**F4 COMPUTER STUDIES PAPER 2 QUESTIONS.**

1. (a)(i) The extract below shows a spreadsheet used to compute the toll charges for a highway based on the type of vehicle, tonnage and charge per kilometer for usage.

|  |  |
| --- | --- |
|  | ***HIGHWAY TOLL CHARGES*** |
| **Registration** | **Vehicle Type** | **Weight** | **Distance** | **NormalCharge** | **Penalty Charge** | ***Total*** |
| **KCY 789 M** | **PickUp** | **6** | **12** |  |  |  |
| **KCR 769 L** | **Car** | **4** | **40** |  |  |  |
| **KCF 724 C** | **PickUp** | **6** | **32** |  |  |  |
| **KCM 737 N** | **Truck** | **12** | **25** |  |  |  |
| **KCA 745 W** | **Lorry** | **20** | **28** |  |  |  |
| **KCP 756 H** | **Truck** | **10** | **12** |  |  |  |
| **KCU 778 J** | **Car** | **4** | **8** |  |  |  |
| **KCZ 701 A** | **PickUp** | **8** | **25** |  |  |  |
| **KCB 781 E** | **Car** | **6** | **4** |  |  |  |
| **KCV 743 H** | **PickUp** | **4** | **20** |  |  |  |
| **KCQ 735 X** | **Truck** | **8** | **32** |  |  |  |
| **KCT 721 K** | **Lorry** | **10** | **25** |  |  |  |
| **KCD 792 V** | **Truck** | **12** | **28** |  |  |  |
| **KCZ 784 P** | **Car** | **6** | **12** |  |  |  |
| **KCB 756 C** | **Truck** | **10** | **8** |  |  |  |
| **KCE 734 D** | **Car** | **4** | **25** |  |  |  |
| **KCF779 E** | **PickUp** | **6** | **32** |  |  |  |
| **KCG 700 F** | **Lorry** | **12** | **25** |  |  |  |
| **KCH 723 K** | **Truck** | **20** | **28** |  |  |  |
| **KCJ 711 W** | **PickUp** | **10** | **12** |  |  |  |
| **KCR 712 D** | **Car** | **4** | **8** |  |  |  |
| **KCD 774 B** | **PickUp** | **8** | **25** |  |  |  |
| **KCS 756 M** | **Truck** | **6** | **4** |  |  |  |
| **KCA 745 W** | **Car** | **4** | **20** |  |  |  |
|  |  |  | ***Total*** |  |  |  |

(ii)Create a workbook and save the workbook as toll. ( 2 Marks)

(iii)Fill the data in the worksheet1 and rename the worksheet as tollOriginal. ( 14 Marks)

(b)(i)The NormalCharge column is calculated based on the table below.

|  |  |
| --- | --- |
| **Vehicle Type** | **Max AllowedWeight(Tns)** |
| **PickUp** | **6** |
| **Car** | **4** |
| **Truck** | **8** |
| **Lorry** | **10** |

(ii) The PenaltyCharge column is calculated based on the table below. The penalty is based on any weight above Maximum allowed weight for a vehicle type for every kilometer of the the usage. ( 8 Marks)

|  |  |
| --- | --- |
| **Vehicle Type** | **Penalty Charge (Ksh)per Km** |
| **PickUp** | **10** |
| **Car** | **5** |
| **Truck** | **15** |
| **Lorry** | **20** |

 (iii) The TotalCharge is based on summation of NormalCharge and PenultyCharge . Create a column TotalCharge and use a function to Calculate the Total Charge ( 2 Marks)

(iv) Create the Running Totals for Normal Charge,Penulty Charge And Totalcharge ( 4 Marks)

(b)(i)Copy The data in the OriginalToll to another worksheet rename the workshhet as Sorted( 1 Mark)

 (ii)Sort the Data is ascending order of Vehicle type Sorted worksheet. ( 4 Marks)

 (iii)Create subtotals based on the vehicle Type ( 4 Marks)

(iv) Draw a column chart based on The Vehicle Type subtotals and Total Charge ( 8 Marks)

2. a) Create a database called **Aberdare bottles ltd** and create the following tables **(15 marks)**

**Table 1: Employee**

|  |  |  |  |
| --- | --- | --- | --- |
| **Employee\_ID** | **EmployeeName** | **Department**  | **YearOfEmployment** |
| 101 | Kibet Arap Kamau | Human resource  | 1985 |
| 102 | Janet Atieno | Procurement  | 1990 |
| 450 | Kimani Koigu  | Accounts  | 2000 |
| 891 | Moraa Kerubo  | Human resource  | 2010 |

**Table 2: Sales**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ProductName** | **Employee\_ID** | **ProductID** | **SalesAmount** | **Salary**  |
| Tea leaves  | 101 | Xc101 | 5000 |  |
| cocoa | 102 | Xp105  | 15500 |  |
| coffee | 450 | Xvb11  | 9500 |  |
| Chocolate  | 891 | X56po | 30000 |  |

**Table 3: Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **Employee\_ID** | **Department\_Name** | **HeadOfDepartment** | **NoOfEmployees** |
| 101 | Human resource  | B.N. Komu | 52 |
| 102 | Procurement  | J.K. Wanjiru | 12 |
| 450 | Accounts  | P.G. Otindo | 20 |
| 891 | Human resource  | M.M. Jerotich  | 10 |

1. Create **relationship** among the tables **(2 marks)**
2. Create **three** input screens **(forms)** and use them to enter the data into the tables above**(6 marks)**
3. Create a query called **Start\_K** and use it to display **EmployeeName** that start with letter **K (3 marks)**
4. Display the **no of years** an employee has worked given that the current year is 2018. Save **the report** as **AGE.** **(3 marks)**
5. Create a query called **Yote** to display the following fields **(2 marks)**
* **Employee\_ID**
* **EmployeeName**
* **Department\_Name**
* **ProductName**
* **Salary**
* **HeadOfDepartment**
1. Copy Yote query (**in v above**) and save the new query as **MPYA**:- (1 marks)

**Use MPYA query to**

* Calculate the salary given that: salary is 10% of the S**alesAmount (2 marks)**
* Display salary in ascending order (2 marks)
* Display employees from **human resource** department whose **SalesAmount** is **greater than 12000.** (2 marks)
1. Create a form called **AberdareForm** using **Yote query** (**in v above**) and use it to answer the questions below:-
* Count no of employees (2 marks).
* Add a title of the form as **“Aberdare bottles ltd-2018”** (2 marks)
* Insert **date and time** on the form header use **( =NOW( ) )** (2 marks)
1. **Print** Age, Sales table, and AberdareForm (3 marks)