**Questions and Answers On**

**Inventory Control Management**

**1) What is the total number of products per category?**

select categories.CategoryName,sum(products.ProductID) as Total\_products from products

join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID

group by categories.CategoryName;

**2) Calculate the average price of products for each supplier?**

select suppliers.SupplierName,avg(products.Price)as Avg\_price from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID

group by suppliers.SupplierName;

**3)Get the maximum and minimum price of products for each category?**

select categories.CategoryName,min(products.Price) as Min\_price,max(products.Price) as Max\_Price from

products join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID

group by categories.CategoryName;

**4) Find the total number of products and the total quantity in each category?**

select categories.CategoryName,count(products.ProductID) as Total\_Products,Sum(QuantityInStock) as Total\_Quntity from

products join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID

group by categories.CategoryName;

**5) List the suppliers and the number of products they supply?**

select suppliers.SupplierName,count(products.ProductID)as No\_Of\_Products from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID

group by suppliers.SupplierName;

6) List products with their rank based on price within each category?

select P.ProductName,P.Price,

(rank() over(partition by categories.CategoryName order by Price desc)) as Price\_Rank

from products P join productcategories on P.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID;

**7) Calculate the running total of quantities for products ordered by price?**

select ProductName,

sum(QuantityInStock) over (order by Price ) as Total\_Qunatity from products

order by Total\_Qunatity desc ;

**8)Find the average price of products for each supplier and their rank based on average price?**

select suppliers.SupplierName,Avg(products.Price) as Avg\_Price,

rank() over( order by Avg(products.Price)) as Supply\_Rank

from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID

group by suppliers.SupplierName;

**9)List each product with its rank based on quantity within its category?**

select categories.CategoryName,products.ProductName,

rank() over( partition by categories.CategoryName order by products.QuantityInStock desc) as Rank\_Qunatity from products

join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID;

**10)Get the top 3 most expensive products in each category?**

select products.ProductName,

row\_number() over( partition by categories.CategoryName order by products.Price desc) as Top\_Products

from products

join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID

where row\_number() over( partition by categories.CategoryName order by products.Price desc)<=3;

**11)Find all products along with their category names?**

select products.ProductName,categories.CategoryName from products

join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID;

**12)Get all products and their suppliers?**

select products.ProductName,suppliers.SupplierName from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID;

**13)List categories and the count of products in each category?**

select categories.CategoryName,count(products.ProductID) as no\_of\_products from

products join productcategories on products.ProductID=productcategories.ProductID

join categories on categories.CategoryID=productcategories.CategoryID

group by categories.CategoryName;

**14) Find all suppliers and the total number of products they supply?**

select suppliers.SupplierName,count(products.ProductID) as total\_products from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID

group by suppliers.SupplierName;

**15) Get products that are supplied by more than one supplier?**

select products.ProductName,count(products.ProductID) as total\_products from suppliers

join productsuppliers on suppliers.SupplierID=productsuppliers.SupplierID

join products on products.ProductID=productsuppliers.ProductID

group by products.ProductName

having count(products.ProductID) >=1;