EXCELLING STUDENTS K.C.S.E 2023 PREDICTION SERIES 2 EXAMS *(ALL SUBJECTS TESTED)*



EXCELLING STUDENTS K.C.S.E 2023 PREDICTION SERIES 2

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 For Marking Schemes

***N/B** In Response to the Huge Costs Associated in Coming Up with Such/Similar Resources Regularly, We inform us All, MARKING SCHEMES ARE NOT FREE OF CHARGE. However Similar QUESTIONS, Inform of soft Copies, are Absolutely FREE to Anybody/Everybody. Hence NOT FOR SALE*

by Amobi Group of Examiners.

Amobi Group Of Examiners

Call Us @

0743 333 000 or 0706 851 439

CALL 0743 333 000 OR 0706 851 439

- Mid/End Term, Pre/Mock Exams
- K.C.S.E Prediction/Forecast Exams
- F1-F4 All Subjects Notes/Topical Qsns
- Updated Schemes of Work/Syllabus
- Acted Set Books Videos/ Guides
- Set Books Essays/Excerpts Qsns
- Past K.C.S.E Papers & Holiday Assignments
- 70 Biology Graphical/Essays Qsns
- 70 Biology Pictorial Practical Qsns
- Poetry & Ushairi Qsns.... e.t.c

ORDER OF THE 14 SUBJECTS TESTED *(ALPHABETICALLY ARRANGED)*

1. **AGRICULTURE**
2. **BIOLOGY**
3. **BUSINESS STUDIES**
4. **CHEMISTRY**
5. **COMPUTER**
6. **C.R.E**
7. **ENGLISH**
8. **GEOGRAPHY**
9. **HISTORY**
10. **KISWAHILI**
11. **MATHS**
12. **PHYSCIS**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

443/1

AGRICULTURE

Paper 1

Time: 2 hours

INSTRUCTIONS TO CANDIDATES

- Write your name, class and admission number, in the spaces provided above.
- Sign and write the date of the examination in the spaces provided above.
- This paper consists of three sections: A, B and C.
- Answer **all** the questions in section **A** and **B** and **any two** questions from section **C.**
- All answers must be written in the spaces provided in this paper.

For Examiner's Use Only

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1−15	30	
B	16−19	20	
C		20 20	
TOTAL SCORE		90	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A (30 marks)

1. State **four** reasons why agriculture is important to Kenya's economy. **(2mks)**

……

……

……

……

……

……

2. State **four** ways in which mulching conserves water. **(2mks)**

……

……

……

……

……

……

3. State **four** ways in which trees improve soil productivity. **(2mks)**

……

……

……

……

……

……

4. What is meant by the term integrated pest management? **(2mks)**

……

……

……

……

……

……

5. State **four** factors that influence soil formation. **(2mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

6. State **four** causes of crop diseases. **(2mks)**

……

……

……

……

……

……

7. State **four** ways in which a land title deed is important to a farmer. **(2mks)**

……

……

……

……

……

……

8. Give **four** agents of soil erosion. **(2mks)**

……

……

……

……

……

……

9. Give **four** reasons for intercropping in crop production **(2mks)**

……

……

……

……

……

……

10. State **four** characteristics of extensive farming system. **(2mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

11. Outline **four** minimum tillage practices **(2mks)**

……

……

……

……

……

……

12. Give **four** reasons why burning of land is discouraged. **(2mks)**

……

……

……

……

……

……

13. State **four** functions of Young Farmers Club **(2mks)**

……

……

……

……

……

……

14. Distinguish between a perfect and an imperfect market. **(1mk)**

……

……

……

……

15. State the meaning of the following terms as used in crop production.

(a) Crop rotation. **(1mk)**

……

……

……

(b) Pruning. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(c) Rogueing. **(1mk)**

……

……

……

SECTION B (20 marks)

16.A farmer has a piece of land on which he can grow maize, cabbages and beans.

The expected yields and selling prices of the three crops are shown below.

Crop	Yield (kg)	Selling prices (ksh/kg)
Maize	4000	40
Cabbages	2800	60
Beans	3000	80

If the cost of producing any of the three crops is the same.

(a) Which crop should the farmer grow? Show your working. **(2mks)**

……

……

……

……

(b)(i) State the farmer's opportunity cost. **(1mk)**

……

……

……

(ii) Give a reason for your answer in (b) (i) above. **(1mk)**

……

……

……

(c) Give a reason why farmers always have to make a choice on the enterprise to implement on the farm. **(1mk)**

……

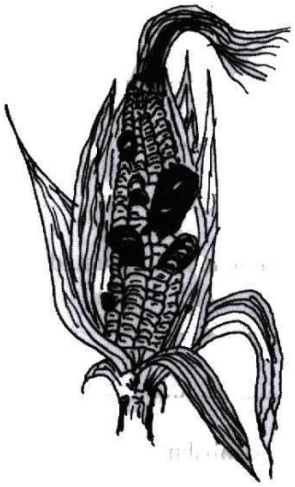
……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

17. A famer is advised to apply 60kg N, 20kg P_2O_5 and 30kg K_2O per hectare. Calculate the quantity of urea (46%N), single super phosphate (20%P_2O_5) and muriate of potash (50% K_2O) the farmer should apply on his 10 hectares land. **(5mks)**

18. Below is a diagram showing a crop disease.



(a) Identify the crop disease. **(1mk)**

……

……

(b) State **three** control measures for the crop disease. **(3mks)**

……

……

……

……

……

(c) Name the category in which the crop disease is classified. **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

19. The diagram below illustrates a nursery practice.



(a) Identify the practice. **(1mk)**

……

……

(b) Describe the procedure followed in carrying out the practice illustrated. **(2mks)**

……

……

……

……

(c) State **two** advantages of the practice illustrated above in crop production. **(2mks)**

……

……

……

……

SECTION C (40 marks)

20(a) Describe **seven** harmful effects of crop pests. **(7mks)**

(b) Describe **eight** safety measures a farmer should observe when using herbicides to control weeds. **(8mks)**

(c) Describe the harvesting of coffee. **(5mks)**

21. (a) Explain **five** factors that can increase the demand for tea on a market. **(10mks)**

(b) State **four** ways of improving labour productivity on the farm **(4mks)**

(c) The following information was obtained from Upendo Farm inventory on 1st January2013.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ITEM	VALUE(Ksh)	
Layers		80,000
Beef cattle		240,000
Beans in store		40,000
Cash at hand		15,000
Land		550,000
Machinery		250,000
Buildings		310,000
Calves		75,000

On the same day the farm recorded the following;

ITEM	VALUE(Ksh)	
Wages payable		5,000
Interest payable		8,000
Bank loan		725,000
Milk sales on credit		12,000
Chicken sales on credit		6,000
Cash in bank		52,000
Purchase of fertilizer on credit		26,000
Taxes payable		3,000

Using the information provided prepare a balance sheet for Upendo Farm. **(6mks)**

22. (a) Describe the field management practices for tomatoes. **(10mks)**

(b) Explain ways in which the Kenyan Government can improve maize production to ensure food security in the country. **(10mks)**

……

……

……

……

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

443/2
AGRICULTURE
PAPER 2
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name, Admission number and class, in the spaces provided above.
- This paper consists of three sections: A, B and C.
- Answer **all** the questions in section **A** and **B** and **any two** questions from section **C**
- All answers must be written in the spaces provided in this paper

For Examiners use only

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE SCORE
A	1-16	30	
B	17-20	20	
C	21-23	20 20	
TOTAL SCORE		90	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A (30 MARKS)

Answer all the questions in this section in the spaces provided

1. Name **four** beef breeds of cattle. **(2mks)**

……

……

……

……

……

2. State **four** observations on the behavior of chicks which would indicate that the temperature in the brooder is too high. **(2mks)**

……

……

……

……

……

……

3. Give **four** practices carried out on fish before preservation. **(2mks)**

……

……

……

……

……

……

4. Outline **four** reasons for steaming up a gestating cow. **(2mks)**

……

……

……

……

……

……

5. List **four** factors considered when selecting eggs for marketing. **(2mks)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

……

6. Give **four** disorders associated with calcium deficiency in livestock **(2mks)**

……

……

……

……

……

……

7. State **four** advantages of carrying out raddling in sheep management. **(2mks)**

……

……

……

……

……

……

8. Give a reason why ruminant animals are able to digest grass. **(1mk)**

……

……

……

……

9. Give the difference in meaning of the following terms as used in livestock.

(a) Quarantine and Isolation **(1mk)**

……

……

……

(b) Zoonotic and notifiable diseases **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

10. List **four** effects of ticks on livestock bodies. **(2mks)**

……

……

……

……

……

……

11. State **four** factors that influence selection of construction materials. **(2mks)**

……

……

……

……

……

……

12. Name **thre**e farm implements operated by the tractor's P.T.O shaft. **(1 1/2mks)**

……

……

……

……

……

13. State **four** reasons for debeaking in poultry production. **(2mks)**

……

……

……

……

……

……

14. Name **three** breeding diseases controlled through the use of artificial insemination. **(1 1/2mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

15. Give **four** characteristics of a good vaccine. **(2mks)**

……

……

……

……

……

……

16. State **four** advantages of Kenya top bar hive in bee keeping. **(2mks)**

……

……

……

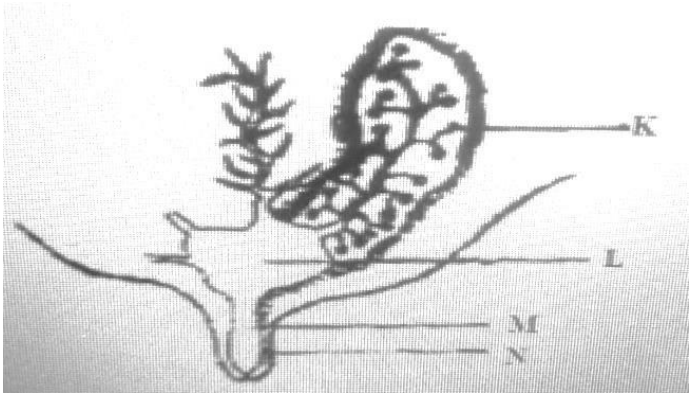
……

……

……

SECTION B (20 MARKS)

17. The diagram below shows the udder of a cow. Use it to answer the questions that follow.



a) Name parts L and M. **(2mks)**

……

……

……

b) State the hormone responsible for milk let down. **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

c) Define dry cow therapy. **(1mk)**

……

……

……

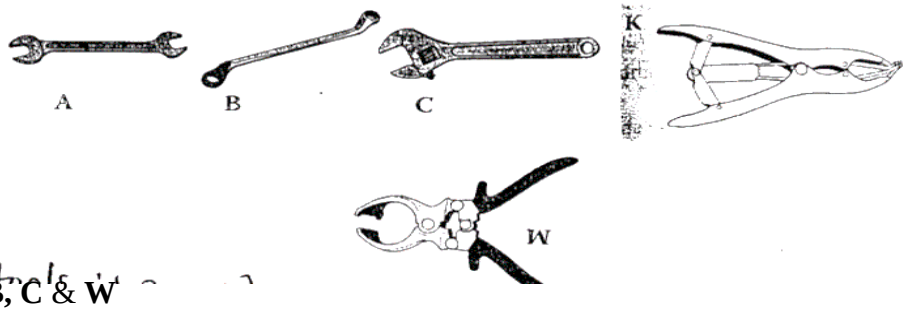
d) Why milking should be done quickly and evenly. **(1mk)**

……

……

……

18. The diagrams below show some farm tools. Study them and answer the questions that follow.



a) Name the tools. **A,B, C** & **W** **(2mks)**

……

……

……

……

……

b) State the functional differences between tools K and W. **(1mk)**

……

……

……

c) What advantage does C have over A and B? **(1mk)**

……

……

……

……

d). State one common maintenance practice carried out tool C and W. **(1mk)**

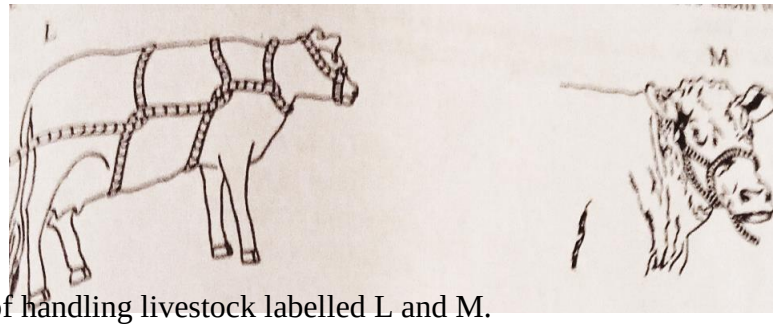
……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

19. The diagram below shows two methods of handling livestock in the farm. Study them and answer the questions that follow.



a) Identify the methods of handling livestock labelled L and M. **(1mk)**

……

……

……

b) Give **two** occasions when it may be necessary to carry out the practice labelled L above. **(2mks)**

……

……

……

……

c) Give **two** animal conditions under which method L above cannot be used. **(2mks)**

……

……

……

……

20. The diagram **below** represents conditions of the tyre.



(a) Which diagram represents the correct pressure in a tractor tyre? **(1mk)**

……

……

(b) Identify the mistakes with the other two tyres. **(2mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

(c) Give the correct measures taken for each tyre mentioned in **(b) above**. **(2mks)**

……

……

……

……

……

SECTION C (40 MARKS)

Answer any two questions in this section

21.a) Explain **five** factors that affect milk composition in dairy farming. **(5mks)**

b) State five signs of parturition in cattle **(5mks)**

c) State five maintenance practices of a fish pond **(5mks)**

d) Explain five factors considered when selecting livestock for breeding **(5mks)**

22.a) Describe the management of a sow during parturition. **(10mks)**

b) Describe the lifecycle of a three host tick. **(7mks)**

c) Outline **three** effects of endo-parasites to the host animals **(3mks)**

23.a) Describe a blue tick (*Boophilus decolaratus*) under the following sub-headings.

i) Diseases transmitted. **(2mks)**

ii) Preferred site of attachment. **(3mks)**

iii) Non-chemical control measures. **(5mks)**

b) Discuss mastitis disease under the following sub-headings:

i) Predisposing factors. **(5mks)**

ii) Control and treatment. **(5mks**

……

……

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

231/1 - BIOLOGY - Paper 1

2 Hours

Instruction To Candidates

a) Write your name and admission number in the spaces provided above.

b) Sign and write the date of the examination in the spaces provided.

c) Answer all the questions in this question paper.

d) Answers must be written in the spaces provided

e) This paper consists of 10 printed pages.

f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

g) Candidates should answer all the questions in english.

For Examiner's use only

Question	Maximum Score	Candidate's Score
1 – 29	80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. A young scientist observed a bird laying her eggs in a nest and later the eggs hatched into chicks. Name two characteristics shown by the chicks that show a chick is a living thing but an egg is not. **(2mks)**

……

……

……

……

2.In which two ways are the organelles chloroplast and mitochondria similar. **(2mks)**

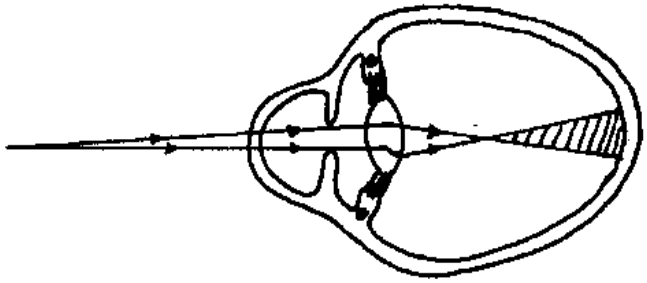
……

……

……

……

3.The illustration below shows a human eye that is defective.



(a) Identify the eye defect. **(1mk)**

……

……

(b) How would this defect be corrected? **(1mk)**

……

……

……

4. (a) Whatis homeostasis? **(1mk)**

……

……

……

(b) State three processes in humans in which homeostasis is involved. **(3mks)**

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

5. (a) In which phase of photosynthesis are carbohydrates formed? **(1mk)**

……

……

(b) How is the dark stage of photosynthesis dependent to light stage? **(2mks)**

……

……

……

……

6.Why are the cooling fans of value even in a closed room? **(2mks)**

……

……

……

……

7.How can the colour of the skin affect the rate of heat loss or heat gain? **(3mks)**

……

……

……

……

8.List down three abiotic factors that would influence life in a lake**.** **(3mks)**

……

……

……

……

……

9.Distinguish between the terms asexual and sexual reproduction **(2mks)**

……

……

……

……

10. (a) Define the term germination. **(1mk)**

……

……

……

(b) state the two types of germination in plants**.** **(2mks)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

(c) when does growth start in plants**.** **(1mk)**

……

……

11. (a) What is polyploidy. **(1mk)**

……

……

……

(b) Mating a horse with a donkey produces an infertile animal, a mule. Explain. **(2mks)**

……

……

……

……

12. A part of DNA strand has the following base sequence: G-G-C-C-T-A-T-C.

(a) what is the sequence of the complimentary strand? **(1mk)**

……

……

……

(b) what will be the sequence of m-RNA transcribed from this part of DNA? **(1mk)**

……

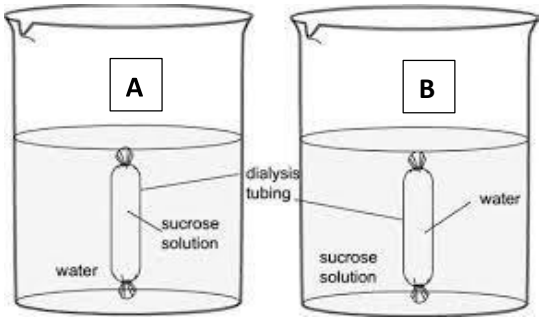
……

……

(c) How does DNA differ from RNA**?** **(3mks)**

DNA	RNA

13. A student made a set up shown below to study a physiological process



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) In which beaker did the dialysis tubing reduce in size? **(1mk)**

……

……

……

b) Account for your answer in a) above**.** **(2mks)**

……

……

……

……

14. Give two reasons why lumbar vertebrae have long and broad transverse processes. **(2mks)**

……

……

……

……

15. Give two ways in which seed dormancy benefit a plant**.** **(2mks)**

……

……

……

……

16. State three precautions one should observe while conducting experiments in food test. **(3mks)**

……

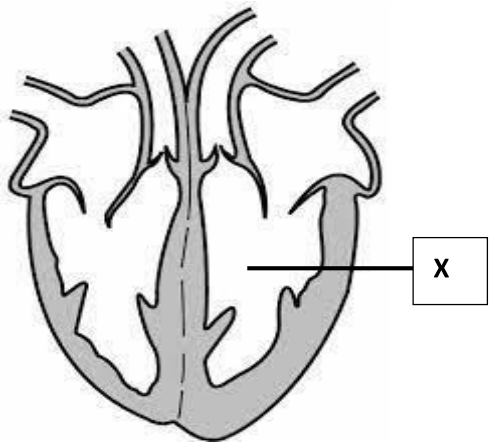
……

……

……

……

17. Use the diagram of the heart shown below to answer the questions that follow



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) From the diagram, give a reason to show that **X** is the left ventricle**.** **(1mk)**

……

……

……

b) Name a class of organisms where all members have the heart structure above **(1mk)**

……

……

c) Why are the muscles found in the heart above said to be myogenic? **(1mk)**

……

……

……

18. State the role of the following in the nitrogen cycle. **(2mks)**

(a) *Thiobacillus denitrificans*.

