NAME ……INDEX NO……

SCHOOL…….SIGNATURE……..

**451/2**
**COMPUTER STUDIES**
**PAPER 2**
**JUNE -2016**
**TIME:2 ½ HOURS**

# KAKAMEGA SOUTH SUB-COUNTY JOINT EXAMINATION

***Kenya Certificate of Secondary Education (K.C.S.E)***

**451/2**
**COMPUTER STUDIES**
**PAPER 2**

**INSTRUCTIONS TO CANDIDATES**

- Type your name and index number at the top right hand corner of each print out and your CD
- Write the version of software used for each question attempted
- Write your name and index number on the CD
- Password should not be used while saving in the CD
- Answer ALL the questions
- All questions carry equal marks
- Hand in all printouts and the CD

**FOR OFFICIAL USE**

| QUESTION | MAXIMUM SCORE | STUDENT SCORE |
|---|---|---|
| 1 | 50 | |
| 2 | 50 | |
| **TOTAL** | **100** | |

***This paper consists of 5 printed pages students to confirm the same and ensure there are no questions missing***

## Question 1

### Scenario

You have been asked by the cabinet secretary for Transport to create a spreadsheet and a chart to show the number of serious traffic accidents in Kenya over a period of years. You've found the raw statistics at the Kenya Government Website, but now you need to work with the data. In particular, the secretary wants you to create a chart to show;

- For accidents resulting in fatalities, what percentage involved alcohol and what percentage did not
- For accidents resulting in injuries what percentage involved alcohol and what percentage did not
- For accidents resulting only in property damage, what percentage involved alcohol and what percentage did not.

**Figure 1** below represents the raw statistics downloaded from the government website.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TA BLE1 | | | | | | | | | | | | TABLE 2 | | |
| 2 | | MAJOR TRAFFIC CRASHES | | | | | | | | | | | | **Fatality** | **Injur** |
| 3 | | All Crashes | | | | | | **Alcohol Related Crashes** | | | | | **Alcohol** | | |
| 4 | Year | Total | Fatality | Injury | Damage | | Year | Total | Fatality | Injury | Damage | | **No Alcohol** | | |
| 5 | 1986 | 20854 | 108 | 7814 | 12932 | | 1986 | 987 | 26 | 516 | 445 | | | | |
| 6 | 1987 | 23625 | 128 | 8624 | 14875 | | 1987 | 1051 | 35 | 520 | 496 | | | | |
| 7 | 1988 | 26072 | 129 | 8963 | 16980 | | 1988 | 1103 | 27 | 519 | 557 | | | | |
| 8 | 1989 | 26894 | 127 | 8888 | 17879 | | 1989 | 1018 | 26 | 497 | 495 | | | | |
| 9 | 1990 | 26640 | 154 | 9745 | 16741 | | 1990 | 1215 | 31 | 595 | 589 | | | | |
| 10 | 1991 | 21840 | 119 | 9046 | 12675 | | 1991 | 951 | 27 | 496 | 428 | | | | |
| 11 | 1992 | 21835 | 121 | 9359 | 12355 | | 1992 | 847 | 21 | 439 | 387 | | | | |
| 12 | 1993 | 21471 | 110 | 9564 | 11786 | | 1993 | 853 | 29 | 461 | 363 | | | | |
| 13 | 1994 | 19851 | 118 | 9172 | 10569 | | 1994 | 773 | 16 | 416 | 341 | | | | |
| 14 | 1995 | 16581 | 132 | 8939 | 7524 | | 1995 | 686 | 12 | 412 | 262 | | | | |
| 15 | 1996 | 13285 | 117 | 7913 | 5240 | | 1996 | 655 | 17 | 408 | 230 | | | | |
| 16 | 1997 | 12445 | 131 | 7642 | 4686 | | 1997 | 633 | 9 | 387 | 237 | | | | |
| 17 | 1998 | 11542 | 113 | 7016 | 4413 | | 1998 | 744 | 17 | 457 | 270 | | | | |
| 18 | 199 | 10567 | 90 | 6570 | 3907 | | 1999 | 676 | 12 | 408 | 256 | | | | |
| 19 | 2000 | 11094 | 116 | 6846 | 4132 | | 2000 | 651 | 15 | 422 | 214 | | | | |
| 20 | 2001 | 10848 | 133 | 6125 | 4590 | | 2001 | 468 | 15 | 270 | 183 | | | | |
| 21 | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | |

(a) Use suitable application software to capture the data in figure 1.Format the data accordingly
Save this file as **AutoAccidents1**. (22mks)

(b)

(i) Delete columns Fand G (1mk)

(ii) Type the label"**Total**" in cell A21, "Average" in cell A23, "**Lowest"** in cell A24. (1mk)

(iii) Insert functions in row 21,22,23 and 24 to get the sum number of crushes that occurred in the reported years (1mk)

(iv) To avoid confusing the number of accidents in each year with the total of the accidents over the whole range of years, change the labels in cells B4 fro **Total** to **Numbers** (1mk)

