**451/2**

**COMPUTER STUDIES**

**Paper 2**

**(PRACTICAL)**

**JULY-2019**

**Time : 2 ½ HOURS**

**END OF TERM 2 2019**

***FORM FOUR EXAMINATION***

**451/2**

**COMPUTER STUDIES**

**Paper 2**

**(PRACTICAL)**

**JULY 2019**

**Time : 2 ½ HOURS**

**INSTRUCTIONS TO CANDIDATES**

***•* Type your name and index number at the top right hand corner of each printout.   
• Sign and write the date of the examination below the name and index number on each print out.   
• Write your name and index number on the removable media provided.   
• Write the name and version of the software used for each question attempted in the answer sheet.   
• Passwords should not be used while saving in the storage media.   
• Answer all questions.   
• All questions carry equal marks.   
• All answers must be saved in the removable media.   
• Make a printout of the answers on the answer sheets provided.   
• Hand in all the printouts and the removable media.**

***This paper consists of 4 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing***

QUESTION ONE

1. Consider the three tables below extracted from a school database Management Information System

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **Students table** | | | | | | | | | | | | | |
| **NO** | **ADM NO** | | **FIRST NAME** | | | **LAST NAME** | | **CLASS** | | **TERM TWO FEES** | | | |
| 1 | 1010 | | Thomas | | | Onyango | | 2A | | KSHS17,000.00 | | | |
| 2 | 1011 | | Hillary | | | Joel | | 2C | | KSHS17,000.00 | | | |
| 3 | 1012 | | Steve | | | Njoroge | | 2B | | KSHS17,000.00 | | | |
| 4 | 1013 | | Titus | | | Mutua | | 2A | | KSHS17,000.00 | | | |
| 5 | 1014 | | Paul | | | Lema | | 2B | | KSHS17,000.00 | | | |
| 6 | 1025 | | Ben | | | Okoth | | 2C | | KSHS17,000.00 | | | |
| 1. **EXAMS TABLE** | | | | | | | | | | | | | | | | | |
| SERIALNO | | ADM NO | | ENG | | KISW | MAT | | BIO | CHEM | PHY | HIST | GEO | | AGRI | COMP | BSN |
| 1 | | 1012 | | 81 | | 65 | 42 | | 89 | 52 |  | 86 |  | |  | 80 |  |
| 2 | | 1010 | | 56 | | 35 | 46 | | 74 | 75 | 62 | 38 |  | |  |  |  |
| 3 | | 1025 | | 76 | | 91 | 72 | |  | 48 | 59 | 88 |  | |  |  | 81 |
| 4 | | 1011 | | 64 | | 39 | 46 | |  | 86 | 67 | 37 | 88 | |  |  |  |
| 5 | | 1013 | | 75 | | 72 | 68 | | 56 | 85 |  |  | 54 | | 78 |  |  |
| 6 | | 1014 | | 86 | | 83 | 70 | | 86 |  | 43 | 90 |  | |  | 67 |  |
| 1. **ACCOUNTS TABLE** | | | | | | | | |
| **RECEIPT NO** | | | **ADMNO** | | **FEES PAID** | | | |
| 1 | | | 1025 | | KSH10,000.00 | | | |
| 2 | | | 1010 | | KSH17,000.00 | | | |
| 3 | | | 1011 | | KSH2,500.00 | | | |
| 4 | | | 1012 | | KSH5,800.00 | | | |
| 5 | | | 1013 | | KSH14,000.00 | | | |
| 6 | | | 1014 | | KSH1,500.00 | | | |

1. Create a database to contain the data and save it as **information system (2mks)**
2. Design the above tables structures with the appropriate primary keys ***(4 marks)***
3. *Link* the tables and enforce referential integrity ***(4 marks)***
4. Design **forms** for each of e above tables created ***(6 marks)***
5. Use the respective forms you have created in (c) above enter the data in those tables