……

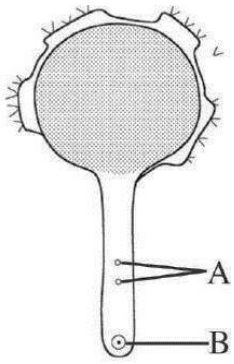
……

(b) *Nitrococcus* bacteria.

……

……

19. The diagram below shows the structure of germinating pollen grain



(a) Name the type of cell division that formed the parts labelled A. **(1mk)**

……

……

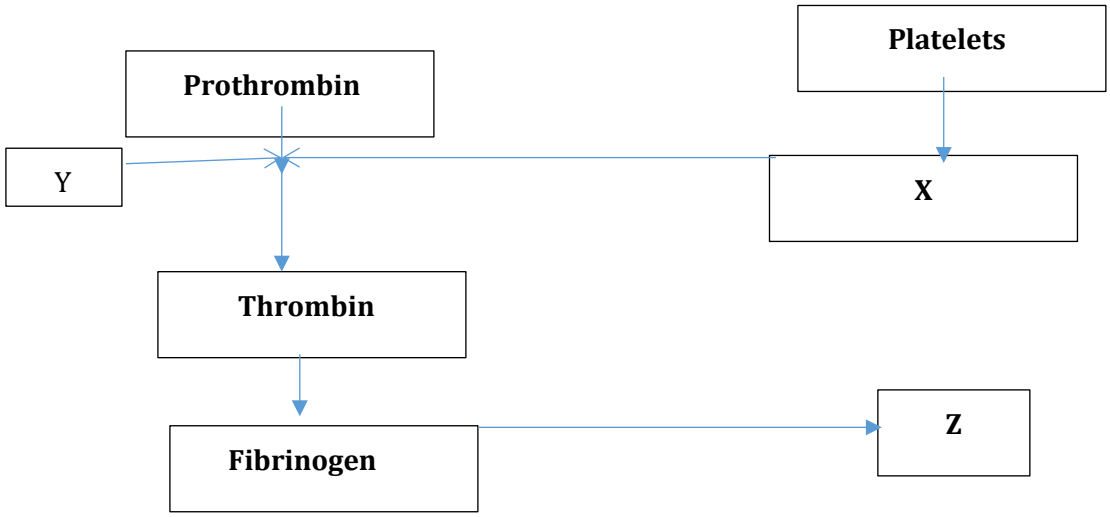
(b) State the role of part labelled B**?** **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

20. The chart below is a summary of blood clotting mechanism in a man.



Name;

(a) The metal ion represented by Y. **(1mk)**

……

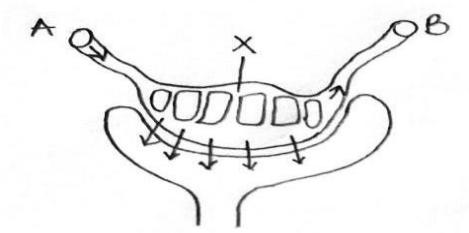
……

(b) The end product of the mechanism represented by Z. **(1mk)**

……

……

19. The following is part of a kidney nephron



(a) i) Name the process represented by the arrows. **(1mk)**

……

……

ii) Name the conditions necessary for the process named in (a) (i) above to take place. **(1mk)**

……

……

(b) Identify with a reason vessel A. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

20. Name any two blood components that are present in vessel (A) but are absent in vessel B. **(2mks)**

……

……

……

……

21. State the function of the following during pregnancy. **(3mks)**

(a) Amnion

……

……

(b) Amniotic fluid

……

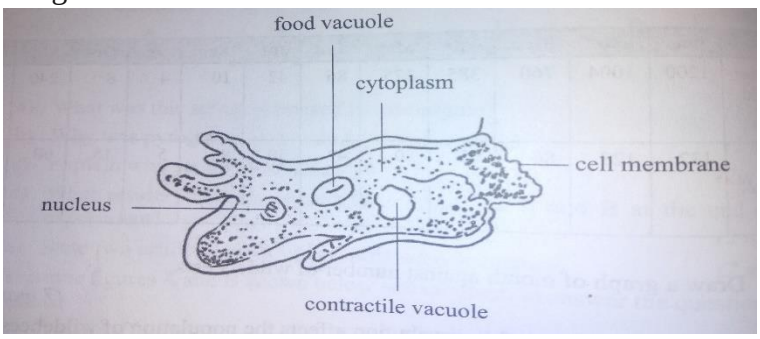
……

(c) Umbilical cord

……

……

22. Below is a diagram of an organism.



(a) Name the kingdom to which the organism belongs. **(1mk)**

……

……

(b) Give a reason for your answer in (a) (i) above. **(1mk)**

……

……

……

(c) Explain the process by which the food gets into the organism. **(2mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

23. State two characteristics features of members of division bryophyte. **(2mks)**

……

……

……

……

24. (a) i) Name the cartilage between the bones of the vertebral column **(1mk)**

……

……

ii) State the function of the cartilage named in (a)(i) above**.** **(1mk)**

……

……

……

25. Why do herbivores have large eyes on the side of their heads? **(1mk)**

……

……

……

26. Suggest three measures that can be taken to control infection of man by protozoan parasites. **(3mks)**

……

……

……

……

……

27. In a family, all off springs have blood group AB. What are the possible blood groups of?the parents? **(1mk)**

……

……

……

28. List the changes that take place during inhalation in the breathing cycle of a mammal in the following: **(3mks)**

(a) Rib cage thoracic cavity**……**

(b) Diaphragm **…….**

(c) External intercostal muscles **…….**

29. Evolution is an ongoing process, state two pieces of evidence which suggest that evolution is still taking place. **(2mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……..

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

231/2
BIOLOGY
PAPER 2
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- This paper consists of **two** sections. Section **A** and section **B.**
- Answer **ALL** questions in section **A** in the spaces provided. In section **B** answer question **6** (compulsory) and either question **7** or **8** in the spaces provided after question 8

For Examiners use only.

Section	Question	Maximum score	Candidates score
	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
	6	20	
	7	20	
	8	20	
	Total score	80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A:
Answer all the questions in the spaces provided.

1. A biological washing powder contains an enzyme. The enzyme removes stain such as blood from clothes by digestion when the clothes are soaked in water with powder.

(a) What is an enzyme? **(1Mk)**

……

……

……

(b) Identify two possible enzymes that are found in the washing powder above. **(2Mks)**

……

……

……

……

(c) Would the stains be removed faster with the powder in water at 30^{o}C or 15^{0}C. **(1Mk)**

……

……

……

(d) Explain your answer in (c) above **(2Mks)**

……

……

……

……

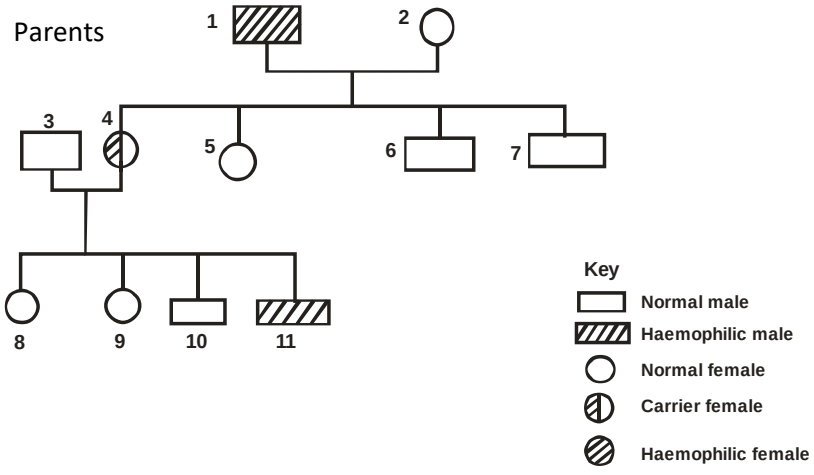
(e) Why would boiling the clothes soaked with the washing powder do not remove the stains? **(2Mks)**

……

……

……

2.The pedigree chart below illustrates the inheritance of haemophilia in a given a given family.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) Suggest the possible genotype of: **(2Mks)**

Individual 1 ……

Individual 4 ……

b) Using a punnet square, work out the possible phenotypes of offspring's, if individual 4 married a haemophiliac male. **(4Mks)**

c) Explain why there are no carrier males. **(1Mk)**

……

……

……

d) Name a condition in man that is due to chromosomal mutation. **(1Mk)**

……

……

3.(a) Distinguish between pyramid of numbers and pyramid of biomass. **(2Mks)**

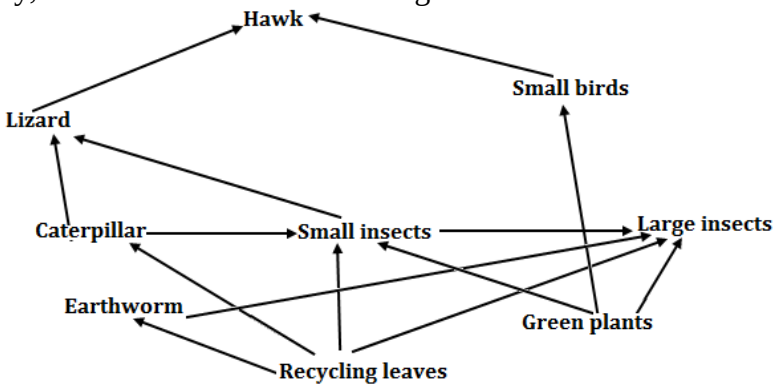
……

……

……

……

b) From an ecological study, students formed the following food web.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

From the food web, construct two food chains with lizard as a tertiary consume. **(2Mks)**

……

……

……

c) (i) Which organism has the least biomass in the ecosystem. **(1Mk)**

……

……

(ii) Give reasons for your answer **(3Mks)**

……

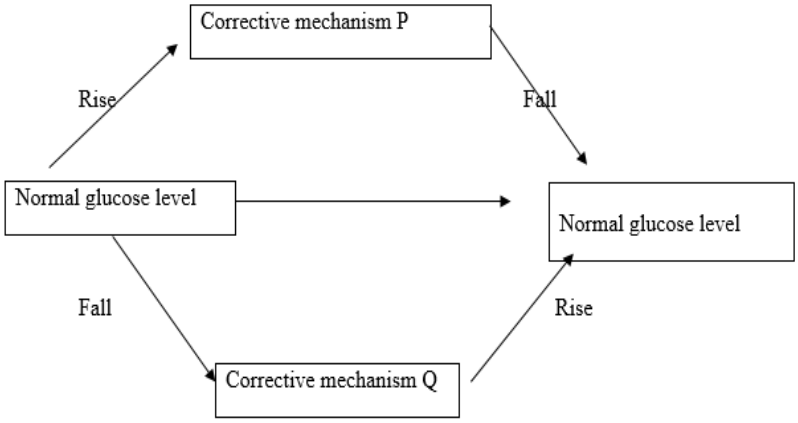
……

……

……

……

4.The diagram below shows how blood sugar in mammalian body is regulated.



a) Explain what happens during corrective mechanism P. **(3Mks)**

……

……

……

……

……

b) Name two organs involved in corrective mechanisms P and Q. **(2Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

c) State the reasons why glucose level should be maintained constant. **(2Mks)**

……

……

……

……

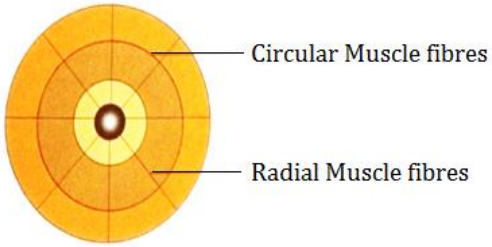
d) What is osmoregulation? **(1Mk)**

……

……

……

5.The diagram below shows the internal arrangement of muscles in the eye.



(a). How is the pupil affected by contraction of ;

(i) Circular muscles **(1Mk)**

……

……

(ii) Radial muscles **(1Mk)**

……

……

(b) Where are light sensitive cells located in the eye? **(1Mk)**

……

……

(c) What is short sightedness? **(2Mks)**

……

……

……

……

(d) Explain why cones have a higher visual acuity as compared to rods. **(2Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(e) State one defect that is heritable. **(1mk)**

……

……

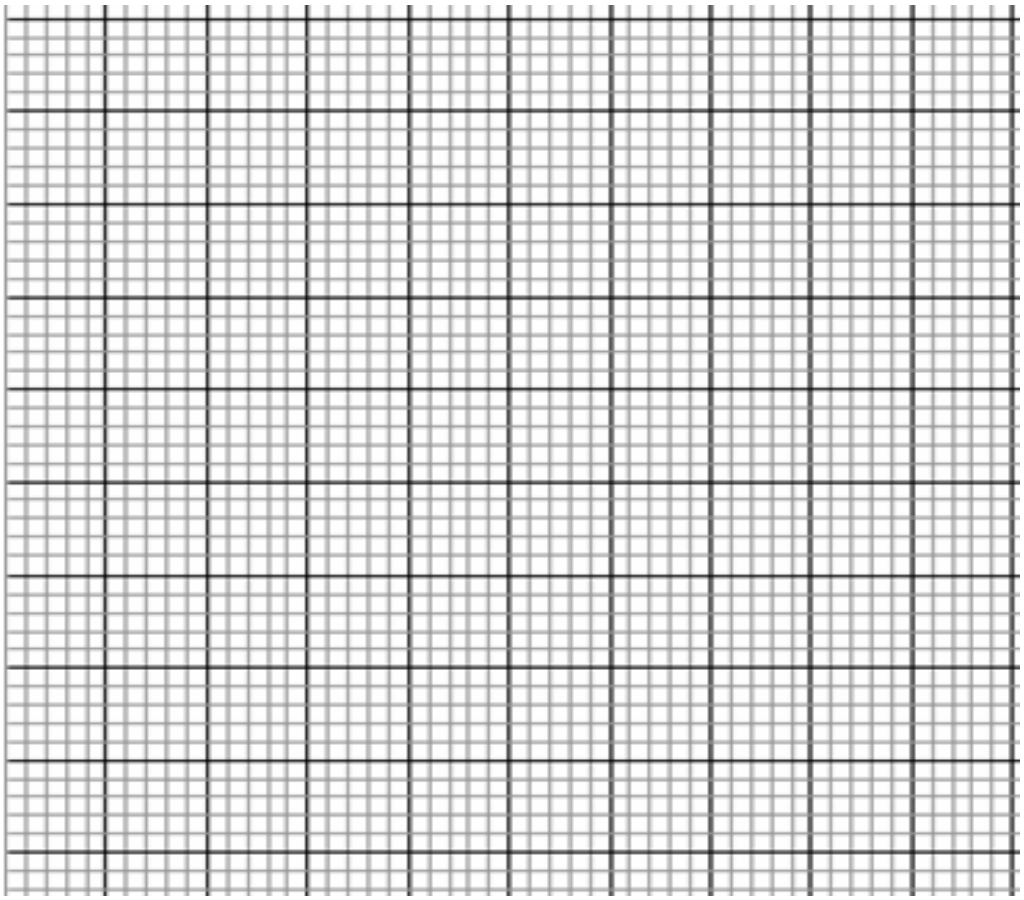
……

SECTION B:
Answer question 6 and either question 7 or 8.

6. The diagram below is obtained from measurements of growth in the leaf petiole of a certain plant. The relative growth rate is calculated and the data is obtained as shown below.

Time in days	0	1	2	3	4	5	6	7	8	9
Relative growth rate(cm/day)	0	0.1	0.3	0.8	2.0	4.0	4.5	3.5	0.2	0

a) Plot a graph of relative growth rate against time. **(5Mks)**



b) State two functions of a leaf petiole. **(2Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

c) State two characteristics of cells found in the region of cell division. **(2Mks)**

……

……

……

……

d) Account for the shape of the curve between the following days **(3Mks)**

i) 2 – 5.

……

……

……

……

……

ii) 6 – 8 **(3Mks)**

……

……

……

……

……

iii) 8-9 **(3Mks)**

……

……

……

……

……

e) Distinguish between primary growth and secondary growth in a flowering plant. **(2Mks)**

……

……

……

……

7.Explain how <u>abiotic</u> factors affect plants. **(20Mks)**

8. (a) Describe how the following supports the theory of evolution. **(4Mks)**

(i) Geographical distribution of organisms

(ii) Comparative anatomy

(b) Describe how hormones regulate the menstrual cycle in human beings. **(16Mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

231/3
BIOLOGY
PAPER 3
PRACTICAL
TIME: 1 ¾ HOURS

231/3
BIOLOGY
PAPER 3
PRACTICAL
TIME: 1 ¾ HOURS

Instructions To Candidates

- Write your Name, Class and Adm No. in the spaces provided above
- Answer ALL the questions in the spaces provided
- You are required to spend the first 15 minutes of the 1 $^{3}/_{4}$ hours reading the whole paper carefully before commencing your work.
- Candidates should answer the questions in English

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	18	
2	07	
3	15	
TOTAL	40	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.(a) You are provided with specimen A

i) Name the fruit type that the specimen belongs to **(1mk)**

……

……

ii) Give a reason **(1mk)**

……

……

iii) Make a transverse section on specimen A and label the parts. **(4mks)**

iv) State the type of placentation of fruit A **(1mk)**

……

……

b) Squeeze out the juice from the two halves of specimen A into a small beaker. Using part of the juice and the reagents provided only, test for the food substances in the juice. **(6mks)**

Reagent	Procedure	Observation	Conclusion
DCPIP			
Benedict's Solution			

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

c) Transfer 5ml of lime water in to a test tube. Insert a straw in the lime water in the test tube and blow air in it.

i) State the observation made **(1mk)**

……

……

……

ii) What was the aim of the experiment? **(1mk)**

……

……

iii) Account for the observation **(1mks)**

……

……

……

iv) What biological process produces the gas being tested in this experiment **(1mk)**

……

……

v) What physiological process is involved in the removal of the gas from the body. **(1mk)**

……

……

2. The photographs below were taken from a grassland ecosystem. Examine them carefully



i) Construct a food chain from the organism in the photographs above**.** **(1mk)**

ii) Name the trophic level occupied by the antelope giving a reason for your answer. **(2mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

iii) Using observable feature only, name the class in which lion and antelope belong giving a reason. **(2mks)**

class

……

……

……

Reason.

