**F4 COMPUTER STUDIES EXAM PAPER 2 MARKING SCHEME**

**QUESTION 1.**

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** |

Use a Formula to calculate the Normal charge in the worksheet ( 4 Marks)

* ***=IF(C3<=5,2.5\*D3,IF(C3<=10,3.5\*D3, IF(C3<=15,4.5\*D3,IF(C3<=20,5.5\*D3,IF(C3<=25,6.5\*D3,IF(C3<=30,7.5\*D3, 10\*D3))))))***

(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** |

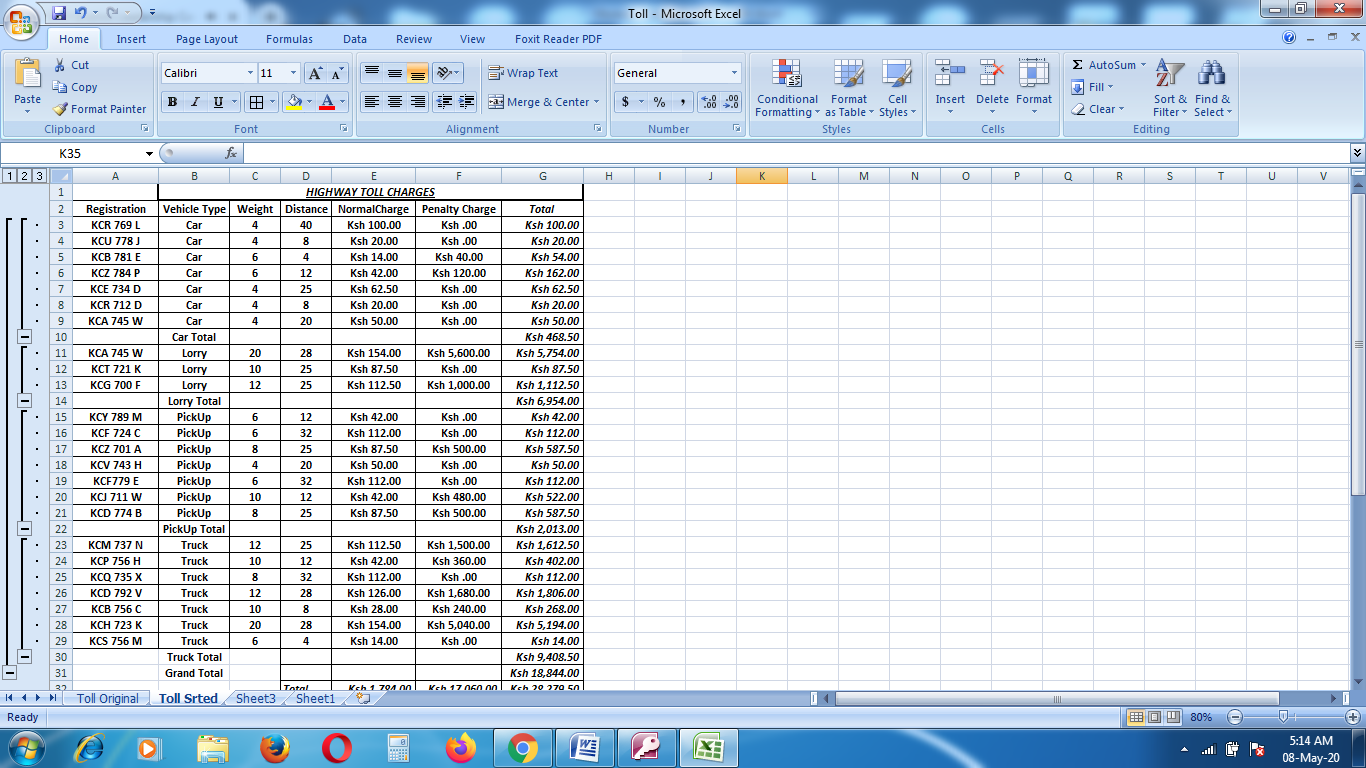
(iii) The TotalCharge is based on summation of NormalCharge and PenultyCharge . Create a column TotalCharge and use a function to Calculate the Total Charge ( 2 Marks)

(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)

**QUESTION 2**

|  |  |  |  |
| --- | --- | --- | --- |
| NO | AREA  DATABASES | MAX  MARKS | MARKS AWARDED |
| a | Creating and saving the database as Aberdare bottles ltd | 2 |  |
|  | Creating 3 tables and saving as instructed  -Employee, Sales, Department @ 5 x 3  Correct fields and data types | 15 |  |
| i | Creating relationship among tables | 2 |  |
| ii | Creating three forms with correct fields @2x 3 | 6 |  |
| iii | Creating a query Start\_K  Correct filtering K\* | 1  2 |  |
| iv | Saving the query as AGE  Correct function to calculate no of years | 1  2 |  |
| v | Creating Yote query  Correct fields | 1  2 |  |
| vi | Copying Yote and renaming to MPYA  Calculating SalesAmount correctly  Sorting salary in ascending order  Display Department HR , SalesAmount>12000 | 1  2  2  2 |  |
| vii | Creating form AberdareForm to:-  Count no of employees  Adding title: “Aberdare bottles ltd-2018”  Insert date and time using = now() function | 2  2  2 |  |
| vii | Printing :-  Age  **@ 1 mark**  Sales table  AberdareForm | 3 |  |
|  |  |  |  |
|  | TOTAL | 50 |  |