B. Strong entity set always has a primary key attribute.
- C. Both A and B are true
- D. None of the above.

Correct Answer: C

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 3)

Q. No.1

A relation is in _____ form, if there is no transitive dependency for non-prime attributes as well as it is in second normal form.

Answer Choices

- A. first normal
- B. second normal
- C. third normal
- D. zero normal

Correct Answer: C

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

If $\text{Movie_ID} \rightarrow \text{Listing_ID}$ and $\text{Listing_ID} \rightarrow \text{Listing_Type}$ are two FDs then _____ is called transitive dependency.

Answer Choices

- A. $\text{Movie_ID} \rightarrow \text{Listing_Type}$
- B. $\text{Listing_ID} \rightarrow \text{Listing_Type}$
- C. $\text{Movie_ID} \rightarrow \text{Listing_ID}$
- D. There is no Transitive dependency.

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 4)

Q. No.1

Which among the following are the correct representation of “float (4, 2)”?

Answer Choices

- A. 24.33

- B. 124.4
- C. 1234.789
- D. Both A and B

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Analyse the following statement.

CREATE TABLE student (id int, sname varchar(20), mobile varchar(10));

What command a database programmer will issue to add PRIMARY KEY constraint on ID column of student table.

Answer Choices

- A. ALTER table STUDENT modify ID int {PRIMARY KEY};
- B. ALTER table STUDENT modify ID int PRIMARY KEY;
- C. ALTER table STUDENT modify ID int [PRIMARY KEY];
- D. ALTER table STUDENT modify (ID int PRIMARY KEY);

Correct Answer: B

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 3

What is the problem in following SELECT statement?

Statement is: SELECT ename E FROM emp WHERE e ='smith';

Answer Choices

- A. The statement is invalid because alias name 'e' in WHERE clause is not given in uppercase.

- B. The statement is invalid because alias name cannot be given to a column name.
- C. The statement is invalid because alias name cannot be used in WHERE clause.
- D. The above SELECT statement is valid, and will execute properly

Correct Answer: C

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 4

The following are clauses of the SELECT statement:

1. WHERE
2. FROM
3. ORDER BY

In which order should they appear in a query?

Answer Choices

- A. 1, 3, 2
- B. 2, 1, 3
- C. 2, 3, 1
- D. The order of these clauses does not matter.

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 5

Which of the following is correct to count the total number of employees for every deptno?

Note: Output should display only deptno and its count.

Answer Choices

- A. Select deptno, count(*) from Emp Group By deptno;
- B. Select empno, deptno, count(*) from Emp Group By deptno;
- C. Select deptno, count(*) from Emp Order By deptno;
- D. Select empno, count(*) from Emp Order By deptno;

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No.6

Examine the following statement.

```
mysql> SELECT IF(10 <=> 10, 1, 2);
```

What will be the output?

Answer Choices

- A. 1
- B. 2
- C. Null
- D. The statement is invalid.

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 5)

Q. No.1

Which of the following statement is correct, to display the NAME and his JOB whose employee name is "SMITH".

Answer Choices

- A. SELECT (ENAME, JOB) FROM EMP where ename='smith';

- B. `SELECT (ENAME, JOB) FROM EMP where ename='SMITH';`
- C. `SELECT (SELECT ENAME, JOB from emp where ename="SMITH") from dual;`
- D. None of the above statements are valid.

Correct Answer: D

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Analyse the following statement.

`CREATE TABLE TEMP (COL1 int AUTO_INCREMENT, COL2 int) engine=InnoDB;`

Answer Choices

- A. This statement has no error and will create the table TEMP.
- B. This statement has an error because `AUTO_INCREMENT` keyword cannot be given with `INT` data type.
- C. This statement has an error because to apply `AUTO_INCREMENT`, the column must be an `INDEX KEY`.
- D. None of the above.

Correct Answer: C

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No.3

Analyze the following statement, what will be the result?

`SELECT 1 UNION ALL SELECT 1;`

Answer Choices

- A. This statement will display value 1 for one time.
- B. This statement will display value 1 for two times.

C. This statement has an error.

D. UNION keyword, must be written in lower case to display the output.

Correct Answer: B

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 6)

Q. No.1

How can we create a new table Employee with same structure of EMP table without rows?

Answer Choices

A. CREATE TABLE Employee AS SELECT * FROM EMP;

B. CREATE TABLE Employee AS SELECT * FROM EMP WHERE 1=2;

C. CREATE TABLE Employee AS SELECT * FROM EMP WHERE FALSE;

D. Either B or C

Correct Answer: D

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Examine the following statement.

SELECT 47 WHERE EXISTS (SELECT NULL);

What will be the output?

Answer Choices

A. 0

B. NULL

C. 47

D. UNDEFINED

Correct Answer: C

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 7)

Q. No.1

A _____ index does not allow any duplicate values to be inserted into the table.

Answer Choices

- A. Implicit
- B. Unique
- C. single-column
- D. Composite

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

What is TRUE about a TEMPORARY table?