……

……

……

iv) With a reason, identify which of the three organisms has the highest biomass. **(2mks)**

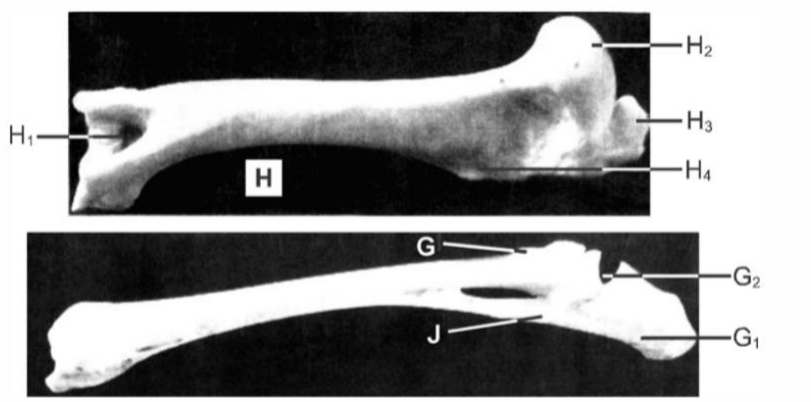
……

……

……

……

3. You are provided with photographs of specimen J, G and H.



a) Name the specimen labelled J, H, G. **(3mks)**

……

……

……

……

b) Which part of the mammalian body were these specimens obtained. **(1mk)**

……

……

……

c) Name the parts labelled as G_1, G_2 and H_2. **(3mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

d) i) Name the type of joint formed at the proximal end of specimen H. **(1mk)**

……

……

ii) Give a reason for your answer in d (i) above**.** **(1mk)**

……

……

……

e)State two functions of the part labelled G_1. **(2mks)**

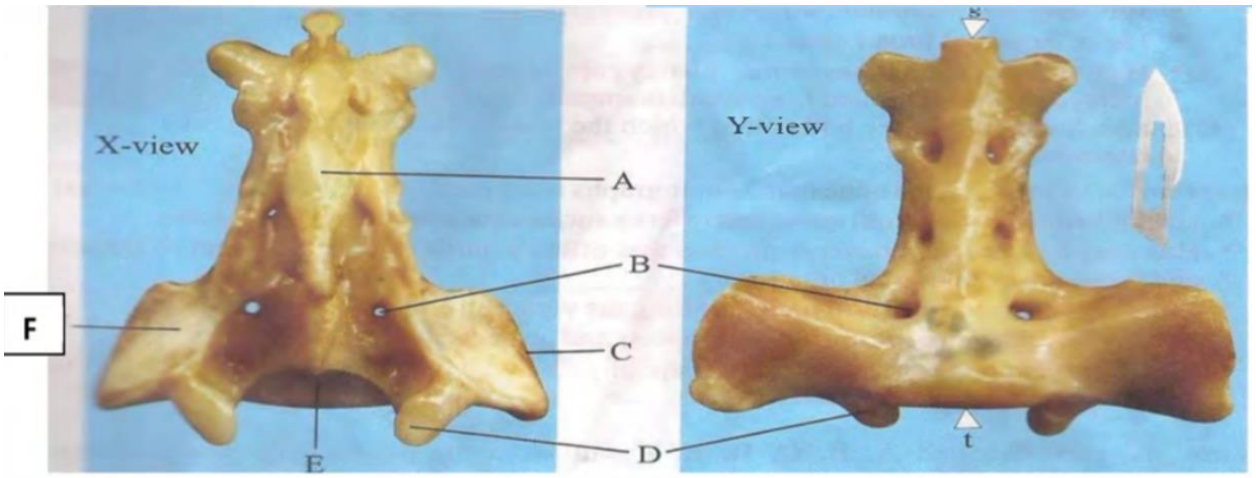
……

……

……

……

f) The photograph below are different views of a bone obtained from a mammal. Examine them and answer the questions below.



i. Identify the bone**.** **(1mk)**

……

……

ii. Give reasons for your answer in f) (i) above. **(1mk)**

……

……

……

iii. Name the bone that articulates on the surface labelled F**.** **(1mk)**

……

……

iv. Identify the view of photograph X. **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

565/1
BUSINESS STUDIES
Paper 1
Time: 2 hours

INSTRUCTIONS
Answer ALL the questions in the spaces provided.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

16	17	18	19	20	21	22	23	24	25

TOTAL

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.Outline **four** commercial services that are useful to a manufacturer **(4Mks)**

……

……

……

……

……

……

2.Kamau operates a shop in a farming area. State **four** ways in which the farm community can benefit from the business activity **(4Mks)**

……

……

……

……

……

……

3.State **four** sources of energy that are naturally available in Kenya but not fully exploited **(4Mks)**

……

……

……

……

……

……

4.Outline **four** ways in which the utility of a commodity is increased **(4Mks)**

……

……

……

……

……

……

5.Outline **four** reasons why production in the subsistence sector is usually low **(4Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

6.Use the cash book below to state the transactions that took place on 2nd, 5th and 7th of May 2010.

Date	Details	Folio	Cash (shs)	Banks (shs)	Date	Details	Folio	Cash (shs)	Banks (shs)
1-May	Bal		100,000	250,000	2-May	Creditors			30,000
					3-May	Rent		4,000	
5-May	Bank	c_1	20,000		5-May	Cash	c_1		20,000
7-May	James			11,000	6-May	Drawing		12,000	
					8-May	Bal	c/d	104,000	211,000
			120,000	261,000				120,000	261,000
8-May	Bal	b/d	104,000	211,000					

Transaction;

(i) 2nd –

……

……

(ii) 5th –

……

……

(iii)6th –

……

……

(iv)7th –

……

……

7.State **four** errors that do not affect the agreement of a trial balance **(4Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

8.Highlight the reasons that have made the use of credit cards (plastic money) popular as means of payment **(4Mks)**

……

……

……

……

……

……

9.Give **four** malpractices against which consumers may need protection **(4Mks)**

……

……

……

……

……

……

10. During a trader's workshop, a speaker presented a speech on ethical issues in business. Highlight some ethical issues that he may have raised, affecting business **(4Mks)**

……

……

……

……

……

……

11. List the **four** documents that should be prepared during the formation of a joint stock company **(4Mks)**

……

……

……

……

……

……

12. State **four** expenses that are incurred in the process of distribution of goods **(4Mks)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

……

13. Given below are transactions to Buda traders for each of the transactions, indicate in the column below the account to be debited and the account to be credited **(4Mks)**

	Transaction	DR	CR
(i)	Paid salaries in cash		
(ii)	Withdraw cash from bank for office use		
(iii)	Paid telephone bill by cheque		
(iv)	Purchased office equipment on credit from Eldoret Holdings		

14. Highlight **four** ways in which Kenya is likely to benefit from preparing a proper development plan **(4Mks)**

……

……

……

……

……

……

15. Highlight **four** principles of government expenditure **(4Mks)**

……

……

……

……

……

……

16. The following information was extracted from the books of Kiambu traders

	Ksh.
Opening stock	160,000
Closing stock	200,000
Purchases	1,800,000
Margin	20%

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Calculate Kiambu trader's sales **(4Mks)**

17. Apart from the price mechanism, state other ways in which prices of goods and services are determined **(4Mks)**

……

……

……

……

……

……

18. State the **four** forms of economic integration **(4Mks)**

……

……

……

……

……

……

19. State the type of insurance/assurance cover Mshamba should take in the following circumstances.

	Circumstance	**Type of Policy**
(i)	To cover against theft of his property at home	
(ii)	To take a short period cover in case one is participating in motor car rally	
(iii)	To cover loss of cash or goods through theft by any of his employees	
(iv)	To cover damage to his/her car, property in the car and damage to other vehicles	

20. Outline **four** assumptions that would make a two-sector economy to hold **(4Mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

21. Outline **four** causes of unemployment in Kenya today **(4Mks)**

……

……

……

……

……

……

22. State the journal that deals with each of the following types of transaction **(4Mks)**

	Types of transaction	Journal
(i)	Sale of fixed asset on credit	
(i)	Correction of errors	
(i)	Credit purchases	
(i)	Return of goods by customers	

23. Highlight **four** factors a trader may consider when determining the appropriate means of transport **(4Mks)**

……

……

……

……

……

……

24. Outline **four** qualities of a good sales person **(4Mks)**

……

……

……

……

……

……

25. Give **four** reasons why firms choose to remain small in an economy dominated by large firms **(4Mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

565/2
BUSINESS STUDIES
PAPER 2
TIME: 2 ½ HOURS

Instructions To The Candidate

- This paper consists of **six** questions.
- Answer any **five** questions in this paper
- Answers should be written in the foolscaps provided
- Clearly indicate the question number on the foolscaps
- Ensure you write your class and admission number.
- All questions carry equal marks.

For Examiners Use Only

QUESTION	1	2	3	4	5	6	TOTAL
MARKS							

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. **(a)** Explain **Five** factors that hinders entrepreneurial practices in Kenya today. **(10mks)**

(b) Outline **Five** differences between a public corporation and a private limited company. **(10mks)**

2.(a) The following Trial balance was extracted from the books of laikipia Traders on 30th may 2023.

LAIKIPIA TRADERS

Trial Balance

As at 30th May 2023

Name of Account	Dr (Shs)	Cr (Shs)
Sales and purchases	21,000	221,000
Returns	4,000	8,000
Carriage inwards	3,500	
Carriage outwards	4,200	
Stock (1/05/2023)	10,000	
Discount	7,000	9,600
Electricity	4,500	
Wages	8,600	
Premises	300,000	
Debtors and Creditors	13,500	40,500
Cash at bank	47,800	
Capital		145,000
Returns		
	424,100	424,100

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Additional information:

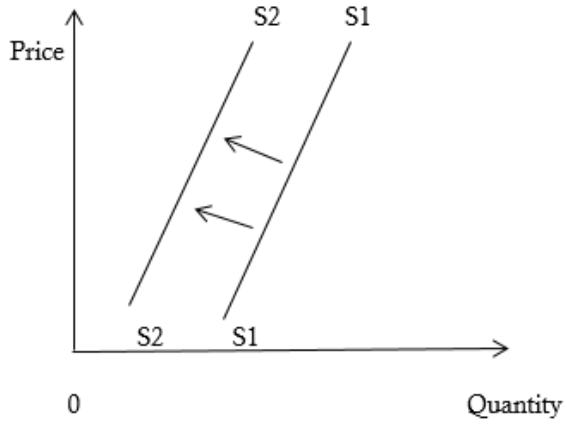
Closing stock was valued at shs 7,000.

Prepare : **i)** Trading, profit and loss Account for the year ending 30th may 2023. **(8mks)**

(ii) balance sheet as at 30th may 2023.

(b) Highlight **four** documents that are sent to the seller by the buyer in home trade. **(8mks)**

3.(a) The diagram given below shows changes in the supply curve.



Explain **five** factors that may have led to the change from S1S1 to S2S2. **(10mks)**

(b) Explain **five** functions of commercial banks**.** **(10mks)**

4.(a) Explain **five** limitations of using billboards as medium of advertising. **(10mks)**

(b) Explain **five** significance of warehousing to the consumers. **(10mks)**

5. (a) The following balances were extracted from **KIVU MERCHANTS** books of accounts on January 2017;

Motor vehicles	250, 000
Furniture	8, 000
Stock	37, 000
Debtors	20, 000
Cash at bank	15, 000
Cash in hand	5,500
ADC loan	100, 000
Creditors	12, 000
Capital	224, 000

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

The following transactions took place during the month.

January	1	deposited an additional shs.30, 000 from private sources into the business bank account.
January	5	issued a cheque for shs. 8, 000 to ADC bank which was honoured by the bank.
"	10	sold goods whose cost was shs.3, 500 at shs.7, 000 and received the proceeds by the cheque.
"	15	bought a new motor vehicle worth shs.50, 000 having borrowed an additional loan from ADC bank.
"	17	took goods worth shs. 1,200 to be used by his family.
"	20	sold one of the old motorvehicles whose book value was shs.27, 000 at shs. 22,000 on credit.
"	25	received cash shs.15, 000 from a debtor.
"	29	paid a creditor by cheque shs.8, 500
"	30	bought more goods on credit worth shs. 3,200

Required: Prepare **KIVU MERCHANT'S** balance sheet as at 30th April 2017. **(10mks)**

(b) Outline **five** reasons why mobile phones (cell phones) have become popular means of communication. **(10mks)**

6 (a) Explain **five** negative effects of inflation. **(10mks)**

(b) Explain **five** reasons why a country may experience balance of payments disequilibrium. **(10mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……..…

SCHOOL: ……..…..

INDEX NO: ……..... SIGN: ……..……. DATE: ……..….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

233/1 - CHEMISTRY -Paper 1
(THEORY)

Instructions to candidates

(a) Write your name, index number in the spaces provided above.

(b) Sign and write the date of the examination in the spaces provided

(c) Answer all the questions in sp[aces provided .

(d) All working **MUST** be clearly shown.

(e) KNEC mathematical tables and silent non programmable electronic calculators may be used.

f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing

(g) Candidates should answer the questions in English

FOR EXAMINER'S USE ONLY.

Question	Maximum score	Candidate's score
1 – 28	80	
Total score		

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. Draw a labeled diagram showing atomic structure of ($^{23}_{11}Na$.) **(2mks)**

……

……

……

……

(b) The atomic number of phosphorus is 15.Draw a dot (•) and cross(x) diagram for the compound formed when phosphorus reacts with hydrogen atomic number 1 **(1mk)**

2. Study the following heat changes and answer questions that follow

$NaCl(s) \longrightarrow Na^{+}_{(g)} + Cl^{-}_{(g)} \quad \Delta H1 = +781 kJmol^{-}$

$Na^{+}(g) \longrightarrow Na(aq) \quad \Delta H_2 = -390 kJmol^{-}$

$Cl^{-}(g) \longrightarrow Cl^{-}(aq) \quad \Delta H3 = -384 kJmol^{-}$

Identify the heat changes **(1mk)**

H1……..

H2……

b) calculate
The heat of solution of sodium chloride using the above heat changes **(2mks)**

3. Dry carbon (II) oxide gas reacts with heated lead(II)oxide as shown in the equation below.

$PbO_{(s)} + CO_{(g)} \longrightarrow Pb_{(s)} + CO_{2(g)}$

(a) Name the process undergone by the lead(II)oxide. **(1mk)**

……

……

(b) Give a reason for your answer in (a) above. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(c) Name another gas that can be used to perform the same function as carbon(II)oxide gas in the above reaction. **(1mk)**

……

……

4. The following reaction is in equilibrium in a closed container

$2SO_{2(g)} + O_{2(g)} \rightleftharpoons 2\ SO_{3\ (g)}$ Δ**H= -Ve**

State giving reasons how an increase in temperature would affect the amount of sulphur (VI) oxide gas. **(2mks)**

……

……

……

……

5. The standard electrode potential for elements **P, Q, R** and **S** are given below.

	E^{θ} (volts)
$P^{2+}(aq) + 2e^- \longrightarrow P_{(s)}$	-2.40
$Q^{2+}(aq) + 2e^- \longrightarrow Q(s)$	-0.80
$2R^{+}(aq) + 2e^- \longrightarrow R_2(g)$	0.00
$S^{2+}(aq) + 2e^- \longrightarrow S(s)$	+0.35
$\frac{1}{2}\ T_2(aq) + e^- \longrightarrow T^-(aq)$	+1.40

(a) What is the E^{θ} value for the strongest oxidizing agent? **(1mk)**

(b) Which two of the above elements in an electrochemical cell produce the largest e.m.f . **(1mk)**

……

……

……

(c) Calculate the electromotive force of the cell in (b) above. **(1mk)**

6.(a) What is meant by the term:

Half-life:- **(1mk)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) state one application of radioactivity in medical

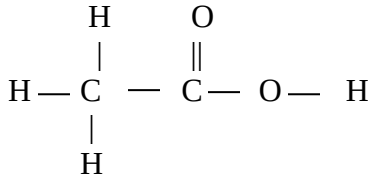
……

……

……

c) 50g of a radioactive substance was reduced to 6.25g in 36.3years. Calculate the half-life of the substance. **(2mks)**

7. The structure below belongs to a member of alkanoic acid.



a) Give the name of the Structure. **(1mk)**

……

……

b) What is the total number of electrons used for bonding in a molecule of the structured Named in (a) **(2mks)**

8. The purple color of a solution containing manganese (vii) ions disappears when iron (ii) ions are added. The ionic equation for the reaction which occurs is;

$MnO^-_{4(aq)} + 5Fe^{2+}_{(aq)} + 8H^+_{(aq)} \longrightarrow Mn^{2+}_{(aq)} + 5Fe^{3+}_{(aq)} + 4H_2O_{(l)}$

With reasons state which substance is acting as a; **(2mks)**

i) Reducing agent.

……

……

ii) Oxidizing agent.

……

……

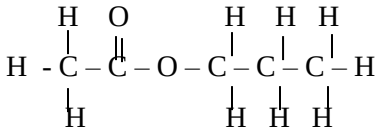
9) .3.1g of an organic compound containing carbon ,hydrogen and oxygen only produced 4.4g of carbon(iv) and 2.0 of water on combustion

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) Calculate its empirical formulae **(2mk)**

b) Calculate its molecular formular if its mass 90**.** **(1mk)**

10. Esters, fats and polyesters all contain the ester linkage. The structural formula of the ester is given below.



Name **two** chemicals that could be used to make this ester and draw their structural formulae. Show all bonds. **(2mks)**

……

……

……

……

11.An iron sculpture was produced to commemorate the anniversary of founder of a certain village. To prevent it from rusting, the village elder attached it by a wire to a block of zinc which was stored underground out of sight.

(i). Explain how the village elder's action would prevent the rusting of the sculpture. **(1mk)**

……

……

……

(ii). What name is given to this method of preventing rusting? **(1mk)**

……

……

(iii). List down **two** other ways in which rusting of the statue could be prevented. **(1mk)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

12) .50cm^3 ammonia gas diffuses through a small orifice in 20 seconds. How long will it take a similar volume of propane (C_3H_8) to diffuse through the same orifice under the same conditions of temperature and pressure? (C=12.0, H =1.0, N=14.0) **(3mks)**

13.(a) what observations would be made if hydrogen sulphide gas was bubbled through a solution of Copper (II) sulphate. **(1mk)**

……

……

……

(b) Write an equation for the reaction that takes place in (a) above. **(1mk)**

……

……

(c). Chlorine reacts with methane as shown below.

$$CH_{4(g)} + Cl_{2(g)} \longrightarrow CH_3Cl_{(g)} + HCl_{(g)}$$

What condition is necessary for this reaction to take place? **(1mk)**

……

……

……

14. The table below gives some properties of three metals: Aluminium, iron and copper. Use it to answer the questions that follow.

Metal	Density	Tensile Strength 10^{10}pa	Electrical conductivity
Aluminium	2.70	7.0	0.38
Iron	7.86	21.1	0.10
Copper	8.92	13.0	0.59

Assuming that steel and stainless steel have similar properties to iron.

(a) Why do some stainless steel sauce pans have a copper base? **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) Aluminum with a steel core is used for overhead power cables in preference to copper. Why is aluminium preferred ? **(1mk)**

……

……

……

(c). Apart from over head power cables copper is chosen for almost all other electrical uses.

Suggest **two** reasons for the choice of copper. **(2mks)**

……

……

……

……

15. A form four student wanted to determine the solubility of potassium nitrate. He obtained the following results.

Mass of evaporating dish = 15.13g

Mass of evaporating dish and solution. = 36.51g

Mass of evaporating dish and salt = 19.41g

Use the information above to calculate the solubility of potassium nitrate. **(3mks)**

16. The grid below is part of the periodic table. Use it to answer the questions that follow. (The letters do not represent the actual symbols of elements.)