***(9 marks)***

1. Create a query with a new field called **“Total marks”** that add marks for all subjects in exams table. The query should display the following: ADMNO, FIRSTNAME, LASTNAME, CLASS, ENG, KISW, MATHS, BIO, CHEM, PY, EO, AGRI, COMP, BSN and TOTAL MARKS. Save the query as **“Total MarksQ” *(9 marks)***
2. Create a query with a new field called **“Fees Balance”** that displays the fees balance from a calculation. This query should display the following: ADM NO, FIRSTNAME, LASTNAME, CLASS, TOTAL FEES, FEES PAID and FEES BALANCE for ONLY students who have **fees balance greater than Kshs. 8000 and come from 2B,** save it as “**QFEES BAL”** ***(6 marks)***
3. Create a query to display the students who scored more than 50 marks in ENG, KISW and MATHS. Save the query as “**QSCORES”** ***(3 marks)***
4. Using the query **“QSCORES”**in **(f)** above, create a **report** with the following properties:

* Layout : Tabular
* Orientation: Landscape
* Style: Opulent

Save the report as **“RTotalSCORESQ” *(4 marks)***

1. Print:

* **Exams table** and **“QFEESBAL”** on both sides of the page ***(2 marks)***
* Query **“QSCORES”** in landscape ***(1 mark).***

**QUESTION TWO**

1. Employees of Sunshine Company are paid salaries which comprise of Basic salary, house allowance and medical allowances. The gross salary of each employee is calculated as the total of the three payment categories.

Below is a list of allowances and basic salaries for ten employees in the month of July 2019.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **MEDICAL ALLOWANCE** | **HOUSE ALLOWANCE** | **BASIC SALARY** |
| MURTAZA | 5,000 | 10,000 | 20,000 |
| WASIM | 3,000 | 8,000 | 16,000 |
| MWANGI | 3,500 | 8,000 | 16,000 |
| ISHO | 6,000 | 12,000 | 25,000 |
| MITESH | 2,500 | 6,500 | 12,000 |
| MITHEU | 2,500 | 6,500 | 12,000 |
| KRISHNA | 7,000 | 15,000 | 30,000 |
| MBUGUA | 3,500 | 8,000 | 16,000 |
| KASOO | 3,500 | 8,000 | 16,000 |

1. Using the above information, design an appropriate spreadsheet and enter the given sample data. Give the spreadsheet an appropriate title and save at **SUNSHINE-1**. (12marks)
2. Calculate the gross salary for each employee. Label it appropriately on the spreadsheet. Write the formula used for Murtaza’s gross salary, on the sheet provided. (6marks).
3. Fatuma Ndeche joined the company at management level and was paid 20% Basic salary more than Krishna was paid. If her medical allowance and house allowance was calculated at 30% and 50% of her basic salary respectively. Calculate and fill a record for Fatuma Ndeche on the spreadsheet. Write the formulae used on the answer sheet provided. Save the spreadsheet as **SUNSHINE -2** (6marks)
4. Calculate the average of basic, house allowance and medical allowance for the employees. Label these averages appropriately and write the formula used to calculate the average for basic salary on the answer sheet provided. Save the spreadsheet as **SUNSHINE -3**. (7marks)
5. Count all the employees whose house allowance is above Ksh. 10,000 and place your results in an empty cell. Label the result appropriately. Write the formula used on the answer sheet provided (6marks)
6. The company would like you to help them sort out the employees in the management from others. By labeling a column STATUS, generate the appropriate status for each employee given that those who earn a basic salary above Ksh. 20,000 are in the management while others are Junior staff. Write on the answer sheet provided the function you used for Krishna. Save the spreadsheet as **SUNSHINE-5** (6marks)
7. Plot a line graph of employees against gross salary. Add a title, axes and a legend. Save the graph as **SUNSHINE-6** (5marks)
8. Print **SUNSHINE-1**, **SUNSHINE-2, SUNSHINE-4, SUNSHINE-**MOCK\_5. (2marks)