(v) Format all the numbers in range B5:120 so that a comma separator at the thousand's place.(Example:3,789 instead of 3789). (1mk)

(vi) Save this file as **Auto Accidents2**. (1mk)

(c ) (i) The data in this table has different sections. To make it easier to tell what each section is about, merge and center the following ranges so that the labels are centered over corresponding data;

B2:12 (1mk)
B3:E3
F3:13

(ii) Edit the text in B2:12 to make it read:

**MAJOR TRAFFIC CRASHES IN KENYA** **(1mk)**

(iii)In order to visually separate data on all crashes from those that were alcohol-related: Create an outline border around the cells in the B 3:E21,and around cells in range F3:21. (1mk)

(i) To increase readability, make all of the sections labels in the B2:14 range bold (1mk)

(ii) To make the labels look neat and tidy, adjust the width of the column A through column 1 to fit their contents (1mk)

(iii) Save this files as **Auto Accidents 3** (1mk

(d)

(i) You will use **Table 2** (the grey shaded table to the right of Table) to analyze the crashes that involved alcohol vs. crashes that did involve alcohol. Use cell references and formulae to fill in the fatality, injury and damage values for:

(a) Alcohol related crashes (1mk)

(b)Non alcohol related crashes (1mk)

(ii)Create a **Blue** outline border around the cells in the range L5:P21 (1mk)

(iii)Save this file as **Auto Accidents 3** (1mk)

(e)Use table 2 data (range M2:P4)to

(i) Create a 100% Stacked Column chart with 3D effect (1mk)

(ii)Title the chart "Alcohol vs.**Non Alcohol Related Crashes**" (1mk)

(iii)Place the legend at the bottom (1mk)

(iv) Place the chart: directly under Table 2 and directly to the right of Table 1 .Resize the chart to fit inside the empty blue box.(i.e the boundary outline created in question d)ii above. (1mk)

(v) Save this file as **Auto Accidents4** (1mk)

(f) Change page set up so that:

i. It has a landscape orientation (1mk)
ii. It is scaled/resized to fit on one page by one page(i.e on one page only) (1mk)
iii. It has 1 inch margins all round (left,right,top and bottom) (1mk)
iv. Customize the header so that it; has your full name in the left section. Your index number in the section and current date in the right section (1mk)
v. Save this file as AutoAccidents5 (1mk)

(g) Print the spreadsheet (1mk)

Your finished products should resemble the one in figure 2 below.

**Question 2**

Witu Company is an organization that has employed several workers .In order for it to monitor the performance of its workers and the different duties assigned to its workers, the company needs a database to organize the information required.

(a) Create a database file and name it records 2016 (2mks)
(b) (i)Using the table below create the appropriate fields and split the data into two tables ,one for storing employees records and the other for storing employment records and give them appropriate names (8mks)

| EMPLOYEE NO. | NAME | DEPARTMENT | MARITAL STATUS | SALARY | AGE |
|---|---|---|---|---|---|
| 2213 | JOHN CLAY | TRANSPORT | MARRIED | 8,000.00 | 35 |
| 2214 | ROSE JOHNS | CUSTOMER CARE | MARRIED | 10,000.00 | 40 |
| 2215 | PETER ROGERS | HEALTH | MARRIED | 50,000.00 | 45 |
| 2216 | JED OTIENO | FINANCE | SINGLE | 20,000.00 | 25 |
| 2217 | VINCENT JED | TRANSPORT | SINGLE | 8,000.00 | 20 |
| 2218 | ALLAN LIMO | CLEANING | SINGLE | 4,000.00 | 22 |
| 2219 | PETER OLOO | MARKETING | MARRIED | 80,000.00 | 35 |
| 2220 | HUSSEIN KIMAN | FINANCE | SINGLE | 15,000.00 | 26 |
| 2221 | ROBERT KIBANI | SECURITY | SINGLE | 5,000.00 | 28 |
| 2222 | JANE LESSOS | SECRETARY | MARRIED | 6,000.00 | 31 |
| 2223 | LUCY OJWANG | CUSTOMER CARE | MARRIED | 8,000.00 | 30 |

(ii) Create screens for each table for inputting the data in the table above (12mk)
(iii)For each of the tables, choose the most appropriate primary key (2mks)
(iv)Create a relationship between the two tables (2mks)
(c.)Create a query to display the files Name, Department and Salary for those employees who earn more than 10,000.00.Save as experts (5mks)
(d)
(i)Generate a tabular report with landscape orientation from the table to display the fields in the following order (5mks)
**EMPLOYEE NO., NAME, SALARY, DEPARTMENT, AGE**
(ii)Sort records in the report in alphabetical of the name field (2mks)
(ii)Compute the total of salary for all the employees and place it below the salary column. Save as **Expenses** (5mks)
(iv)Create a query to display the workers years of birth and save it as YOB (3mks)
(e)Print the two **tables ,experts, expenses** and **YOB** (2mks)