						R	S	
N	Q						T	U
P								

(a) Indicate in the grid the position of an element represented by letter V, whose atomic number is 14. **(1mk)**

(b) Select a letter which represents a monoatomic gas. **(1mk)**

……

……

(c) Write an equation for the reaction between Q and T **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

17. The table below shows ammeter readings recorded when two equimolar solutions were tested separately.

Electrolyte	Current (A)
Dilute Sulphuric (VI) Acid	7.2
Ethanoic Acid	4.0

Explain the difference in the ammeter readings. **(1mk)**

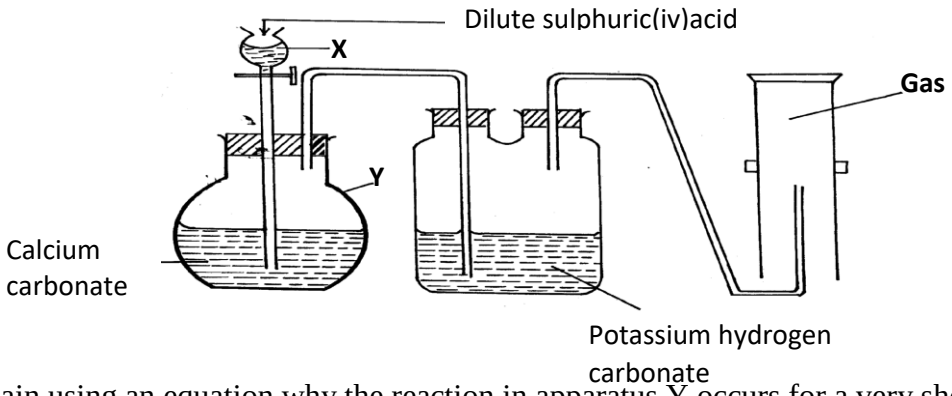
……

……

……

18. A student set up the apparatus for the preparation of carbon (IV) oxide gas as shown below.

Study the set up and answer the questions that follow.



(a) Explain using an equation why the reaction in apparatus Y occurs for a very short time then stops. **(1mk)**

……

……

……

(b) What is the purpose of passing the gas through potassium hydrogen carbonate? **(1mk)**

……

……

……

(c) State and **explain** why there is no sample of carbon (IV) oxide gas collected**.** **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

19. Describe how a solid of ammonium sulphate can be prepared starting with $100cm^3$ of 2M ammonium hydroxide **(3mks)**

……

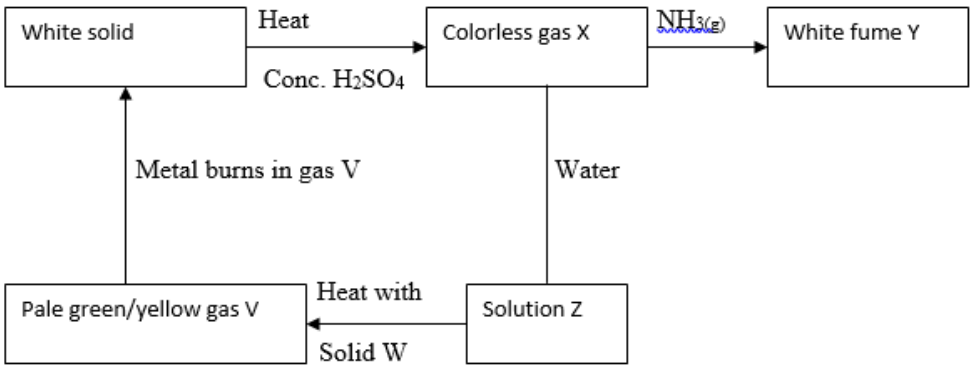
……

……

……

……

20. Study the scheme below and answer the questions that follow.



a) Write an equation for the formation of white fumes Y. **(1mk)**

……

……

b) What is the function of solid W in the reaction? **(1mk)**

……

……

……

c) Identify gas V. **(1mk)**

……

……

21. Explain the effect of the following on the rate of reaction in terms of the collisions theory ; **(3mks)**

a) Increase in concentration

……

……

b) Change in pressure

……

……

c) Use of catalyst

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

……

22. Explain each of the following observations.

(a). Soft drinks fizz when the cap is removed from the bottle. **(1mk)**

……

……

……

(b). Diamond does not conduct electricity while graphite does. **(1mk)**

……

……

……

(c). Pure nitric (V) acid is colourless but during its laboratory preparation, it appears yellow. **(1mk)**

……

……

……

23. Polyvinyl/ chloride (PVC) is an example of an addition polymer whose monomer is Chloroethene.

(a). What is a polymer? **(1mk)**

……

……

……

(b). What is meant by addition polymerization? **(1mk)**

……

……

……

(c). Using 2n molecules draw the structure of PVC. **(1mk)**

……

……

……

24.(a) State BoyleS's law **(1mk)**

……

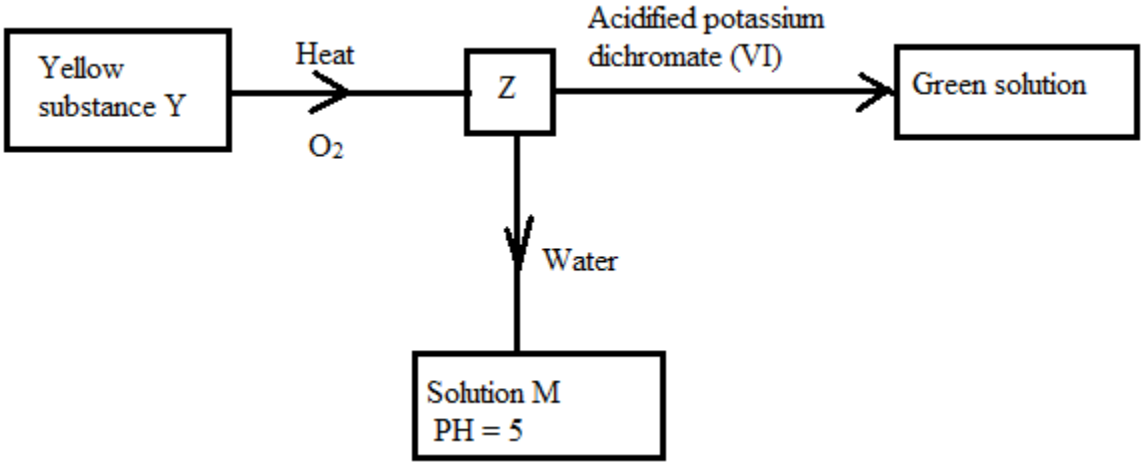
……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b A gas occupies 500cm^3.at 27^{c} and 100,000pa. What will be its volume at 0^{c} and 101325pa **(2mks)**

25. Study the flow chart below and answer the questions that follow.



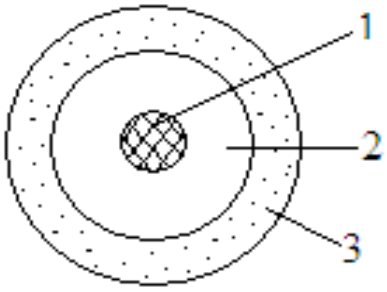
Identify **(3mks)**

Z……

M……..

Y……..

26. The diagram below represents pipes used in Frasch pump for the extraction of sulpur



Which substance passes through tube? **(3mks)**

1…….

2……

3…….

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

27. In the last stage of the solvay process, a mixture of sodium hydrogen carbonate and ammonium chloride is formed.

(i). State the method of separation used. **(1mk)**

……

……

(ii). Write an equation showing how lime is slaked **(1mk)**

……

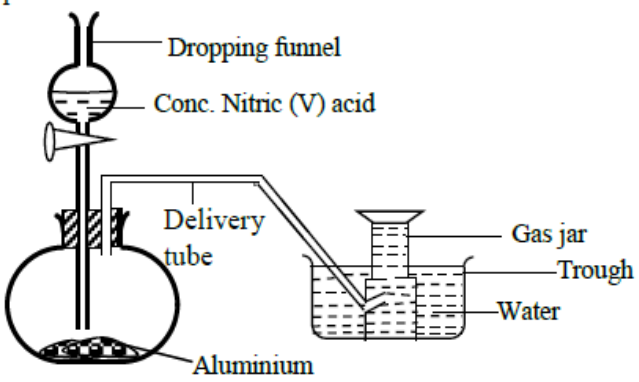
……

(iii). Name the by- product recycled in the above process. **(1mk)**

……

……

28. In order to prepare hydrogen gas in the laboratory a student set-up the apparatus shown in the diagram below. Study it and answer the questions that follow.



(a) Suggest why the student did not collect hydrogen gas. **(1mk)**

……

……

……

(b) In a separate experiment the student reacted iron and hydrochloric acid to prepare hydrogen gas.

(i) Write an ionic equation for the reaction. **(1mk)**

……

……

(ii) The hydrogen gas produced was found to have a foul smell. Suggest an explanation for this. **(1mk)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

233/2
CHEMISTRY
PAPER 2
(THEORY)
TIME: 2 HOURS

INSTRUCTION TO CANDIDATES

1. Write your name and index number in the spaces provided above

2. Answer all the questions in the spaces provided

3. All working **must** be clearly shown where necessary.

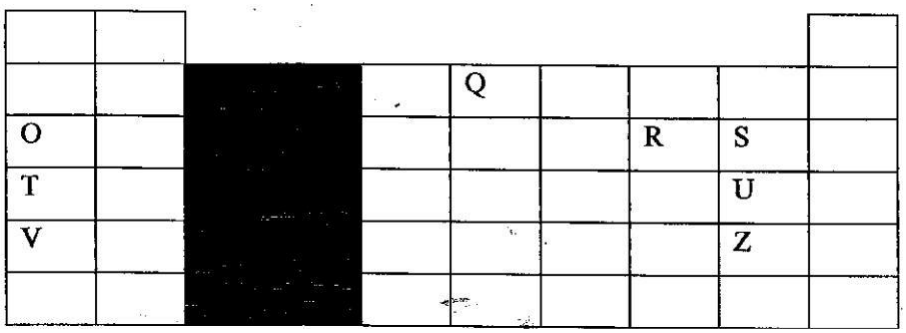
4. Candidates should check to ascertain that each page s printed as indicated and that no question is/are missing.

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1	11	
2	9	
3	12	
4	9	
5	10	
6	10	
7	10	
8	9	
TOTAL	80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. (a) The grid below represents part of the periodic table. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.



i. Which element will require the least amount of energy to remove one of the outermost electrons? **(1mk)**

……

……

……

ii. Select the most reactive non- metal. **(1mk)**

……

……

……

……

iii. Which of the elements has the greatest tendency of forming covalent? Explain **(2mks)**

……

……

……

……

iv. What name is given to the family of elements to which elements **O**, **T** and **V** belong? **(1mk)**

……

……

v. An element **W** has atomic number 15. Indicate the position of **W** on the grid. **(1mk)**

……

……

vi. Explain why the atomic radius of **S** is smaller than that of **R**. **(1mks)**

……

……..

vi. Explain why the atomic radius of **Z** is smaller than its ionic radius. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) Study the information given in the table below and answer question that follow.

Formula of compound	NaCl	MgCl2	AlCl3	SiCl4	PCl5	SCl2
Boiling point ^{0}C	1470	1420	Sublimes at 180^{0}C	60	75	60
Melting point ^{0}C	800	710		-70	-90	-80

i. Give **two** chlorides that are liquids at room temperature. Give a reason for your answer. **(2mks)**

……

……

……

……

ii. Give a possible reason why AlCl3 has much lower boiling point than MgCl2 although both Aluminum and Magnesium are metals. **(1mk)**

……

……

……

2. The table below gives standard reduction potentials for some half cells.

Half-cell	Half-cell equation	E^{θ} /V
I	$Cr^{3+}(aq) + e^- \rightarrow Cr^{2+}(aq)$	-0.41
II	$Cd^{2+}(aq) + 2e^- \rightarrow Cd(s)$	-0.4
III	$Na^+(aq) + e^- \rightarrow Na(s)$	-2.71
IV	$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$	0.34
V	$Pb^{2+}(aq) + 2e^- \rightarrow Pb(s)$	-0.13
VI	$Br2(aq) + 2e^- \rightarrow 2Br^-(aq)$	1.07
VII	$2H^+(aq) + 2e^- \rightarrow H2(g)$	0
VIII	$Fe^{2+}(aq) + 2e^- \rightarrow Fe(s)$	-0.44V
IX	$O2(g) + 2H2O(l) + 4e^- \rightarrow 4OH^-(aq)$	+0.40V
X	$H2O2(aq) + 2H^+(aq) + 2e^- \rightarrow 2H2O(l)$	+1.23V

(i) Identify with reasons: **(2mks)**

I. The strongest oxidizing agent.

……

……

II. The strongest reducing agent.

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ii) Draw an electrochemical cell from half-cells **V** and **IV.** **(3mks)**

(iii) Write the equation and calculate the electromotive force for the electrochemical cell constructed from half-cells **V** and **IV.** **(2mks)**

……

……

……

(iv) Explain why it is not advisable to use aqueous sodium sulphate as the salt bridge in the electrochemical cell formed between half-cells **V** and **IV.** **(1mk)**

……

……

……

(v) Write the cell notation for an electrochemical cell made using half-cells **V** and **VI**. **(1mk)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

3. a) Draw the structures of the following compounds. **(2mks)**

i) 2 – methylbut-2-ene

ii) heptanoic acid

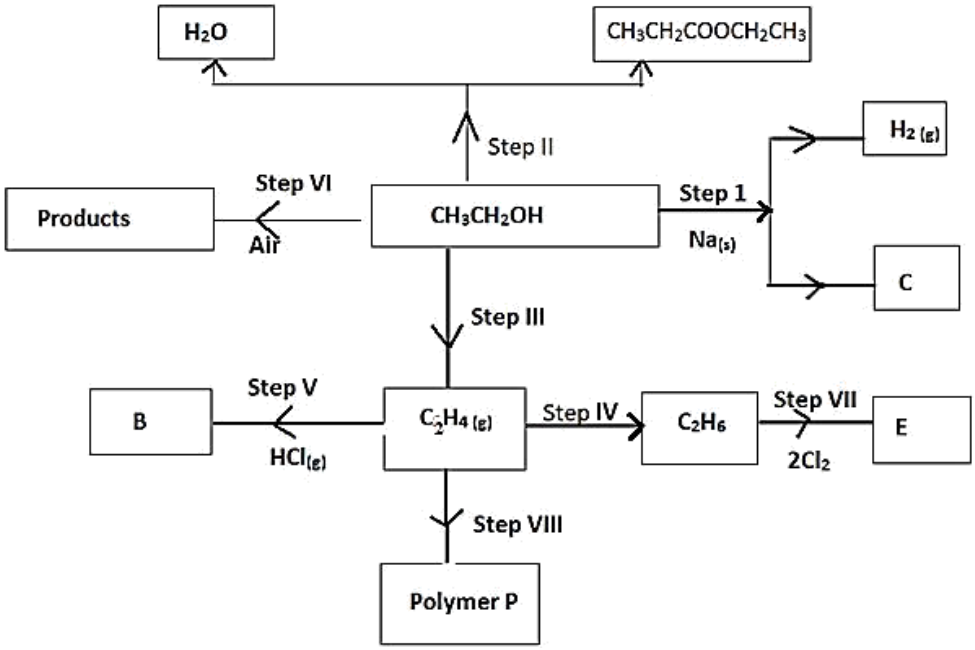
b) Describe a physical test that can be used to distinguish between ethanol and ethane **(2mks)**

……

……

……

c) Use the flow chart below to answer the questions that follow.



i) Name

I. The type of reaction that occurs in step VII. **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

II. Substance B **(1mk)**

……

……

ii) What conditions and reagents are necessary to convert CH3CH2OH to CH3CH2COOCH2CH3 in step II

Conditions **(1mk)**

……

……

……

Reagent **(1mk)**

……

……

……

iii) Give the formula and name of substance C. **(1mk)**

……

……

……

iv) Give the reagent and conditions necessary for the reaction in step IV. **(2mks)**

……

……

……

……

v) i)Draw and name the structure of polymer P. **(1mk)**

ii) Name one use of the polymer P. **(1mk)**

……

……

……

4. Several students prepared hydrogen gas using different reagent

Student 1: Used Zinc granules and dil. Nitric (V) acid

Student 2: Used Zinc granules and dilute sulphuric acid and a catalyst.

Student 3. Used calcium and dilute sulphuric(VI) acid.

Student 4: Used copper and dilute hydrochloric acid.

(a) State and explain the observation made in the set-ups for;

(i) Student 2. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(ii)Student 3 **(2mks)**

……

……

……

……

(b) Explain why no hydrogen was collect for set ups of student;

(i) 1 **(1mk)**

……

……

……

(ii) 4 **(1mk)**

……

……

……

(c) Name the catalyst used by student 2. **(1mk)**

……

……

(d) Write the equation for the reaction that took place in the set-up for student 2. **(1mk)**

……

……

(e) Explain why group 1 metals are not used to prepare hydrogen gas in the laboratory. **(1mk)**

……

……

……

(f) State two uses of hydrogen gas. **(1mk)**

……

……

……

……

5.(a). In an experiment to determine the heat of combustion of ethanol the following data was collected.

Volume of water = $450cm^3$

Initial temperatures of water = 25^oc Final temperature of water = 46.5^oc

Mass of ethanol + lamp before heating = 125.5g
Mass of ethanol + lamp after heating = 124.0

Prefer Calling Amobi Group of Examinerys @ 0743 333 000 or 0706 851 439 for Marking Schemes

Calculate:

(i). Heat evolved during the experiment (Density of water = $1g/cm^3$, specific heat capacity of water = $4.2kJ/kg^{-1}k^{-1}$. **(2mks)**

(ii). Molar heat of combustion of ethanol. **(2mks)**
(C=12,O=16,H=1).

