MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education

MOCK EXAMINATIONS 2021

CODE 451/2 SUBJECT COMPUTER STUDIES Paper 2

December 2021 – TIME $2\frac{1}{2}$ Hours

Name: ..... Adm No: .....

Class: .....Candidate's Signature: .....Date: .....

Instruction to Candidates

- The Paper has two questions
- Answer all the questions
- Type your name and index number at the Right- hand corner of each printout
- Write your name and index number on the CD-RW.
- Write the name and version of software used in each question on the answer sheet.
- Password should not be used on CD-RW.
- All answer must be saved on the CD-RW.
- Hand in all the printouts and the CD-RW.

FOR OFFICIAL USE ONLY

QUESTION	MAX SCORE	CAND SCORE
ONE	50	
TWO	50	
TOTAL	100	

Question One

(a) Using a word processor , type the document as it appears and save it as **Biogas Main (30marks)**

BIOGAS PLANT

1.0 Domestic Biogas Presentation

1.1 Value Chain

1.1.1 General Presentation

Biogas is a gas produced through the digestion of organic materials in anaerobic condition by specific bacteria called Methanogenic or Methanogens

Biogas is mainly composed of Methane (CH_4) and is thus flammable gas. It can therefore be used to as fuel for heating, cooking and lighting. Biogas can also be used to feed engines to produce electricity. For information the following table compares the equivalent between biogas and other possible fuels in terms of heating value

Fuel	Unit	Value
Charcoal	5	0.7
Firewood	7	1.3
Gasoline	10	0.75

Table I

2.0 Potential Impacts

The dissemination of Biogas plant have various environmental, social and economic benefits

2.1 Environmental impacts

- ✓ Reduction of the biomass resource depletion
- ✓ Reduction of Green House Gases emission

2.2 Social Impacts

- ✓ Biogas plants help improve beneficiaries quality of life by reducing the workload usually required for typical tasks such as firewood collection and fire tending
- ✓ Improve gender equality Women can spend more time on other activities and on education hence a reduction in Gender disparities
- ✓ Health and sanitation Bio-digester reduce the pathogens content of organic materials
- ✓ Education

  The installation of biogas lamp can enable children to study later in evening

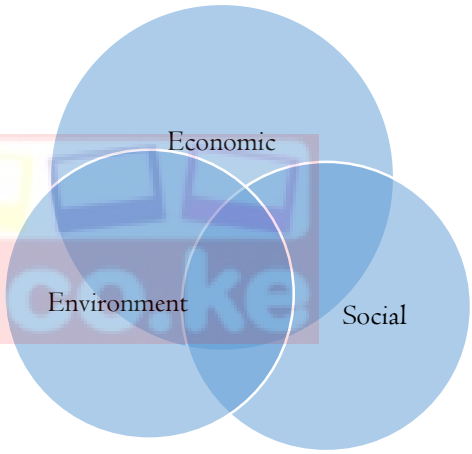

Figure I

2.3 Economic Impacts

- ✓ Economic impacts for beneficiaries by displacing the use of fire word or charcoal , Biogas can help to reduce household energy expense

3.0 Technologies

3.1 Possible Technologies for domestic biogas

The most common technologies for domestic biogas – biogas production at a household scale are

- Plastic tube digester or Polythene Tube Digester (PTP)
- Plastic tank digester
- Technologies based on the fixed Dome Model
- Floating Drum Digester

