Assignment 2

Set 1:

Q1: it is query’s output

Q2: union removes duplicates while union all does not.

Q3: except and intersect

Q4: union combines data in new rows while join combines data into new columns

Q5: inner join shows only matching rows from both tables while full shows all rows from both tables

Q6: outer contains left, right and full join

Q7: shows cartesian product from 2 joined tables

Q8: joins table to itself by left or inner join

Q9: having is used to pick data from groups while where is used for regular records with no groupings

Q10: yes, group by has 2 or more columns

Set 2:

select count(productid) from production.product

Q2:

select count(productid)"total" from production.product

where ProductSubcategoryID is not null

Q3:

select ProductSubcategoryID, count(productsubcategoryid) as

CountedProducts from production.product

where productsubcategoryid is not null

group by productsubcategoryid

Q4:

select count(productid) from production.product where

ProductSubcategoryID is null

Q5:

Select \* from production.ProductInventory

Q6:

Select ProductID, sum(quantity) as TheSum from Production.ProductInventory

where LocationID = 40

group by ProductID

having sum(quantity) < 100

Q7:

Select Shelf, ProductID, sum(quantity) as TheSum from Production.ProductInventory

where LocationID = 40

group by ProductID, shelf

having sum(quantity) < 100

Q8:

Select avg(quantity) as theavg

from Production.ProductInventory

Where LocationID = 10

Q9:

Select ProductID, Shelf, avg(quantity) as TheAvg

from Production.ProductInventory

group by rollup (Shelf, ProductID)

Q10:

Select ProductID, Shelf, avg(quantity) as TheAvg

From Production.ProductInventory

Where LocationID = 10 AND Shelf <> 'N/A'

Group by rollup (Shelf, ProductID)

Order by Shelf

Q11:

Select Color,Class,count(\*) as TheCount, avg(ListPrice) as AvgPrice

From Production.Product

Where Class is not null and Color is not null

Group by grouping sets ((Color), (Class))

Q12:

select distinct c.Name as Country, s.Name as Province

from Person.StateProvince s

inner join Person.CountryRegion c

on s.CountryRegionCode = c.CountryRegionCode

Q13:

select distinct c.Name as Country, s.Name as Province

from Person.StateProvince s

inner join Person.CountryRegion c

on s.CountryRegionCode = c.CountryRegionCode

where c.Name = 'Germany' or c.Name = 'Canada'

Q14:

select distinct p.ProductName

from Products p inner join [Order Details] o

on p.ProductID = o.ProductID

inner join Orders r

on r.OrderID = o.OrderID

where r.OrderDate between '1996-11-11' and '2021-11-11'

Q15:

select top 5 ShipPostalCode from Orders

group by ShipPostalCode

order by count(ShipPostalCode) desc

Q16:

select top 5 ShipPostalCode from Orders

where OrderDate between '1996-11-11' and '2021-11-11'

group by ShipPostalCode

order by count(ShipPostalCode) desc

Q17:

select City, count(ContactName) as 'Number customer for city'

from Customers

group by City

Q18:

select City, count(ContactName) as 'Number of customer for city'

from Customers

group by City

having count(ContactName) > 10

Q19:

select distinct c.ContactName from Orders o inner join Customers c

on o.CustomerID = c.CustomerID

where OrderDate between '1998-01-01' and '2021-11-11'

Q20:

select CustomerID, OrderDate from

(select distinct CustomerID, OrderDate ,dense\_rank() over (partition by CustomerID order

by orderDate desc) rnk from Orders) dt

where dt.rnk = 1

Q21:

select c.ContactName, count(c.ContactName)

from Orders o inner join Customers c

on o.CustomerID = c.CustomerID

group by c.ContactName

order by count(c.ContactName) desc

Q22:

select c.ContactName, sum(r.Quantity)

from Orders o inner join Customers c

on o.CustomerID = c.CustomerID

inner join [Order Details] r

on r.OrderID = o.OrderID

group by c.ContactName

having sum(r.Quantity) > 100

order by sum(r.Quantity) desc

Q23:

select u.CompanyName, s.CompanyName from Shippers s

cross join Suppliers u

Q24:

select distinct r.OrderDate, p.ProductName

from Products p inner join [Order Details] o

on p.ProductID = o.ProductID

inner join Orders r

on r.OrderID = o.OrderID

Q25:

select \* from Employees e inner join Employees m

on e.Title = m.Title

Q26:

select e.EmployeeID, e.LastName, e.FirstName, e.Title from Employees e inner join

Employees m

on e.EmployeeID = m.ReportsTo

where e.Title like '%manager%'

group by e.EmployeeID, e.LastName, e.FirstName, e.Title

having count(m.ReportsTo) > 2

Q27:

select city, ContactName, 'Customer' as Type from Customers

union

select city, ContactName, 'Supplier' as Type from Suppliers

Q28:

Select \* from F1 inner join F2 on F1.T1 = F2.T2

F1.T1 F2.T2   
2 2   
3 3

Q29:

Select \* from F1 left join F2 on F1.T1 = F2.T2

F1.T1 F2.T2  
 1 null  
 2 2   
 3 3