(b). Write the thermochemical equation for the complete combustion of ethanol. **(1mk)**

……

……

(c) The molar heat of combustion obtained from an experiment like the one above is usually lower than the theoretical value. Explain. **(2mks)**

……

……

……

……

(d). The molar heat of combustion of hydrogen is given as $-286Kj/mol^{-2}$

(i). Write the thermochemical equation for the reaction. **(1mk)**

……

……

(ii). Draw an energy level diagram for the reaction in d (i) above. **(2mks)**

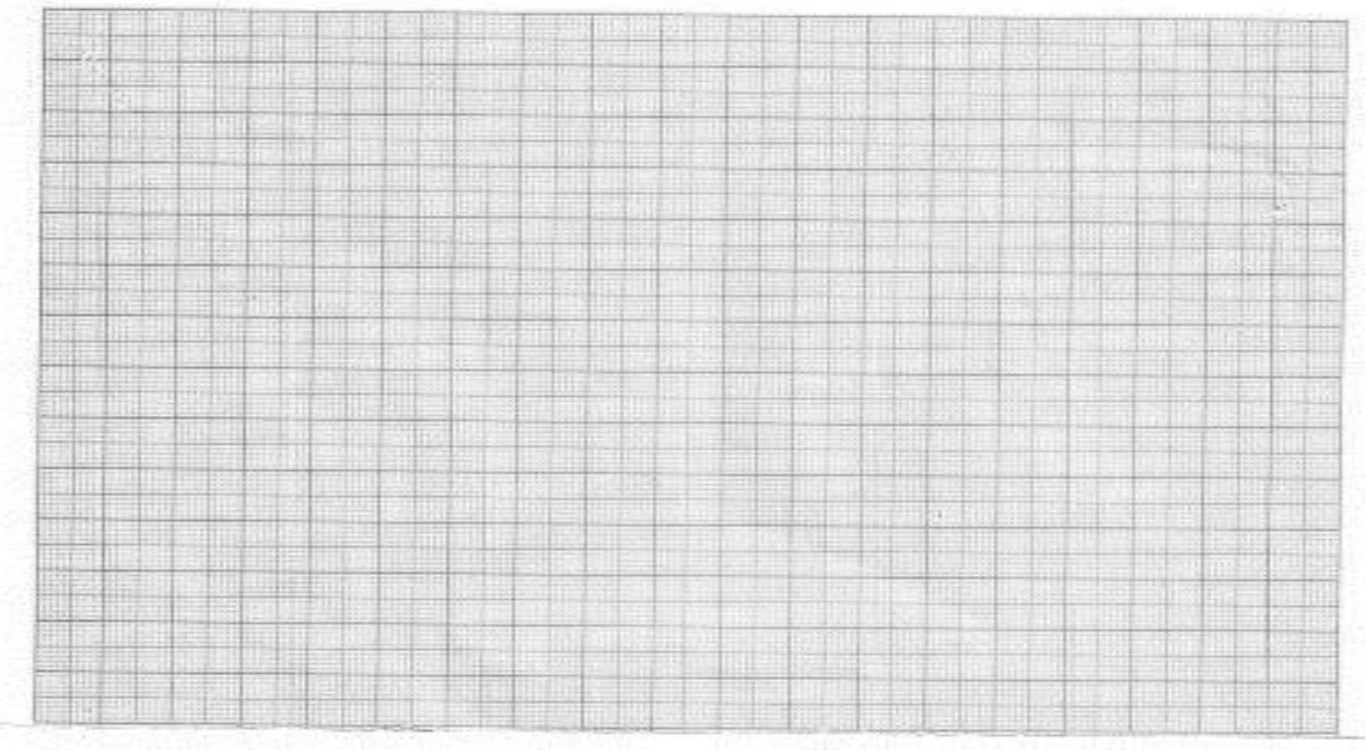
6. In an experiment to determine the solubility of potassium chlorate, the following results were obtained.

Total volume of water added (cm^3)	10	20	30	40	50
Mass of potassium chlorate (g)	5	5	5	5	5
Temperature at which crystals appear (^oc)	80	65	55	45	30
Solubility of potassium chlorate (g/100 H2O)					

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(a) Complete the table to show the solubility of potassium chlorate at different temperatures. **(3mks)**

(b). Plot a graph of mass of potassium chlorate per 100g water against temperature at which crystals from. **(3mks)**



(c). From the graph, determine:

(i). the solubility of potassium chlorate at 40^{o}C. **(1mk)**

……

……

(ii). The temperature at which the solubility of potassium chlorate is 35g/100g water. **(1mk)**

(d). Explain the shape of the graph. **(1mk)**

……

……

……

(c). State one application of solubility and solubility curves. **(1mk)**

……

……

……

7. In the preparation of Copper carbonate, copper was burnt in air and the product collected.

Dilute sulphuric acid was added and the mixture filtered and cooled. Sodium carbonate was added to the filtrate and the content filtered. The residue was washed and dried to give a green powder.

a) Give the chemical name of the product formed when copper burns in air **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) Write a chemical equation for the formation of product. **(1mk)**

……

……

c) (i) Name filtrate collected after sodium carbonate was added **(1mk)**

……

……

(ii) Name the green powder. **(1mk)**

……

……

d) Write chemical equation for the reaction between product in (a) and acid**.** **(1mk)**

……

……

e) Write an ionic equation to show the formation of the green powder **(1mk)**

……

……

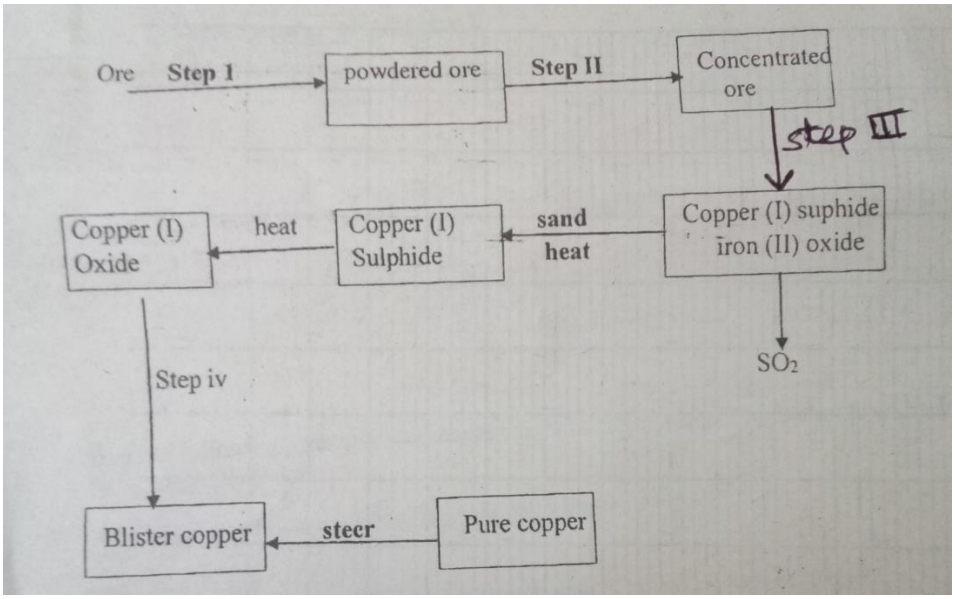
f) Write an equation to show what happened when green powder is strongly heated. **(1mk)**

……

……

(g) Using a diagram, describe how a salt can be obtained from the filtrate in c(i) above. **(3mks)**

8. The diagram below is a flow chart for the extraction of copper. Study it and answer the question that follow.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) Give the name and formula of the major ore from which copper is extracted**.** **(1mk)**

……

……

b) Give the name of the process carried out in step II and III. **(1mk)**

……

……

c) Write equation for the reactions taking place in step III and IV. **(2mks)**

……

……

……

d) Iron (ii) oxide is an impurity during extraction of copper. Write the equation for the reaction to show how it is removed. **(1mk)**

……

……

e) i) Draw a well labelled diagram to show blister copper is purified to form pure copper**.** **(2mks)**

ii) Write the ionic equation for the anode and cathode reaction during purification of copper. **(2mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

233/3
CHEMISTRY
PRACTICAL
PAPER 3
TIME: 2¼ HOURS.

FORM 4

Kenya Certificate of Secondary Education

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Answer **ALL** the questions in the spaces provided.
- You are not allowed to start working with the apparatus for the first 15 minutes of the 2¼ hours allowed time for the paper.
- Use the 15 minutes to read through the question paper and note the chemicals you require
- Mathematical tables and electronic calculators may be used.
- All working **MUST** be clearly shown where necessary.

FOR EXAMINER'S USE ONLY.

Question	Maximum score	Candidate's score
1	17	
2	17	
3	6	
Total score	40	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

QUESTION 1

You are provided with the following:
- Solution A potassium iodide solution
- " B sodium thiosulphate
- " C acidic solution
- " D Starch solution
- " E Hydrogen peroxide
- Distilled water

You are required to determine the rate of reaction between solution A and solution B

Procedure

Step 1

Place $10cm^3$ of solution A using 10ml measuring cylinder into a 100ml beaker.

Add $2cm^3$ of solution B followed by $2cm^3$ of solution C. In same beaker, Add 5 drops of solution D and finally $12cm^3$ of distilled water and shake the mixture.

Step 2

Using a burette, place 6cm3 of solution E into a test tube. Pour the measured 6cm3 of solution E into beaker in step 1 above and immediately start the stop watch. Swirl the mixture and place it on a white paper or tile. Observe the mixture and note the time taken for blue colour to appear.

Record the time taken in table 2

Measure the temperature of the mixture and record table 2.

Step 3

Repeat the step 1 and 2 using the volumes of solution given in table for experiments 2, 3, 4, 5 and 6, record in table below.

Table 1

experiment number	Volumes of solutions (cm^3)				Volume of distilled water
	A	B	C	D	
1	2	2	2	5 drops	12
2	4	2	2	5 drops	10
3	6	2	2	5 drops	8
4	8	2	2	5 drops	6
5	10	2	2	5 drops	4
6	12	2	2	5 drops	2

a) Calculate the rate of reaction 1/time 5^{-1} for each of experiments and fill table 2 below.

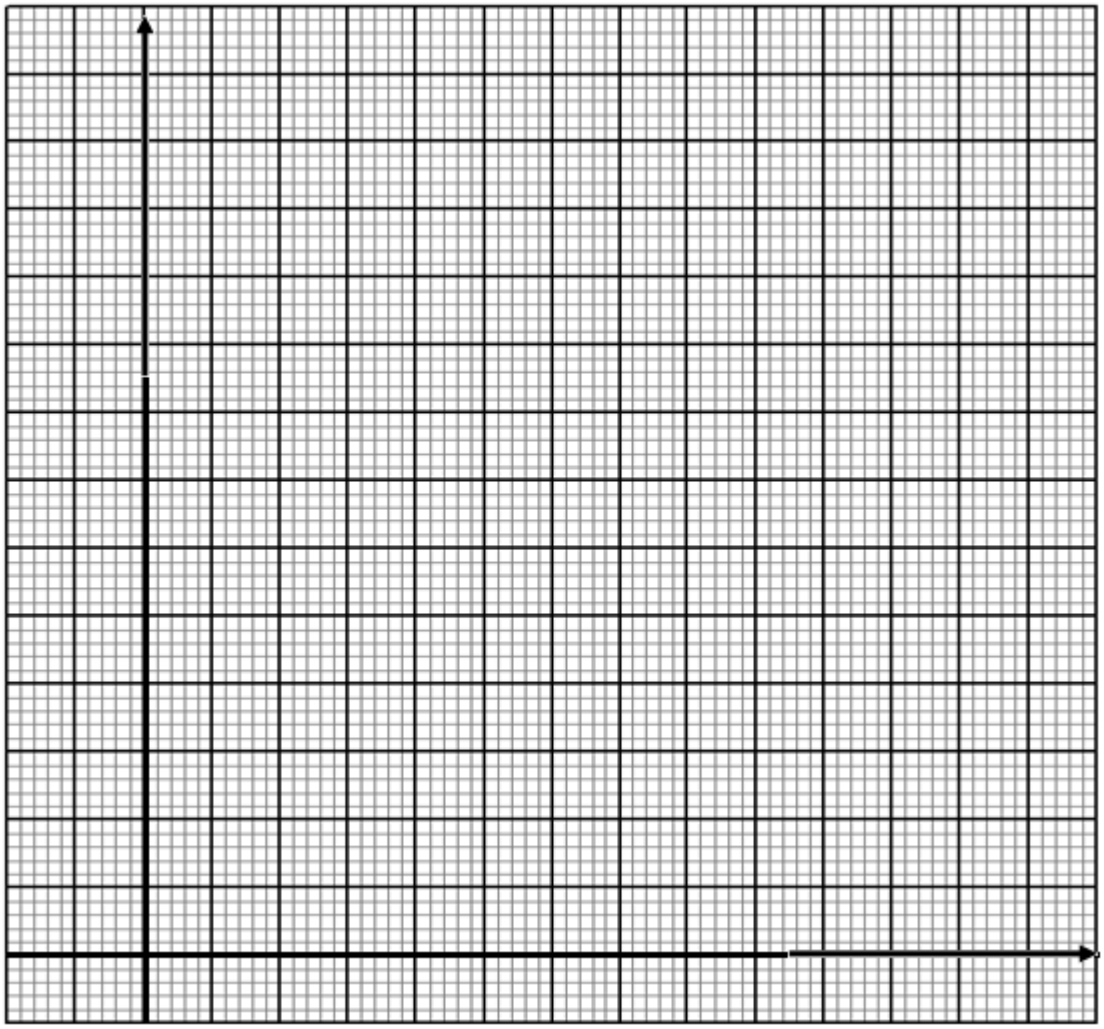
Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Table 2

experiment number	Volumes of solution A (cm^3)	Temp of solution (0c)	Time (sec)	Rate 1/t sec^{-1}
1	2			
2	4			
3	6			
4	8			
5	10			
6	12			

(8mks)

b) Plot the graph of rate of reaction 1/time against volume of solution A. **(3mks)**



c) If the experiment was repeated using 5cm3 of potassium iodide solution A, determine;

i) Volume of distilled water that would be used. **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ii) Time taken for blue colour to appear. **(2mks)**

d) Explain how rate of reaction is affected by the volume of potassium iodide. **(2mks)**

e) Explain why it is necessary to record the temperature each experiment. **(1mk)**

QUESTION 2

You are provided with solid F. Carry out the following tests and record your observations and inferences in the space provided.

a) Place all solid F into a boiling tube. Add about $10cm^3$ of dilute nitric (V) acid, warm the mixture and then allow it to stand until all the solid dissolves. Add about $10cm^3$ of distilled water to the solution and shake. Retain the solution for tests (b) and (c)

observations	Inferences
(2mks)	**(1mk)**

b) Use $2cm^3$ portion of solution obtained in 2(a) for each of the following tests.

i) To first portion, add 3 drops of Barium Nitrate.

observations	Inferences
(1mk)	**(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ii) To the second portion, add 3 drops of lead (ii) Nitrate solution.

observations	Inferences
(1mk)	**(1mk)**

iii) To the third portion, add drops of 2MNaOH until in excess.

observations	Inferences
(1mk)	**(1mk)**

iv) To the fourth portion, add few then excess drops of 2MNH4OH provided in the access point.

observations	Inferences
(1mk)	**(1mk)**

c) To the last portion in the boiling tube add all solid G provided. Shake the mixture for about 2 minutes. Filter the mixture into a boiling tube. Retain the filtrate for test below.

observations	Inferences
(1mk)	**(1mk)**

i) To about $2cm^3$ of filtrate add few then excess drops of 2MNaOH.

observations	Inferences
(1mk)	**(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ii) To about $2cm^3$ portion of filtrate add 3 drops of hydrogen peroxide solution then excess drops of 2MNaOH.

observations	Inferences
(1mk)	**(1mk)**

Question 3

You are provided with solid H carry out the following tests and record the observations and inferences in the space provided.

a) Place all solid in a boiling tube then add about $10cm^3$ of distilled water use the mixture for tests (i) and (ii) below.

observations	Inferences
(1mk)	**(1mk)**

i) Using about $2cm^3$ of the mixture in a test tube, determine the pH using universal indicator and pH chart.

observations	Inferences
(1mk)	**(1mk)**

ii) To about $2cm^3$ of the mixture in a test tube, add 3 drops of potassium manganate VII provided in the access.

observations	Inferences
(1mk)	**(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

451/1
COMPUTER STUDIES
PAPER 1
THEORY
TIME 2 ½ HOURS

INSTRUCTION TO CANDIDATES

- Write your name and Admission number in the spaces provided above
- *This paper consists of **two** sections A and B.*
- *Answer **ALL** questions in section A.*
- *.Answer question **11** and any other **THREE** questions from section B.*
- *All answers should be written in the spaces provided on the question paper.*

For Examiners Use Only

Section	Questions	Candidates Score
A	1-15	
	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A
Answer All questions in this section

1. Suggest **two** disadvantages of a notebook computer when compared with a desktop Computer. **(2mks)**

……

……

……

……

2.(a) What is a software suite? **(1mk)**

……

……

……

(b) Suggest **two** advantages of using a software suite. **(2mks)**

……

……

……

……

3. (a) Explain the two major types of software. **(2mks)**

……

……

……

……

(b) Give an example of each of the above **(2Mks)**

……

……

……

……

4.(a) Explain the term Process Control. **(1Mk)**

……

……

……

……

(b) State two areas where process control is used in industry **(2Mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

5. (a) Give **one** advantage of serial connection over parallel connection. **(1mk)**

……

……

……

(b) Give **one** advantage of parallel connection over serial connection. **(1mk)**

……

……

……

6.(a) Explain the term pipelining as used in CPU **(1mk)**

……

……

……

(b) Explain How parallel processing work **(1mk)**

……

……

……

7.Give **two** advantages and **two** disadvantages of display devices (e.g., monitors). **(4mks)**

Advantages:

……

……

……

……

Disadvantages:

……

……

……

……

8. (a) Explain briefly why increasing the main memory may improve the performance (e.g., speed) of a computer system. **(1mk)**

……

……

……

(b) Explain the term memory address as used in primary memory **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

9. Explain the following as used in word processing **(3Mks)**

i. Spell-check

……

……

ii. Thesaurus

……

……

iii. Macros:

……

……

10. Explain the following spreadsheet concepts:

i. Automatic Recalculation. **(1mk)**

……

……

……

ii. What if analysis **(1mk)**

……

……

……

11. Suggest **two** advantages of using presentation graphics software over the traditional chalk-and-talk approach in a school environment **(2mks)**

……

……

……

……

12. (a) Explain the term workstation as used in a networked environment **(1mk)**

……

……

……

(b) What is a server? **(1mk)**

……

……

……

13. (a) Explain briefly **identification** and **authentication** in computer access control**.** **(2mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) What is a personal identification number (PIN)? **(1mk)**

……

……

……

14. (a) Explain the term ergonomics. **(1mk)**

……

……

……

(b) Suggest **two** possible causes of eyestrain when using computers. **(2mks)**

……

……

……

……

15. State **Three** benefits of telecommuting. **(3mks)**

……

……

……

……

……

SECTION B

Answer question 16 (compulsory) and any other three questions from this section

16. (a)(i) State and describe three types of error can occur in programming: **(3Mks)**

……

……

……

……

……

(ii) When is a programming language considered structured? **(2mks)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b)(i) The Global Science Museum is not large and can become over-crowded when more than 300 people are in the building. They would like a program that will stop visitors from entering when more than 300 visitors are in the building. Design a Pseodocode segment for this problem using a REPEAT loop. You do not have to worry about visitors who leave the building, just those who have entered. **(3Mks)**

(ii) Identify **Three** aspects of a good HCI? **(3Mks)**

……

……

……

……

……

(c)(i) Give **one** advantage of compliers over interpreters **(1mk)**

……

……

……

(ii) Give **one** advantage of interpreters over compliers **(1mk)**

……

……

……

(iii) Explain briefly why the source codes must be translated again if the programmer wantsto use the program on a computer with a different platform. **(1mk)**

……

……

……

(iv). Explain why a programmer may prefer to write code for device drivers using low level languages. **(1Mk)**

……

……

……

……

17. (a) (i) With the aid of examples, explain number complements in the Binary number systems

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

(ii) Outline the benefits of using binary number complementation in computers. **(2mks)**

……

……

……

……

(b) (i) Why is binary number system best suited for use in computers**?** **(2mks)**

……

……

……

……

(ii) Convert the following base two number into base ten. **(2mks)**

11.01

(iii) Convert the following base sixteen number into base two. **(2mks)**

DEF=

(c) Carry out the following binary arithmetic:

(i) 11 + 10 **(1mk)**

(ii) $1010.011_2 - 11.0111_2$ **(2mks)**

(iii) 101 – 11 **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

18. Describe briefly the three data processing modes **(3mks)**

i. Batching Processing Mode

……

……

ii. *Real-time Processing Mode*

……

……

iii. *Interactive Processing Mode*

……

……

(b)(i) Suggest **two** possible reasons for data preparation errors. **(2mks)**

……

……

……

(**ii)** Suggest **two** possible reasons for data input errors. **(2mks)**

……

……

……

……

(c)(i) Distinguish between **data validation** and **data verification**. **(1mk)**