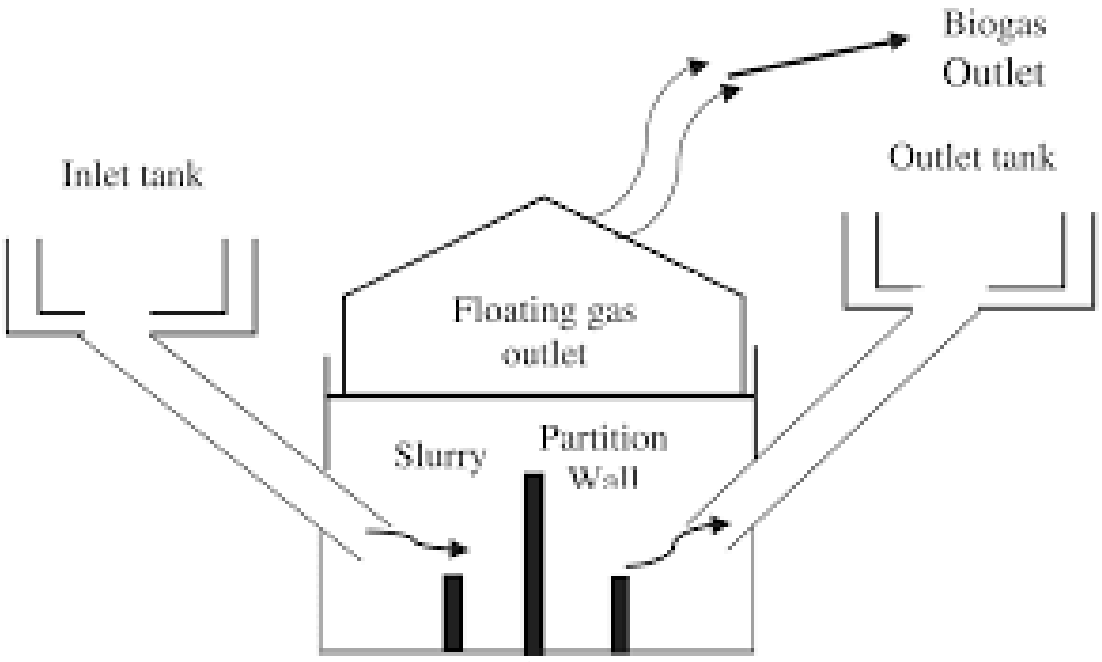

Figure 2

(b) Create a pie chart showing Fuel values as indicated in the table. Insert appropriate chart title (5marks)
(c) Copy the chart to a new document and saving as Chart (1mark)
(d) Insert the following
  (i) Page number at the bottom center of the page (1mark)
  (ii) Biogas Technology is Eco friendly as a footer (1mark)
  (iii) Your index number and Name as header (1mark)
(e) Replace the word used with utilized (1mark)
(f) Print Biogas Main and Chart (2marks)

Question Two

Chianda School has employed several workers. In order for it to monitor the performance of its workers and the different duties assigned to its workers the school needs a database to organize the information

(a) Create a database file and name it Chianda **(2marks)**

(b) Using the table below create the appropriate fields and splits the data into two tables and set the primary Key **(12marks)**

EMP. No	Name	Department	Salary	Paid	Age	Date of Payment
0021	Joy	Humanities	50,000	Yes	42	28/3/2017
0022	Ruth	Mathematics	40,000	Yes	38	28/3/2017
0024	Cate	Applied Science	42,000	No	28	27/3/2017
0023	Mary	English	38,000	Yes	33	26/3/2017
0025	Alex	Mathematics	42,000	Yes	38	28/3/2017
0026	Isaac	Applied Science	50,000	Yes	42	27/3/2017
0027	Faith	English	57,000	No	44	28/3/2017
0028	Jude	Mathematics	58,000	Yes	28	29/3/2017
0024	Cate	Applied Science	42,000	Yes	28	28/3/2017
0029	Jude	Mathematics	57,000	Yes	28	28/3/2017
0021	Joy	Humanities	50,000	Yes	42	26/3/2017

(c) Create screens for each table for inputting the data in the tables **(10marks)**

(d) Create relationships between the tables **(2marks)**

(e) Validate Paid field to allow text that either begin with Y or N **(2marks)**

(f) Create a query to calculate the amount earned by each employee on the month of March if the employer decides to increase the salary by 10%. Save the query as **Increment (2marks)**

(g) Create a query for all the employees who were paid on 28/3/2017 and Save the Query as **Paid (2marks)**

(h) Create a query that will assign digit 1 to the paid employee and digit 0 to the unpaid employees, the data should appear on a new field save the Query as **Number (3marks)**

(i) Create a tabular report with landscape orientation from the tables to display the fields in the following order **EMP. No, Name, Department, Salary and Paid.** Save the report as **Chianda Employees (6marks)**

(j) Sort the records in the report in alphabetical order of name field **(2marks)**

(k) Add **SALARY REPORT** on the header and **INDEX NUMBER** on the footer **(2marks)**

(l) Compute Total Salary for all employees and place it below salary column save the report as Salary Report **(2marks)**

(m) Print Increment , Paid and Chianda Employees **(3marks)**