Answer Choices

- A. A TEMPORARY table is visible only within the current session.
- B. A TEMPORARY table is dropped automatically when the session is closed.
- C. Both A and B are TRUE.
- D. None of the above.

Correct Answer: C

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No.3

ACID property means?

Answer Choices

- A. Atomicity, Consistency, Isolation, Durability
- B. Actual, Consistency, Isolation, Durability
- C. Atomicity, Cardinal, Isolation, Durability
- D. Atomicity, Consistency, Isolation, Duration

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 8)

Q. No.1

Analyse the following stored procedure.

```
DROP PROCEDURE IF EXISTS pro1;
```

```
delimiter $
```

```
CREATE PROCEDURE pro1(x int)
```

```
beginLabel: begin
```

```
    set x:=1001;
```

```
    select x;
```

```
end beginLabel$
```

```
delimiter ;
```

```
mysql> CALL pro1(10);
```

What will be the output?

Answer Choices

- A. 10
- B. 1001
- C. Error, because x1 is not defined.
- D. Error, because invalid label_name.

Correct Answer: B

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

What is the proper syntax to create stored procedure with IN parameter mode?

Answer Choices

- A. CREATE PROCEDURE pro1(IN x int)
- B. CREATE PROCEDURE pro1(x IN int)
- C. CREATE PROCEDURE pro1(x int IN)
- D. Both A and B

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No.3

Analyse the following stored procedure.

Note: There are few rows for deptno 10,20,30.

```
DROP PROCEDURE IF EXISTS pro1;
```

```
delimiter $$
```

```
CREATE PROCEDURE pro1(x INT)
```

```
begin
```

```
IF NOT EXISTS(SELECT * FROM emp WHERE deptno=x) THEN
```

```
        SELECT "Employee not found";
    END IF;
end$$
delimiter ;
mysql> CALL pro1(12);
What will be the output?
```

Answer Choices

- A. Will display "Employee not found" message.
- B. Will display all Employee from deptno 12.
- C. error, invalid IF condition.
- D. error, invalid procedure name.

Correct Answer: A

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 9)

Q. No.1

Analyse the following stored procedure.

```
DROP PROCEDURE IF EXISTS pro1;
delimiter $$
CREATE PROCEDURE pro1()
begin
    IF (SELECT 1) THEN
        SELECT "Hello";
    ELSE
        SELECT "World";
    END IF;
end$$
```

delimiter ;

mysql> CALL pro1();

What will be the output?

Answer Choices

- A. Hello
- B. World
- C. Invalid syntax of IF flow-control statement.
- D. None of the above.

Correct Answer: A

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Each IF must be terminated by its own _____ followed by a semicolon.

Answer Choices

- A. END IF
- B. ENDIF
- C. END
- D. FI

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No.3

Examine the following stored procedure.

```
DROP PROCEDURE IF EXISTS pro1;
delimiter $$
CREATE PROCEDURE pro1(x INT)
BEGIN
    label1: LOOP
        SET x = x + 1;
        IF x < 11 THEN
            ITERATE label1;
        END IF;
        LEAVE label1;
    END LOOP label1;
    SET @x = x;
END$$
delimiter ;
```

mysql> CALL pro1(7);

mysql> SELECT @x;

What will be the value @x variable?

Answer Choices

- A. 10
- B. 11
- C. 12
- D. 7

Correct Answer: B

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 10)

Q. No.1

Which single-row function could you use to return a specific portion of a character string?

Answer Choices

- A. INSTR
- B. LPAD
- C. LEAST
- D. INSIDE

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Which of the following MySQL function is used to returns the numeric value (ascii value) of the leftmost character of the string str.

Answer Choices

- A. ASC(str)
- B. ASCII(str)
- C. ANSI(str)
- D. TO_NUMBER(str)

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 11)

Q. No.1

A database programmer wants to create an explicit cursor. Which of the following is correct syntax to create an explicit cursor?

Answer Choices

- A. declare cursor c1 for select * from table_name;
- B. declare c1 cursor for select * from table_name;
- C. declare c1 cursor as select * from table_name;
- D. declare cursor c1 as select * from table_name;

Correct Answer: B

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

A database developer wants to open an explicit cursor. Which of the following is correct syntax to open an explicit cursor?

Answer Choices

- A. SELECT cursor_name
- B. OPEN cursor_name
- C. OPENUP cursor_name
- D. UPDATE cursor_name

Correct Answer: B

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Topic / Module: DBT (Session 12)

Q. No.1

In an INSERT trigger, _____ can be used.

Answer Choices

- A. :NEW.col_name
- B. :OLD.col_name
- C. Both :NEW.col_name and :OLD.col_name can be used.
- D. None of the above is correct.

Correct Answer: D

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Examine the following TRIGGER code and find on which line number the error will occur.