……

……

……

(ii) Give **two** examples of data verification techniques. **(2mks)**

……

……

……

……

(d) Describe briefly the following data validation techniques

i.Presence Check **(1mk)**

……

……

ii. Type Check **(1mk)**

……

……

iii. Range Check **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

iv. Control Total Check **(1mk)**

……

……

v.Parity Checks **(1mk)**

……

……

19. (a) (i) Explain the term search engine **(1mk)**

……

……

……

(ii) Peter and Mary use the same keyword to search for information. Suggest **two** reasons why their search results may vary. **(2mks)**

……

……

……

……

(iii) State **one** disadvantage of using an e-mail account provided by the Internet service provider (ISP). **(1mk)**

……

……

(b)(i) Explain the term URL **(1mk)**

……

……

(ii) For the URL **http://www.csklsc.net/pe/calendar.htm**, ***http*** stands for **(1mk)**

……

……

The domain name is **(1mk)**

……

……

The top-level domain (TLD) is **(1mk)**

……

……

pe stands for **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(c) (i) Explain the term communication protocol **(1mk)**

……

……

……

(ii) Explain the following types of communication protocol

Ethernet **(1mk)**

……

……

Token Ring **(1mk)**

……

……

TCP/IP **(1mk)**

……

……

(iii) Give **Two** examples of wireless-based communications channels. **(2mks)**

……

……

……

……

20. (a). Describe the role of the systems analyst. **(2Mks)**

……

……

……

……

(b). Describe Two techniques used by the systems analyst in requirements elicitation. **(2Mks)**

……

……

……

……

(c) What is a requirements specification and what does it contain? **(5Mks)**

……

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(d) Software development is often said to be an *iterative process*.
Describe Two events that might spark an iterative process in software development. **(2Mks)**

……

……

……

……

(e) (i) Describe briefly the **three** basic e-commerce models. **(3Mks)**

……

……

……

……

……

(ii) Apart from parental control, state **one** other ways of Internet censorship. **(1mk)**

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

451/2 COMPUTER STUDIES
Paper 2 (PRACTICAL)
2 ½ hours
FORM FOUR

INSTRUCTIONS TO CANDIDATES

a) Indicate your name and index number at the right hand corner of each printout
b) Write your name and index number on the CD/removable storage medium provided
c) Write the name and version of the software used for each question attempted in the answer sheet provided
d) Answer all the questions
e) All questions carry equal marks
f) Passwords should not be used while saving in the CD/removable storage Medium
g) Marked printout of the answers on the sheet
h) Arrange your printouts and staple them together
i) Hand in all the printouts and the CD/removable storage medium used
j) All the work should be saved at the desktop of your computer in a folder named with our name and index number. All the work in your folder should be burned to the CD/WR provided

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. The Management of a company owning a chain of hotels intend to use a spreadsheet program to compute the revenues in thousands of Kenya Shillings for the hotels during the 1st, 2nd, 3rd and 4th quarters. The hotels are rated as 2 star, 3star, 4 star and 5 star. **Figure 1** below shows an extract of the worksheet.

	A	B	C	D	E	F	G
1	**HOTEL**	**STAR CATEGORY**	**1ST**	**2ND**	**3RD**	**4TH**	**TOTAL REVENUE**
2	City Inn	4	174,400	177,400	127,900	180,800	
3	ForkLand	2	173,700	111,300	194,900	103,700	
4	Highway	4	182,900	136,300	143,900	144,600	
5	Hiltop	5	188,500	124,700	173,500	171,200	
6	Membley	5	187,800	118,700	115,900	195,500	
7	Voyager	3	139,100	178,400	109,600	179,700	
8	Eden	2	200,000	112,200	109,100	117,200	
9	Palm tree	4	169,800	163,000	173,000	148,300	
10	The Shaza	5	163,900	106,800	107,100	150,500	
11							
12							
13							
14	Total Quarterly Revenue						
15	Administrative cost						
16							
17							
18		30%					

Figure 1

(a) Open a spreadsheet program and create the worksheet extract as it appears in Figure 1.
Save the workbook as **Task 1**

(11mks)

(b) Use a function and cell addresses to calculate:

(i) Total revenue for each quarter; **(2mks)**

(ii) Total revenue for each hotel. **(2mks)**

(c) (i) Insert two rows above row 1 and type the title "MBALAMBALA GROUP HOTELS" in cell Al **(2mks)**

(ii) Merge the cells in the range Al: G1. **(lmk)**

(iii) Apply bold and font size 15 to the title. **(1mk)**

(d) Using cell addresses only, compute the administrative cost for each quarter given that the cost is a percentage of total revenue and the percentage rate is in cell B18. **(3mks)**

(e) Apply thick outside borders and regular inside borders to cells in the range A3:G18 **(2mks)**

(f)(i) Copy all the contents of the current worksheet to a new worksheet. **(2mks)**

(ii) Rename the old worksheet as **original** and the new worksheet as **formatted** **(2mks)**

(g) (i) Change the page layout orientation of the formatted worksheet to landscape and the page size scaled to 80%. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(ii) Enter the values 2, 3, 4 and 5 in the cell range B20: B23 respectively representing the hotel star category ratings. **(1mk)**

(iii) Using a function and cell references:

compute the total revenue for each hotel references;

II compute the total revenue for each hotel category in the 1st quarter using reference values in the range B20: B23 in cells C20: C23. **(5mks)**

(iv) Sort the revenues from the hotels in descending order of hotels. **(2mks)**

(h) (i) Create a column chart that compares the revenues of the hotels in star category 4 for the 1st and 2nd quarter. **(4mks)**

(ii) Format the chart created as follows:

I. Chart title"FIRST AND SECOND QUARTER REVENUES" **(2mks)**

II. Move the chart to a new sheet and rename the sheet as **FourStar Revenues.** **(2mks)**

(i) Save the changes and print later each of the following:

(i) original worksheet showing the column and row headings; **(2mks)**

(ii) formatted worksheet; **(lmk)**

(iii) FourStar Revenues chart. **(2mks)**

2. Popo City planners intend to use a Desktop Publishing program to draw a plan for a section of a city. Assume you have been given the task.

(a) (i) Open a desktop publishing program and set the page layout orientation to portrait and and paper size to A4.(2 marks)

(ii) Save the publication as **Task 2** **(lmk)**

(b) Create the city plan as it appears in **Figure 2** ensuring that the design covers the entire printable area of the page. **(46mks)**

(c) Save the changes and print the publication later. **(lmk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

142
POPO CITY PLAN

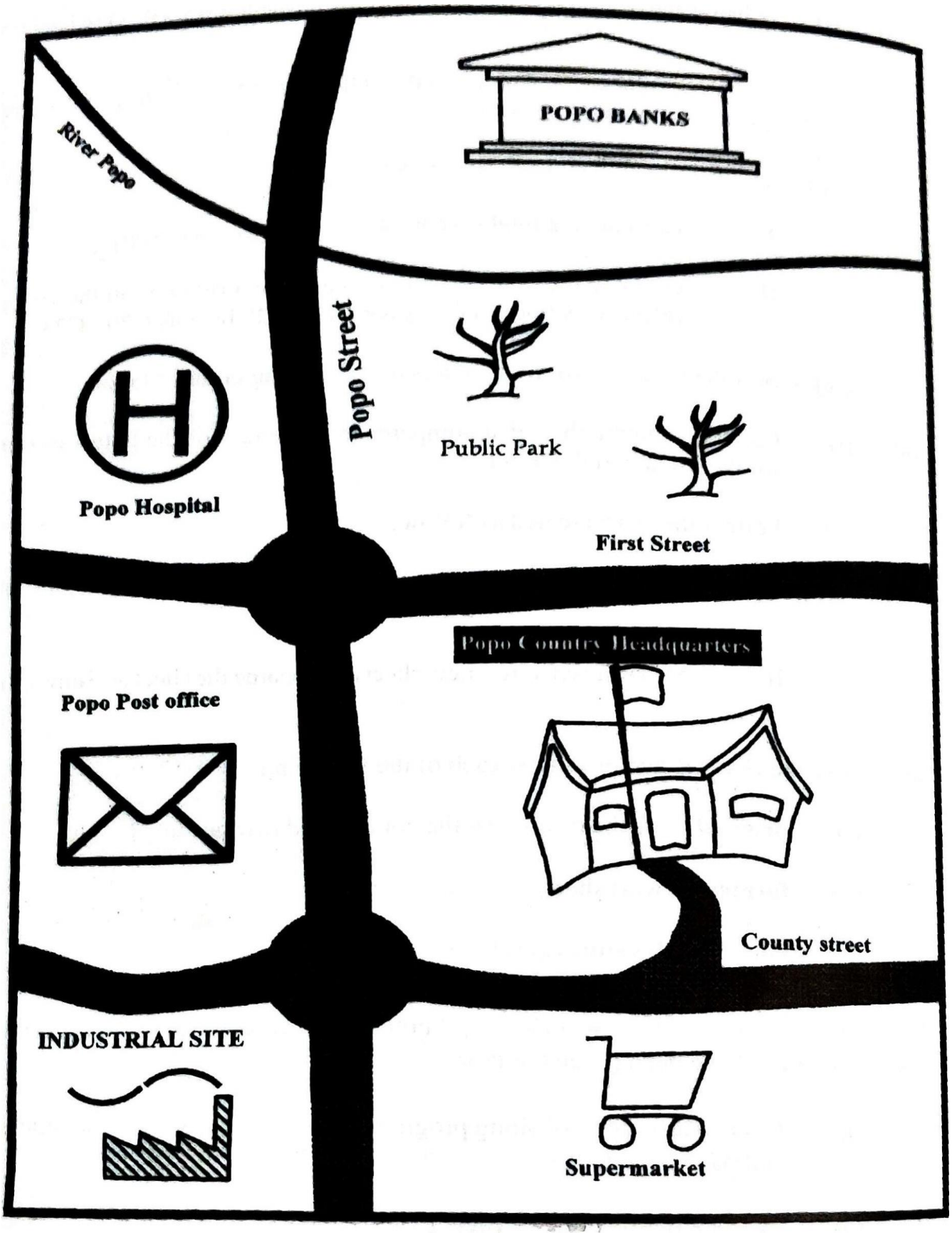


Figure 2

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

313/1

CHRISTIAN RELIGIOUS EDUCATION (C.R.E)

PAPER 1

2½ HOURS

Instructions to candidate

a) Candidates must check the paper to ascertain that all pages are printed and no question is missing

b) Answer any five questions in the foolscaps provided.

c) All answers must be written in English.

For Examiner's Use Only

Question	1	2	3	4	5	6	Totals
Maximum Score	20	20	20	20	20	20	100
Candidate's Score							

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1. a) State the benefits of learning Christian Religious education in secondary schools. **(8mks)**

b) Explain the differences between Biblical causes of sin and Traditional African understanding of evil. **(7mks)**

c) Identify Ways in which the Bible is misused in Kenya today. **(5mks)**

2. a) Explain seven characteristics of the covenant between God and Abraham. **(7mks)**

b) Outline the activities carried out by the Israelites on the night of the Passover. **(6mks)**

c) What do Christians learn about the nature of God from the Exodus? **(7mks)**

3. a) Explain four factors that led to the spread of idolatry in Israel during the time of Elijah. **(8mks)**

b) How did God manifest his power during Prophet Elijah's ministry? **(6mks)**

c) Give six reasons why Christians build churches. **(6mks**)

4. a) Explain the role of prophets in the Old Testament. **(7mks)**

b) Identify the social injustices condemned by prophet Amos in Israel. **(7mks)**

c) How is the church promoting justice in the society today? **(6mks)**

5. a) What did the Jews promise before Ezra the priest during the renewal of the covenant? **(7mks)**

b) Identify final reforms carried out by Nehemiah to restore worship of God in Judah**.** **(6mks)**

c) Identify seven ways in which Christians observe the day of worship. **(7mks)**

6. a) Explain the roles performed by ancestors in traditional African communities. **(8mks)**

b) Outline six requirements for a sacrifice to be offered. **(6mks)**

c) Give three changes that have taken place in the traditional African understanding of property. **(6mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

313/2

CHRISTIAN RELIGIOUS EDUCATION (C.R.E)

PAPER 2

2½ HOURS

Instructions to candidate

a) Candidates must check the paper to ascertain that all pages are printed and no question is missing

b) Answer any five questions in the foolscaps provided.

c) All answers must be written in English.

For Examiner's Use Only

Question	1	2	3	4	5	6	Totals
Maximum Score	20	20	20	20	20	20	100
Candidate's Score							

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.a) Outline Isaiah's prophecy about the messiah on the suffering servant in Isaiah 53. **(8mks)**

b) Describe the message of angel Gabriel to Mary according to Luke 1:26-38 **(6mks)**

c) Outline six lessons on family relationships drawn from the incident when Jesus accompanied his parents to the temple at the age of twelve**.** **(6mks)**

2. a) With reference to Luke 5:17-26, describe the healing of the paralytic man. **(8mks)**

b) State seven teachings of Jesus on true discipleship from the sermon on the plain. **(7mks)**

c) Give reasons why modern Christians should accept to suffer in Christ's name. **(5mks)**

3.a) Describe the incident in which Jesus forgave the sinful woman in Luke 7:36-50. **(8mks)**

b) Give six reasons why Jesus chose the twelve Disciples. **(6mks)**

c) Identify six ways in which Christians prepare themselves for the coming of God's kingdom. **(6mks)**

4.a) Describe the New Testament teachings on unity of believers based on the image of the bride. **(8mks)**

b) How was the life of Peter transformed on the day of Pentecost? **(6mks)**

c) Outline Saint Paul's teaching on how the gifts of the Holy Spirit should be used in the church **(6mks)**

5.a) Explain the traditional African understanding of marriage. **(7mks)**

b) List six forms of abuse that children go through in child labour. **(6mks)**

c) Give seven criteria that Christians use to evaluate the use of leisure. **(7mks)**

6.a) Identify eight reasons why people engage in corrupt practices in Kenya today. **(8mks)**

b) In which ways are people punished in Kenya for causing social disorders? **(6mks)**

c) How can Christians today help to improve the Environment? **(6mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

101/1
ENGLISH
PAPER 1
FUNCTIONAL SKILLS, CLOZE TEST AND ORAL SKILLS
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES.

1) Write your name and index number in the spaces provided.

2) Answer all questions in this question paper.

3) All your answers should be written in the spaces provided in this question paper.

4) Contains six printed pages.

5) All answers should be written in English.

FOR EXAMINER'S USE ONLY.

Question	Maximum Score	Candidate's Score
1	20	
2	10	
3	30	
Total	60	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.FUNCTIONAL WRITING **(20 MARKS)**

You are the chairperson of the Drama Club in your school. The club has staged a successful dramatization of Ole Kulet's *Blossoms of the Savannah* at the school. You now want to take the performance to three other schools in your sub-county. The principal is offering the school bus but he/shewants you to look for a sponsor who would pay for the fuel and other expenses. You then decide to contact Daughters of Eve (NGO that advocates for protection of women against F.G.M). Write a letter to the Director and ask the NGO to sponsor these performances. Briefly explain why you think *Blossoms of the Savannah* presents a strong argument against F.G.M. Remember to write through the Principal.

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

2.CLOZE TEST **(10 MARKS)**

Read the passage below and fill each blank space with an appropriate word

The National Health Insurance **1……**once again in the eye of **2 .....** storm after it paid Kshs 336.3 million to a law **3… .....**that had not been prequalified to bid **4……..**tenders with health providers in the **5… .....**scandal unearthed by Auditor-General, Nancy Gathungu. Curiously, the drafting fully paid for by the **6… .....** was not part of the NHIF approved **7… .....** plan for 2018/2019- the period within **8……..**the payment was done. This is **9… .....**to the Public Procurement and Assets Disposal Act 2015. No money had been **10… .....**to pay for legal service and therefore, it went against Public Finance Management (PFM) Act.

3.ORAL SKILLS (30 MARKS)

a) **Read the narrative below and answer the questions that follow**

One afternoon, a big wolf waited in the dark forest for a little girl to come along carrying a basket of food. Finally, the little girl did come along and she was carrying the basket of food. "Are you carrying thebasket to your grandmother?" asked the wolf. The little girl answered, "Yes I am." So the wolf asked the girl where her grandmother lived. When the girl told him he disappeared to the woods. When the little girl opened the door of her grandmother's house, she noticed there was somebody in bed with a night capand a night gown.
She realized that it was the wolf, so the little girl took a dagger from her basket and stubbed the wolfdead.

Questions:

i.) If you were narrating this story, how would you ensure your audience remains glued to it**?** **(2mks)**

……

……

……

……

ii*)* How would you say the words of the wolf in your narration? **(2mks)**

……

……

……

……

iii.) How would you prepare yourself to tell the story effectively? **(3mks)**

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b.) Provide a word pronounced in the same way as each of the ones below **(4mks)**

i) Bald –**……**

ii) Manna –**……**

iii) Colonel –**……...**

iv.) Liar –**……**

c.) Insert the following words in the corresponding column to show whether it has a /θ/ /ʃ/ /ʒ/ or /ð/ sound according to the underlined sound. Examples of words with those sounds have been given. **(4mks)**

Tenth, Sugar, Special, Father, Garage, Mathematics, Leisure, Themselves

/θ/ **path**	/ʃ/ **shirt**	/ʒ/ **pleasure**	/ð/ **that**

d.) A leader of a Theatre Group is visiting your school to arrange for the staging of Literature Sets Books. You have been appointed by the class to negotiate for favorable entry fee for your class and you are meeting the leader for the first time. Explain 4 negotiation skills that you would employ to ensure successful negotiations. **(4mks)**

……

……

……

……

……

……

e) Mary cannot bear children

i) Identify the above genre. **(1mk)**

……

……

ii) Give the **two** possible meanings of the above **(2mks)**

……

……

……

……

iii) Give **one** function of the above genre. **(1mk)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

f.)Study the following situations and write down what you would say in each case. (3mks)

i)When walking along the corridor, you accidentally bump into somebody out of your ownclumsiness.

……

……

……

ii.) You are engaging in a conversation and you catch yourself interrupting the other person

……

……

……

iii) You want to introduce a point during a discussion which contradicts what the other personhas said.

……

……

……

g) Indicate the appropriate intonation at the end of each sentence. (4mks)

i) Have all the students been registered? ……...

ii) Stop wasting time. …….

iii) That was superb! …….

iv) There is hope for Cancer patients. …..……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

101/2

ENGLISH

Paper 2

Time: 2 ½ Hours

Instructions to students

- Write your **name, admission number** and **class** in the spaces provided.
- Sign and write the date of the examination in the spaces provided.
- Answer **all** questions in the spaces provided
- All your answers must be written in the spaces provided in this question paper.
- This paper consists of **10 printed** pages. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing
- Candidates must answer all questions in English

Question	Maximum Score	Student's Score	Examiner's Initials
COMPREHENSION	*20*		
EXCERPT	25		
ORAL LITERATURE	20		
GRAMMAR	15		
TOTAL	80		

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

QUESTION 1: COMPREHENSION

Read the passage below and answer the questions that follow. (20marks)

The career market is full of opportunities. Gone are the days when we had 'either … or' career choices. The times when women, for example, chose between only nursing, teaching and secretarial work are long gone. The explosion in communication technology, and the liberalization and globalizations of the world economy, has ensured that there is no longer a **dearth** of career choice. Today, colleges and universities offer a wide range of training opportunities to high school graduates. This has made choosing a career an involving process. It has also given rise to the need for career counseling.

