

**END4263 DATA PROCESSING IN INDUSTRIAL SYSTEMS
FINAL EXAM ANSWERS**

**14 January 2010
09:00 (90 min)**

- (30) 4. This is a database design question. Please read it carefully and write your answers on space provided after the question.

Assume that we have five tables with several fields of data to keep track of sales to our customers.

Table 1: Customers [CustomerID, Name, Address]

Table 2: Employees [EmployeeID, Name]

Table 3: Orders [OrderID, CustomerID, EmployeeID, OrderDate, DeliveryDate]

Table 4: OrderDetails [OrderID, ProductID, UnitPrice, Quantity]

Table 5: Products [ProductID, Name]

Write the following queries in **SQL** for the following questions.

- a) Find out which employee by name has made the largest sales in terms of money in a descending order?

```
SELECT Employees.Name_E, Orders.OrderID, [OrderDetails]![Quantity]*[OrderDetails]![UnitPrice] AS Sales
FROM (Employees INNER JOIN Orders ON Employees.EmployeeID = Orders.EmployeeID)
     INNER JOIN OrderDetails ON Orders.OrderID = OrderDetails.OrderID
ORDER BY [OrderDetails]![Quantity]*[OrderDetails]![UnitPrice] DESC;
```

- b) Find out which customer by name and address purchases which product (name) most in a descending order.

```
SELECT Customers.Name_C, Customers.Address, Products.Name_P, OrderDetails.Quantity
FROM (Customers INNER JOIN Orders ON Customers.[Customer ID] = Orders.CustomerID) INNER JOIN (Products
     INNER JOIN OrderDetails ON Products.ProductID = OrderDetails.ProductID) ON Orders.OrderID =
     OrderDetails.OrderID
GROUP BY Customers.Name_C, Customers.Address, Products.Name_P, OrderDetails.Quantity
ORDER BY OrderDetails.Quantity DESC;
```

- c) Find out which employee's customer has suffered most from delayed deliveries in a desc. order?

```
SELECT Customers.Name_C, Employees.Name_E, Orders.OrderDate, Orders.DeliveryDate, [Orders]![DeliveryDate]-
[Orders]![OrderDate] AS Delay
FROM Customers INNER JOIN (Employees INNER JOIN Orders ON Employees.EmployeeID = Orders.EmployeeID)
     ON Customers.[Customer ID] = Orders.CustomerID
ORDER BY [Orders]![DeliveryDate]-[Orders]![OrderDate] DESC;
```

Prof.Dr. Erdal EMEL