Section 1 : Constraints

You should be able to add constraint while creating table as well as should be able to add constraint using alter table command)

Important constraints -

Primary Key
Foreign Key
NOT null
Amount should be greater than 0
Gender 'M' or 'F'
City should be either jalgaon, jalna, nagpur (in short, column should have 1 value out of these 3)
eg. check (city in ('jalgaon','jalna','nagpur'));

example of adding constraint on existing column

1. ALTER TABLE Employee
ADD CONSTRAINT city_default
DEFAULT 'Jalgaon' FOR City;

2. ALTER TABLE Products
ADD CONSTRAINT positive_price CHECK(unit_price > 0);

Example of adding column with constraint

Alter Table Employee
Add gender varchar(1) check (gender in ('M','F'));

To drop constraint on existing table

ALTER TABLE table_name
DROP CONSTRAINT constraint_name;

Section 2 : Add column

eg.
ALTER TABLE YourTableName
ADD NewColumnName DataType Constraint_if_any;

ALTER TABLE student
ADD City VARCHAR (255) NOT NULL;

Section 3 : Update Column

Update Employee set salary=20000 where emp_id=1;

Section 4 : Destroy table - Drop Tablename

Section 5 : Truncate table - Truncate Tablename

Section 6 : Select queries

1. Between query
eg. SELECT * FROM Employee WHERE Salary BETWEEN 15000 AND 30000;

2.
Date operations (Study mainly, month, year, dateadd functions)

Example:

2.1 Select all employees joinged in the month of March 2023

SELECT * FROM Employee] where month(joiningDate) = 3 and year(joiningdate) = 2023;

2.2
Update expirydate , set 1 year more than joiningdate . You can add months and days as well.

Update Employee SET expiryDate = dateadd(year,1,joiningDate)

3. Order by
4. ALL average function queries
5. String function to study

5.1 Concat function example eg. select CONCAT(name, ' ', address) from Employee

just for information the other way to do this is

SELECT name + ' ' + address from employee

5.2 PATINDEX function

eg. select record if email has gmail account

select * from Employee where PATINDEX('%gmail%', Email) > 0;

6. Prepare where clause with "Or" , "And", String pattersn like s%, %s,%s%S etc

7. **Prapare to Create View, Insert in view , Update view.**

Please note view can be created with simple select * from employee query as well. Do not think that view needs multiple table only..

Basically view is virtual table which can be created using any select query to single or muliple table

8. **Join queries**

Thinsgs to remember:

1. In some assigments, fields and type of field in the table are specified, in some assignemnt, you have to decide which columns to take and give data type of. You need to read the query correctly to decide which fields will be needed and which records we should put in it

remember
Following data types stroed in range. We don't need to specify size#
int
smallint
bigint
real/float
date

Following data needs size to be specified
varchar(250)
Char(1)

2. Always make sure, you make your own database
3. Always make sure proper database is selected on the left side top from database list
4. Make sure that either you keep selected your database or use following statement

USE [your_database_name]

4. If you have error – object not sound then check for database and table
5. If field no found then check for field name error

6. While creating table

1 If by mistake you create in master database, don't be panic since you must be having query with you, so
- select proper database and create table again
2. If you think some field is not created properly or you forgot to create constraint at first place then simply

Drop table and again create table
3. If you create table and inserted database as well n then you feel you should have made the column with other name or size then either make changes with alter table or simply drop database and create new and insert the data again as well

7. Please do not put space in tablename or field names . In case you put then use [] while referring them.

8. Please save all queries in notepad, so that in case something goes wrong you can still create the table or insert rows etc

9. Check for syntax error

10. Check for data types n size while inserting new records

11. Do not use 'Identity' keyword if you are not comfortable using it.

12. While creating table, even if you are not able to apply constraints then also create table as queries will need table.
So secure marks of creating table and running queries.

13. Date type is important to study