When choosing a career, whether you have the help of a career counselor or not, there are several factors that you should consider. These include your abilities or talents, your interests, your priorities, and the available opportunities in the job market.

The skills required in a particular career and the ability to gain them though education must be considered when choosing careers. Becoming a doctor, for instance, requires extensive education and training, and many years of educational commitment. In addition to the compulsory subjects, the academic background required for this career is good grades in chemistry and biology at secondary school level. If your ability in these subjects is just average, you would be overstretching your luck to enroll for a Bachelor of Medicine course. In the past, students have chosen to pursue training in engineering, even when their ability to handle physics and mathematics was low. This, in many cases, has made them drop out of the class mid-course. The waste of time and resources would have been avoided if they had considered a career that did not require the ability to handle mathematics and physics well.

There are times when people have been driven to choose a particular career because of the salary and prestige associated with jobs in that field. At times, the desire to take certain courses comes from within the individual, but most times, individuals feel pressured by peers or family to take certain courses. Joining a career in which you have no interest is a recipe for a dull life since you will spend most of your working hours doing something you do not like. Your career does not necessarily have to be your passion, but it should not bore you to death either. You can work out your interests by identifying the subjects you enjoy most at school, or the topics that are of interest to you and for which you take the initiative to read on your own.

It is true that many young people are attracted more by the **social mobility** that the job might provide than by their interest in the career. However, research has found that money does not play as big a role in job satisfaction as many people think. Of course we all have to make a living, but if you do not like your job, it does not matter how much you get paid to do it. What does matter is how well a career choice matches your values. If you value variety, **collaboration** and creativity, for example, you would not find job satisfaction in a career where you are working alone and doing the same thing every day.

The availability of jobs in a particular field should also be a factor in choosing a career. This should be considered alongside the skills and education sought in a given field. Most times, highly competitive fields require more education but may not pay well. When there are many applicants for a particular position, unique personality traits become added benefit. However, in fields where there are fewer applicants than the positions available, the pay may be more and the job may require less education.

Nevertheless, one should not be discouraged by the scarcity of employment positions because institutions of higher learning now emphasize that they are not simply training people to get out and look for jobs. They are training people to get out and create jobs.

Therefore, the availability of job opportunities is not necessarily limited to the presence of employers. It also encompasses opportunities for self-employment which everyone is free to explore.

Questions

1. What has created the necessity for career counseling? **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

2.Why do you think the writer cites engineering in the passage? **(2mks)**

……

……

……

……

3.What do you think should be the most important factor in choosing a career? Give reason for your answer.**(2mks)**

……

……

……

……

4.What evidence is given in support of the statement "Money does not play a big a role in job satisfaction"?**(2mks)**

……

……

……

5.Why is one's ability an important factor in career choices**?** **(2mks)**

……

……

……

……

6.Identify the tone used by the writer in the passage. **(3mks)**

……

……

……

……

……

7.a) The career market is full of many opportunities. (Begin: There …) **(1mk)**

……

……

b) Your career does not necessarily have to be your passion. (Re-write adding a question tag) **(1mk)**

……

……

8.Make notes on factors to consider when choosing a career. **(3mks)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

……

9.Explain the meaning of the following words as used in the passage. **(3mks)**

a) Dearth

……

……

b) Social mobility

……

……

c) Collaboration

……

……

QUESTION 2: EXCERPT

Read the following excerpt and answer the questions that follow. (25 marks)

Helmer: That's right, Mrs Linde

Mrs Linde: Good night, Mr Helmer.

Helmer: (accompanying her to the door) Goodnight, goodnight, I hope you will get home alright. I should be very happy to – but you haven't any great distance to go. Goodnight, goodnight. (She goes out; he shuts the door after her, and comes in again) Ah! – At last we have got rid of her. She is a frightful bore, that woman.

Nora: Aren't you very tired, Torvald?

Helmer: No, not in the least.

Nora: Nor sleepy?

Helmer: Not a bit. On the contrary, I feel extraordinarily lively. And you? – You really look both tired and sleepy.

Nora: Yes, I am very tired. I want to go to sleep at once.

Helmer: (Kissing her on the forehead) Now my little skylark is speaking reasonably. Did you notice what good spirits Rank was in this evening?

Nora: Really? Was he? I didn't speak to him at all.

Helmer: And I very little, but I have not for a long time seen him in such good form. (Looks for a while at her and then goes nearer to her) It is delightful to be at home by ourselves again, to be all alone with you – you fascinating, charming little darling!

Nora: Don't look at me like that, Torvald.

Helmer: Why shouldn't I look at my dearest treasure? – at all the beauty that is mine, all my very own?

Nora: (going to the other side of the table.) You mustn't say things like that to me tonight.

Helmer: (following her.) You have still got the Tarantella in your blood, I see. And it makes you more captivating than ever. Listen – the guests are beginning to go now. (In a lower voice) – Soon the whole house will be quiet.

Nora: Yes, I hope so.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Questions

1.What had happened just before the events in this excerpt? **(3mks)**

……

……

……

……

……

2. "She is a frightful bore, that woman." Describe the attitude of Helmer towards Mrs Linde as revealed in these words. **(3mks)**

……

……

……

……

……

3.Comment on Helmer's character traits as evidenced in the excerpt. **(4mks)**

……

……

……

……

……

……

4. "Everything you do is quite right." What do we learn from this statement about the relationship between Helmer and Nora? **(3mks)**

……

……

……

……

……

5.Identify and illustrate one theme evident in this excerpt. **(2mks)**

……

……

……

……

6.Describe two instances in the rest of the play which show that Helmer thinks of Nora as a child. **(4mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

……

7. "I want to go to sleep at once." (Rewrite in reported speech) **(1mk)**

……

……

……

8.Identify and illustrate one device of style used in this excerpt. **(2mks)**

……

……

……

……

9.What happened immediately after the events in this excerpt? **(3mks)**

……

……

……

……

……

QUESTION 3: ORAL LITERATURE

Read the following oral narrative and then answer the questions that follow. (20 marks)

Wanjiru was the most beautiful girl in all hills. She had milk-white teeth which made the men stop and look whenever Wanjiru and other girls of the hills were teasing each other about their new friends. Many young men came to ask Wanjiru hand in marriage but Wanjiru would not accept any ugly man. She said that all these young men were not handsome enough for her.

One day a young man came to **court** Wanjiru. He was very handsome indeed. And when Wanjiru heard that he had come to ask for her hand in marriage, she loved him and was only too ready to accept him. Her parents had no objection because they also admired this handsome young man. But nobody knew that this handsome young man was an ogre in disguise.

Marriage preparations went ahead. The young man brought the dowry and was given Wanjiru to take to his home. He looked very happy to have such a beautiful bride. Nobody escorted them because the young man said that it was not necessary. He did not want his identity to be discovered. They were soon home and Wanjiru was happy to see so many people around. But on a second look she found that these were not people but ogres. This made her very worried and wondered what her fate would be. Now when she was told to go inside the hut that had been prepared for her, she refused, saying that she would sit outside near the entrance because that is where brides were supposed to sit in her part of the country. Her husband gave her a stool and told her she would sit where she pleased. "I shall surely be in great trouble unless I think quickly, for these ogres will certainly want to eat me," she thought as she became more worried. All the young people she refused to marry came to her mind. "It will be a great shame when they learn that I married an ogre for his beauty". They would laugh and say that she could even marry a hyena if he was handsome enough. There was no time to lose. She had to get away from the ogre's home. She stood and took

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

the same path that they followed from her home. And when her husband saw that she was going away, he followed singing.

Thecethecethecethece!
Where do you go now?
Thecethecethecethece!
Wanjiru come back
Not today but tomorrow I shall eat you.
Wanjiru sang loud and long
People of the nine hills
Who sold me to an ogre?
An ogre that will eat me
And my own father
You sold me to an ogre
An ogre that will eat me,
Listen to the ogre sing!

The ogre sang and the girl sang again. For a long time the two sang and sang until Wanjiru saw the ogre was very near. She climbed to the top of the tallest tree near her path. And when the Ogre saw that he could not get hold of the girl, he stood at the foot of the tree and continued with this song. Wanjiru sang even more **feverishly.** Soon however, her brother heard and recognized Wanjiru's voice. It was then he came and pierced through the back of the ogre until he was dead. Then he said to his sister. "Come down. Let us go home."

He was very angry, for they had sold Wanjiru in his absence. To be duped by an ogre into giving away Wanjiru was unforgivable. He scolded his father, "How could you and your people sell Wanjiru in my absence? I swear by my mother's clothes that neither myself nor anybody else will ever sell Wanjiru again. "Only you son who will have the authority of selling your sister again", the father responded. And so it was like that when the time for selling Wanjiru came. The tale ends there.

Questions

1. Identify and illustrate any two features of oral narratives evident in the above narrative. **(2mks)**

……

……

……

……

2. What made men stop and look at Wanjiru and why wouldn't she accept any of them? **(2mks)**

……

……

……

……

……

3. From the first paragraph, how would you describe the character of Wanjiru? **(2mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

4. Many young men came to ask Wanjiru's hand in marriage but Wanjiru would not accept any ugly man. (Rewrite this sentence in the passive). **(2mks)**

……

……

……

……

5. Give a proverb that summarizes the moral lesson learnt from this narrative. **(1mks)**

……

……

……

6. What are the functions of the song in this narrative? **(2mks)**

……

……

……

……

7. Give a social activity of people from which this narrative is derived. **(2mks)**

……

……

……

……

8. 'I swear by my mother's clothes that neither myself nor anybody else will ever sell Wanjiru again' (Underline the indefinite pronoun in the sentence above) **(1mk)**

……

……

……

9. What is Wanjiru's attitude towards men? **(2mks)**

……

……

……

10. Explain the meaning of the following words as used in the narrative. **(2mks)**

a) Court

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) Feverishly

……

……

……

11. To which audience is this narrative best suited and why? **(2mks)**

……

……

……

……

QUESTION 4: GRAMMAR

1.Rewrite the following sentences according to the instructions given. Do not change the meaning. (3mks)

a) They were so exhausted that they could not stay awake. (Rewrite using "too")

……

……

b) It is bad manners to smoke in a crowded place. (Rewrite using a gerund)

……

……

c) "How much money do you owe me?" demanded the creditor from the debtor. (Rewrite in the passive voice)

……

……

……

2.Complete the following sentences with a phrasal verb starting with the word in brackets. (3mks)

a) The teacher **……..** the errant student. (tell)

b) Please **……..** that all the chairs are in good condition. (see)

c) She looked carefully at the document but couldn't **……..** what it meant. (make)

3.Fill in the blank spaces using the correct form of the word in brackets. (3mks)

a) The criminal's …….. behavior in court angered the judge. (scandal)

b) The students …….. assistance from the police after the attack. (seek)

c) The …….. of the staff has been a matter of concern. (sober)

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

4.Insert the most appropriate prepositions in the blank space. **(3mks)**

a) Traffic was moving **……..** a snail's pace.

b) Please refrain **……..** smoking in the auditorium.

c) Some people are keen **……..** working in a team.

5.Supply the appropriate question tags in the blank spaces. **(3mks)**

a) We needn't worry about tomorrow, **……...?**

b) Let me have a taste**, ……..?**

c) They'll come early in the morning, **……..?**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

101/3
ENGLISH
Paper 3
(Creative writing and Essays from the Set Texts)
Time 2 ½ Hours

Instructions to students

- Write your **name, admission number** and **class** in the spaces provided
- Sign and write the date of the examination in the spaces provided
- Answer **all** questions in the spaces provided in **blue ink**.
- All your questions must written in spaces provided in this paper
- This paper consists of **8** printed pages
- Students must answer all questions in **English**

For examiner's use only

Question	Maximum Score	Student's Score	Examiner's initials
1	20		
2	20		
3	20		
Total	60		

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.Creative composition

Either

a) Write a composition beginning:

It seemed like a very ordinary day. In fact, I assumed it would be uneventful.But how wrong I was…

Or

b) Write a story to illustrate the saying:

Every cloud has a silver lining.

2.The compulsory Set Text

Henry Ole Kulet: *Blossoms of the Savannah*

In life, one needs to be firm and purposeful in order to succeed. With reference to the life of Resian, write an essay in support of this statement drawing your illustrations from *Blossoms of the Savannah*.

3.Optional Set Texts

Answer any one of the following three questions.

Either

(a) The Short Story

Godwin Shiundu (Ed): ***A Silent Song and other Stories***

Drawing illustrations from Leonard Kaberia's *A Silent Song* prove that our actions have more impact than what we say.

Or

(b) Drama

David Mulwa: ***Inheritance***

The people in leadership determine the nation's success or failure. Drawing your illustrations from *Inheritance* discuss the above statement.

Or

(c) The novel

Kazuo Ishiguro: ***An Artist of the Floating World***

With illustrations from *An Artist of the Floating World,* show why Ono is so upset by his grandson's pretend games and how this proves that there is a generational gap.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

Kenya Certificate of Secondary Education

312/1 GEOGRAPHY Paper 1

TIME: 2 HOURS 45 MINUTES

INSTRUCTIONS TO CANDIDATES

- This paper has **two** sections: **A** and **B**
- Answer **ALL** the questions in **section A.**
- In section **B,** answer **questions 6** and any other **TWO** questions.
- All the answers must be written on the foolscaps provided/attached after page 4.
- Candidates must answer the questions **in English**.

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 - 5	25	
	6	25	
		25	
		25	
Total Score			

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A

1.(a) Apart from the Sun and the planets, give **two** other heavenly bodies found in the solar system. **(2mks)**

(b) State **three** characteristics of the earth's crust. **(3mks)**

2.(a) Define the term weather. **(2mks)**

(b) List **two** types of rainfall common in Kenya. **(2mks)**

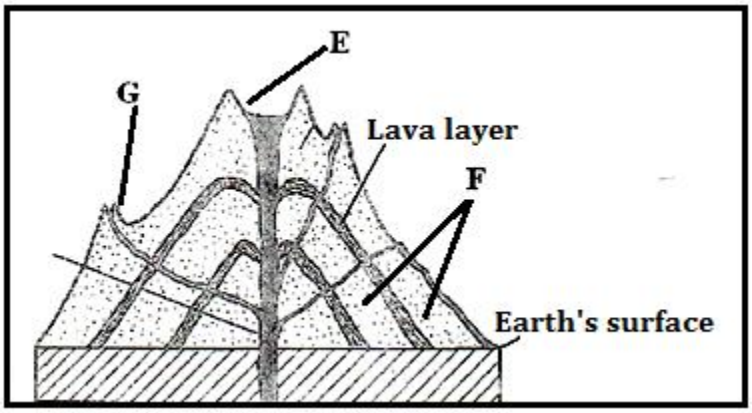
3.(a) Name **two** parts of Africa that experience equatorial climate. **(2mks)**

(b) List **three** major climatic regions of Kenya. **(3mks)**

4.(a) Give **two** categories of lakes formed due to earth movements. **(2mks)**

(b) State **three** conditions necessary for the formation of ox-bow lakes. **(3mks)**

5. The diagram below shows an extrusive volcanic feature.



(a) Identify the parts marked E, F and G. **(3mks)**

(b) Outline **three** ways in which a caldera may be formed. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION B
(Answer question 6 and any other two questions from this section)

6. Study the map of Kisumu East (1:50,000 sheet 116/2) provided and use it to answer the following questions.

(a)(i) What is the four figure grid reference of the point where road B 2/1 reaches along the western margin of the map extract? **(2mks)**

(ii) Measure the length of Kisumu Municipality boundary. Give your answer in kilometres. **(2mks)**

(b) Describe the drainage of the area covered by the map. **(5mks)**

(c) Citing evidence from the map, give **three** social services offered at Kisumu Town. **(6mks)**

(d) (i) Using a vertical scale of 1cm to represent 100m, draw an accurate cross section along easting 05 from northing 99 to northing 92. **(4mks)**

(ii) On the cross section, mark and name:

- A steep slope
- A boundary
- Road C 543/1
- A railway line. **(4mks)**

(iii) Calculate the vertical exaggeration of the cross section. **(2mks)**

7.(a)(i) Define the term folding. **(2mks)**

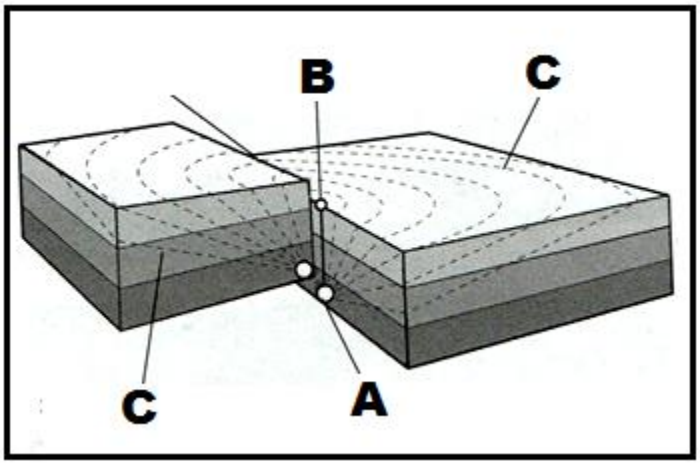
(b)(i) Name **five** types of folds. **(5mks)**

(ii) With the aid of well labelled diagrams, describe how Fold Mountains were formed. **(10mks)**

(c) Explain **four** economic importance Fold Mountains to people. **(8mks)**

8.(a)(i) Define the term earthquake. **(2mks)**

(ii) The diagram below shows the occurrence of an earthquake. Name the parts marked A, B, and C. **(3mks)**



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b)(i) Apart from the movement of tectonic plates, outline **four** other natural causes of earthquakes. **(4mks)**

(ii) Explain **two** ways in which movement of tectonic plates causes earthquakes. **(4mks)**

(c) State **three** differences between the intensity and magnitude of an earthquake. **(6mks)**

(d)Explain **three** effects of earthquakes in built up areas. **(6mks)**

9.(a)(i) What is a river? **(2mks)**

(ii) List **three** types of river erosion. **(3mks)**

(b) Explain **four** ways through which a gorge may be formed. **(8mks)**

(c) Explain the following drainage systems.