Note: CREATE TABLE account(id INT, amount INT);

Examine the following TRIGGER and find because of which line number the error will occur.

```
Line 1. DROP TRIGGER IF EXISTS t1;  
Line 2. delimiter $$  
Line 3. CREATE TRIGGER t1 BEFORE INSERT ON account  
Line 4. BEGIN  
Line 5. IF NEW.amount < 0 THEN  
Line 6. SET NEW.amount = 0;  
Line 7. ELSEIF NEW.amount > 100 THEN  
Line 8. SET NEW.amount = 100;  
Line 9. END IF;  
Line 10. END$$  
Line 11. delimiter ;
```

Answer Choices

- A. Line 3

- B. Line 4
- C. Line 9
- D. Line 10

Correct Answer: A

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book)

Topic / Module: DBT (Session 13)

Q. No.1

Examine the following.

```
CREATE TABLE t (s1 INT, PRIMARY KEY (s1));
```

```
DROP PROCEDURE IF EXISTS pro1;
```

```
delimiter $$
```

```
CREATE PROCEDURE pro1()
```

```
BEGIN
```

```
    DECLARE CONTINUE HANDLER FOR SQLSTATE '23000' SET @x2 = 1;
```

```
    SET @x = 1;
```

```
    INSERT INTO t VALUES (1);
```

```
    SET @x = 2;
```

```
    INSERT INTO t VALUES (1);
```

```
    SET @x = 3;
```

```
END$$
```

```
delimiter ;
```

```
mysql> CALL pro1()
```

```
mysql> SELECT @x;
```

What will be the value @x variable?

Answer Choices

- A. 1
- B. 2
- C. 3
- D. NULL

Correct Answer: C

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

Examine the following.

```
CREATE TABLE t (s1 INT, PRIMARY KEY (s1));
```

```
DROP PROCEDURE IF EXISTS pro1;
```

```
delimiter $$
```

```
CREATE PROCEDURE pro1()
```

```
BEGIN
```

```
    DECLARE EXIT HANDLER FOR SQLSTATE '23000' SET @x = -1;
```

```
    SET @x = 1;
```

```
    INSERT INTO t VALUES (1);
```

```
    SET @x = 2;
```

```
    INSERT INTO t VALUES (1);
```

```
    SET @x = 3;
```

```
END$$
```

```
delimiter ;
```

```
mysql> CALL pro1()
```

```
mysql> SELECT @x;
```

What will be the value @x variable?

Answer Choices

- A. 1
- B. 2
- C. 3
- D. -1

Correct Answer: D

Difficulty Level: Difficult

Reference: (Name of books)

(If question taken from book) (Mention name of the book)

Topic / Module: DBT (Session 14)

Q. No.1

Point out the correct statement.

Answer Choices

- A. MongoDB is classified as a NoSQL database
- B. MongoDB favours XML format more than JSON
- C. MongoDB is column-oriented database store
- D. All of the mentioned

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

The field name _____ is reserved for use as a primary key in MongoDB.

Answer Choices

- A. _id

- B. ID
- C. identity
- D. None of the above.

Correct Answer: A

Difficulty Level: Easy

Reference: (Name of books)

(If question taken from book) (Mention name of the book)

Topic / Module: DBT (Session 15 & 16)

Q. No.1

Which of the following is equivalent to this?

SELECT first_name, designation, salary FROM employees WHERE
designation="manager";

Assume that there are four fields (first_name, designation, salary, date_of_join).

Answer Choices

- A. db.employee.find({"designation": "manager"},{_id : 0, "date_of_join" : 0})
- B. db.employee.find({"designation: manager"},{"date_of_join" : 0})
- C. db.employee.find({"designation: manager"},{"date_of_join" : 1})
- D. None of the above.

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 2

What is equivalent MongoDB query for the following SQL statement.

SELECT * FROM emp WHERE deptno = 30 ORDER BY job DESC;

Answer Choices

- A. db.emp.find({deptno: 30 }).sort({ job: -1 })

- B. `db.emp.find({deptno= 30 }).sort({ job: 1 })`
- C. `db.emp.find({deptno: 30 }).orderby({ job: -1 })`
- D. An error in statement.

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book)

Q. No.3

What is equivalent MongoDB query for the following SQL statement.

`DROP TABLE people;`

Answer Choices

- A. `db.people.drop()`
- B. `db.people.remove()`
- C. `db.drop.people()`
- D. an error in statement.

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book, author, ISBN)

Q. No. 4

What is equivalent MongoDB query for the following SQL statement.

`ALTER TABLE employee DROP COLUMN join_date;`

Answer Choices

- A. `db.employee.updateMany({ }, { $unset: { "date_of_join": 0 } })`
- B. `db.employee.updateMany({ }, { $unset: { "date_of_join": Nil } })`
- C. `db.employee.updateMany({ }, { $remove: "date_of_join" })`
- D. `db.employee.updateMany({ }, { $rem: "date_of_join" })`

Correct Answer: A

Difficulty Level: Intermediate

Reference: (Name of books)

(If question taken from book) (Mention name of the book)

Total Number of Questions Generated: 40

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