(i) Accordant drainage. **(2mks)**

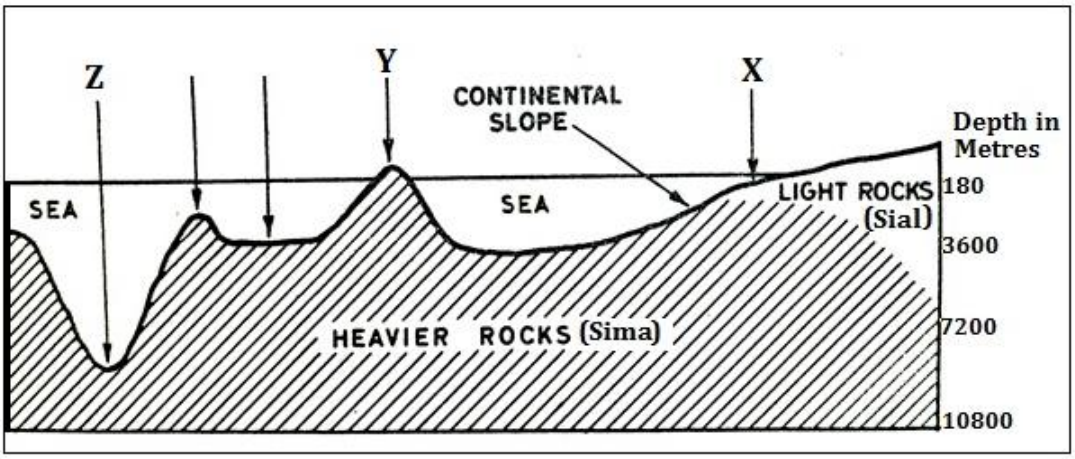
(ii) Back tilted drainage. **(2mks)**

(d) Suppose you were to carry out a field study along the lower course of a major river.

(i) State **five** reasons why it is important to conduct a pre-visit to the area of study. **(5mks)**

(ii) State **three** follow –up activities that you would do after the study. **(3mks)**

10. The diagram below shows some features that form ocean topography.



(a)(i) Identify the features marked X, Y and Z. **(3mks)**

(ii) State **three** sources of salt in ocean water. **(3mks)**

(b) Explain how the following factors influence the rate of wave erosion:

(i) Gradient of the coast. **(2mks)**

(ii) Nature of coastal rocks. **(2mks)**

(iii) Size of waves. **(2mks)**

(c) Describe how a cave is formed at the coast. **(5mks)**

(d) Explain **four** economic importance of coastal features. **(8mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

312/2

GEOGRAPHY PAPER 2

Time: 2¾ hours

INSTRUCTIONS TO CANDIDATES

- This paper has **two** sections: **A** and **B**
- Answer **ALL** the questions in **section A.**
- In section **B,** answer **questions 6** and any other **TWO** questions.
- All the answers must be written on the foolscaps provided after page 4.
- Candidates must answer the questions **in English**.

FOR EXAMINER'S USE ONLY

Section	Questions	Maximum Score	Candidate's Score
A	1 - 5	25	
	6	25	
		25	
		25	
Total Score			

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A

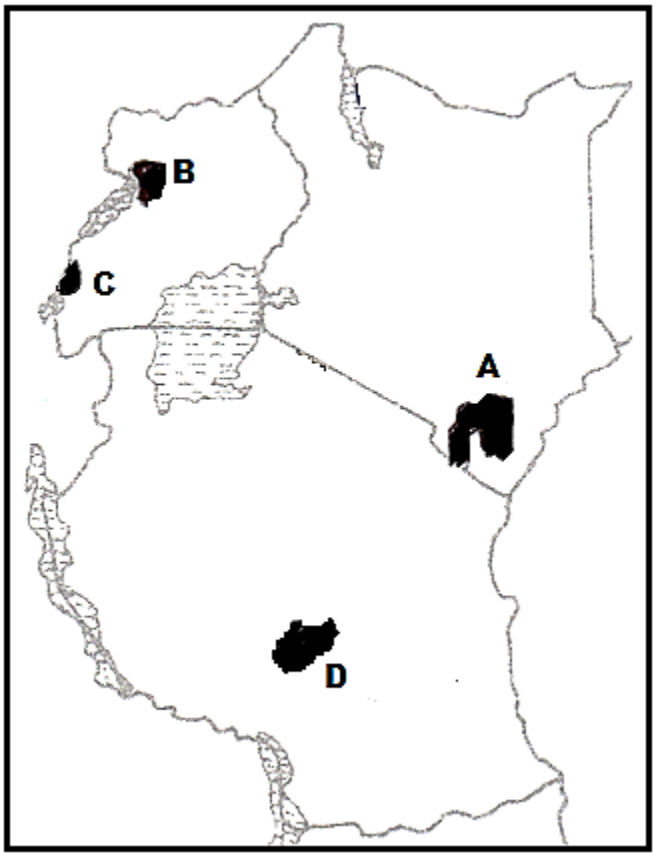
1.(a) List the **two** types of environment. **(2mks)**

(b) Explain how Geography is related to economics. **(2mks)**

2.(a) Name **two** main indigenous breeds of beef cattle reared in Kenya. **(2mks)**

(b) State t**hree** ways in which government policy influences agriculture in Kenya. **(3mks)**

3.The diagram below some national parks in East Africa. Name the parks marked A, B, C and D. **(4mks)**



4.(a) Give **two** main projects through which land was reclaimed in the Netherlands. **(2mks)**

(b) State **four** benefits that resulted in the reclamation of the Yala swamp in Kenya. **(4mks)**

5.(a) State **three** physical factors favouring coffee farming in Brazil. **(3mks)**

(b) Give **three** similarities between coffee farming in Kenya and in Brazil. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION B

6.Study the photograph below and use it to answer the following questions.



(a)(i) Identify the type of photograph provided. **(1mk)**

(ii) Give **two** reasons for your answer in (a)(i) above. **(2mks)**

(iii) Identify the main activity shown on the photograph. **(1mk)**

(b)(i) Draw a rectangle 15 cm by 10 cm to represent the area covered by the photograph. **(1mk)**

(ii) On the rectangle, sketch and label **five** human made features. **(5mks)**

(c)(i) State **five** reasons why river transport is poorly developed in Africa. **(5mks)**

(ii) Explain **five** measures taken to solve transport and communication problems in Africa. **(10mks)**

7.(a)(i) Define the term mining. **(1mk)**

(ii) Give **four** factors that the occurrence of minerals. **(4mks)**

(b) Explain **three** ways in which mining activities cause pollution. **(6mks)**

(c) Describe the stages involved in gold processing in South Africa **(6mks)**

(d) Explain **four** problems facing the gold mining industry in South Africa **(8mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

8.(a) What is unfavourable balance of payments? **(2mks)**

(b) Name **three** major imports to Kenya from the Far East Asia. **(3mks)**

(c) Explain **four** benefits of international trade to Kenya. **(8mks)**

(d)(i) State **four** objectives of ECOWAS. **(4mks)**

(ii) Explain **four** problems facing regional trading blocs in Africa. **(8mks)**

9.(a)(i) What is a Census? **(2mks)**

(ii) State **four** reasons why a census is important to Kenya **(4mks)**

(b) Explain **four** positive effects of high population growth to a country. **(8mks)**

(c) Explain **three** causes of a reduced fertility rate in Kenya **(6mks)**

(d) State **five** differences between Kenya's population and that of Sweden. **(5mks)**

10.(a)(i) Define the term urbanization. **(2mks)**

(ii) List the **three** functional zones of an ideal urban centre. **(3mks)**

(b) Explain **four** physical factors that influence settlement. **(8mks)**

(c) Explain **four** factors that have led to the growth of Rotterdam as a large port. **(8mks)**

(d) State **four** similarities in the functions of Nairobi and New York cities. **(4mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……..……..

SCHOOL: ……..……

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

311/1
HISTORY AND GOVERNMENT
Paper 1
Time: 2 hours 30 minutes

Instructions to Candidates

- This paper consists of three sections; A, B and C.
- Answer all the questions in section A, three questions from section B and two questions from section C.
- Answers to all the questions must be written in the foolscaps provided.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A (25marks)

1.Name the original inhabitants of Kenya during the colonial period. **(1mk)**

2.Identify **one** pre-historic site in Kenya where remains of Ramapithecus were found **(1mk)**

3.Give **two** environmental reason for the migration of the Luo community in Kenya **(2mks)**

4.Name the **two** winds that were used by the early visitors to and from the East African coast up to 1500 AD **(2mks)**

5.Identify **two** social problems facing Nairobi as a modern urban Centre **(2mks)**

6.Outline **two** political responsibilities of a Kenyan citizen **(2mks)**

7.Identify any **two** groups in charge of monitoring the observation of human rights in Kenya. **(2mks)**

8.Give the main significance of the repeal of section 2A of the Kenyan constitution in 1991. **(1mk)**

9.Name the treaty that marked the end of partition of East Africa **(1mk)**

10. State the main recommendation of the Lyttleton constitution of 1954 in Kenya. **(1mk)**

11. Which education commission in Kenya recommended the establishment of 8-4-4 system? **(1mk)**

12. Give the main reason for convening the second Lancaster House Conference **(1mk)**

13. Who is the Chief Legal advisor of the National Government in Kenya **(1mk)**

14. Name the **two** categories of the members of National Assembly **(2mks)**

15. What was the immediate cause of the declaration of state of emergency in Kenya on 20th October 1952? **(1mk)**

16. Name **two** types of land tenure systems/hand holdings in Kenya **(2mks)**

17. Identify any **two** types of revenue funds created by 2010 constitution. **(2mks)**

SECTION B (45marks) Answer any three questions from this section

18. (a) Outline **five** social results of migration of the Bantu community **(5mks)**

(b) Explain the political organization of the Somali community during the pre-colonial period **(10mks)**

19. (a) Give **five** sources of information on contact between East African Coast and outside world **(5mks)**

(b) Explain **five** impacts of Indian Ocean trade on the people of East African Coast **(10mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

20. (a) Outline **three** roles of the trade union movements in Kenya during the colonial period **(3mks)**

(b) Explain **six** problems faced by early political parties in Kenya from 1919 – 1939 **(12mks)**

21. (a) Identify **three** demands raised by the African Elected members organization (AEMO) to the colonial secretary in 1957 **(3mks)**

(b) Explain **six** social results of national philosophies in Kenya **(6mks)**

SECTION C (30marks)

Answer any two questions from this section

22. (a) State **three** rights of arrested persons **(3mks)**

(b) Explain **six** factors promote national unity in Kenya **(12mks)**

23. (a) Outline **three** reasons that may lead to a by-election in Kenya **(3mks)**

(**b)** Explain **six** roles of the National Assembly **(12mks)**

24. (a) State **three** advantages of Devolution in Kenya **(3mks)**

(b) Explain **six** sources of revenue for county governments in Kenya. **(12mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

311/2
HISTORY AND GOVERNMENT
PAPER 2
2½ HOURS

Instructions to Candidates

(a) This paper consists of **three** sections **A, B** and **C.**

(b) Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.**

(c) Answers to all the questions must be written legibly in the answer booklet provided.

(d) This paper consists of three printed pages

(e) Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing

(f) Candidates should answer the questions in English.

FOR EXAMINERS USE

SECTION	QN	MAX	SCORE
A (25 Marks)	1-17	25	
	18	15	
	19	15	
	20	15	
	21	15	
	22	15	
	23	15	
	24	15	
GRAND TOTAL		100%	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A (25 MARKS)

Answer ALL questions in this section.

1. Identify one unwritten source of information in History and Government. **(1mk)**

2. Give two uses of stone tools by early people. **(2mks)**

3. What planting method was used by European farmers before the agrarian revolution? **(1mk)**

4. What is the **MAIN** factor that stimulated the development of Trans-Atlantic trade? **(1mk)**

5. State two reasons why the camel is referred to as 'the ship of the desert'. **(2mks)**

6. Identify two forms of messages that could be relayed by the use of drum beats in Ancient times. **(2mks)**

7. Mention one disadvantage of using coal as a source of energy. **(1mk)**

8. Identify two metals that were used to replace stone tools in Africa. **(2mks)**

9. State one problem which faced Athens. **(1mk)**

10. State one way through which the Europeans maintained peace among themselves during the partition of Africa**.(1mk)**

11. Give two social reasons for the European scramble for Africa. **(2mks)**

12. State two conditions that one had to fulfill to become assimilated to French West Africa. **(2mks)**

13. Give the main reason for the formation of the League of Nations. **(1mk)**

14. Identify one member of the central powers that fought during the First World War. **(1mk)**

15. State the main function of the International court of Justice. **(1mk)**

16. Name two founder leaders of Non-Aligned movement (NAM). **(2mks)**

17. State two reasons why Zanzibar favoured a union with the mainland Tanganyika in 1964. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION B (45 MARKS)

Answer any THREE questions from this section.

18. (a)Outline three physical characteristics of Egyptian ape. **(3mks)**

(b) Describe the culture of the early man during the Old Stone Age. **(12mks)**

19. (a) Give three features of agricultural practices in Britain before Agrarian revolution. **(3mks)**

(b) Explain six measures that can be adopted to alleviate the food shortage in Africa. **(12mks)**

20. (a) State 3 economic activities of the Asante during the 19th century. **(3mks)**

(b) Describe the social organization of the shona during the colonial period. **(12mks)**

21. (a) Give three reasons why the Maji Maji rebellion failed. **(3mks)**

(b) Explain six reforms introduced by German administration after the Maji Maji rebellion. **(12mks)**

SECTION C (30 MARKS)

Answer any TWO questions from this section.

22. (a) State five reasons why Britain used indirect rule in Nigeria. **(5mks)**

(b) Discuss five effects of indirect rule in Nigeria. **(10mks)**

23. (a) Give **three** political changes introduced by Mobutu Seseko which led to dictatorship in D.R.C **(3mks)**

(b) Describe six social challenges that have faced Tanzania since independence. **(12mks)**

24. (a) State five functions of the British House of Commons. **(5mks)**

(b) Explain five factors that limit parliamentary supremacy in Britain. **(10mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

JINA: ……..…….

SHULE: ……..

NAMBARI YA USAJILI: …….. SAHIHI: ……..…. TAREHE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

Cheti cha Kuhitimu Kisomo cha Sekondari

102/1 Kiswahili – Insha Karatasi ya 1

a) Andika jina lako na nambari ya usajili kwenye nafasi ulizoachiwa hapo juu.

b) Tia sahihi yako kisha uandike tarehe ya mtihani katika nafasi ulizoachiwa hapo juu.

c) Andika insha **mbili**. Insha ya kwanza ni ya **lazima.**

d) Kisha chagua insha nyingine moja kati ya hizo tatu zilizobakia.

e) Kila insha isipungue maneno **400**.

f) Kila insha ina alama **20.**

g) Kila insha lazima iandikwe kwa lugha ya **Kiswahili.**

h) Insha zote sharti ziandikwe katika nafasi ulizoachiwa kwenye kijitabu hiki cha maswali.

i) Watahiniwa ni lazima wahakikishe kwamba kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	20	
	20	
JUMLA	40	

1. Rafiki yako anayesomea katika shule jirani amefukuzwa shule kwa sababu ya ukosefu wa nidhamu.Mwandikie barua ukimshauri kuhusu umuhimu wa kuwa na nidhamu shuleni.

2.Teknolojia ya kisasa ina faida na madhara kwa vijana wetu.Jadili.

3.Andika kisa kitakachoonyesha ukweli wa methali : **Asiyesikia la mkuu huvunjika guu.**

4.Andika insha itakayoishia kwa:

…Ilinichukua muda mrefu kuyaamini niliyoyaona.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

JINA: ……..……

SHULE: ……..

NAMBARI YA USAJILI: …….. SAHIHI: ……..…. TAREHE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

102/2
KISWAHILI
KARATASI YA PILI
LUGHA

MUDA: SAA 2 ½

Maagizo

I. Andika jina lako,nambari ya usajili na darasa

II. Jibu maswali yote

III. Maswali yote ni sharti yaandikwe kwa lugha ya kiswahili

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
UFAHAMU	15	
UFUPISHO	15	
LUGHA	40	
ISIMU JAMII	10	
JUMLA	80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

1.UFAHAMU (ALAMA 15)

Shule Yangu Ya Upili

Majio yangu katika shule hii ya upili hayakutokea kwa bahati nasibu bali kwa mipango kabambe niliyoianza tangu nikiwa shule ya vichekechea.Nikiwa sitetereki hata kwa wazazi wangu waliponisihi nijiunge na shule nyingine za karibu nikawa sisikii la mwadhini wala la mteka maji msikitini.Nikawa na ragba ya mkanja nikingoja siku ya kujiunga na shule yenyewe.Kweli majuto ni mjukuu na huja kinyume.

Nilizaliwa katika aila yenye nafasi iliyotopea na kubobea katika ukwasi uliodhihirika kutokana na mitaa tulikoselelea kwa muda kabla ya baba kuaamua kununua nyumba yake mwenyewe huko upande wa Karen hivyo tukagura kutoka Lunda.Wakatiwa likizo tukawa tunaruka hadi pwani ambako mama yangu alikuwa amemiliki jumba lililokuwa katika ufuo wa bahari lililojengwa katika kipande kisichopungua ekari tatu alilotunukiwa wakati wa nikahi yao na wakwe wa baba yangu.

Wavyele wangu wakawa wanaendesha magari meusi ya kifahari ingawa sikuwahi kumwona mama akichangamka kuendesha magari yake ya maana,kila macheo ya siku za kazi gari lililoendeshwa na dereva ambaye alimstahi mama hadi akawa anamfungulia mlango wa gari na kuufunga baada ya mama kujitoma katika tumbo la gari lilimjia na kumrejesha kwa wakati.Nikajiunga na shule ya msingi ya kibinafsi ambako nilishughulikiwa kama kikembe.Wengi wa wale tuliosoma nao walikuwa wa tabaka langu na walikuwa wametoka katika kila sehemu nchini Kenya.

Hayawi hayawi huwa na siku ya kuripoti ikafika.Alfajiri,dereva mmoja akatumwa kwenda hadi Kisumu ili atulaki na kutusafirisha kutoka uwanja wa ndege hadi shule ya upili ambayo ilikuwa yangu ya rohoni.Nasi tukaelekea hadi uwanja wa ndege ili turuke hadi Kisumu.Safari yetu kutoka kitongoji cha kifahari hadi Airport ilikuwa njema,safari yetu tulipoabiri ndege ilikuwa bila bughudha,safari yetu kutoka Kisumu mjini haikuwa na kasoro na tulienda kulingana na mpango.Safari yetu ilikuwa mufti hadi tulipofika katika lango la shule ya kitaifa!Tulipotia ozi tu!!....jamani.....jamani nikafa moyo.Labda mama aliweza kubaini mabadiliko ya hisia zangu,nilitamauka, nikawa mchege na kusema kweli niliyoyaona sikuamini.Mvua iliyokuwa imepasua hapo awali ilikuwa imeacha vitua vya maji kwenye vijia vya kutembea vilivyochakaa na kubomoka bila yeyote kuja kuvikarabati.Majengo yalikuwa makongwe yaliyojengwa miaka mia moja iliyopitana yalistahili kuitwa makavazi badala ya pahali pa kumkaribishia mwanafunzi aliyepita kwa alama mia nne na thelathini na tano.Asiye na wake ana Mungu,nikapiga moyo konde lazima nisajiliwe katika shule ya ndoto yangu.Ningewezaje kughairi wazo langu baada ya siku hizo zote za maandalizi tena mbele ya wanuna walioniona kama kielelezo chao tangu walipozaliwa.Nikasajiliwa! Sikujua shule ya upili ya kitaifa yaweza kuwa hivi.Kweli mwanafunzi aweza kukosa viatu na hatakushindwa kununua rangi ya kupaka viatu hivyo iwapo amenunuliwa na wahisani?Nilimlaumu nina maana hakunieleza kuwa mtu anaweza kula chakula ambacho mbwa wetu hawezi hata kukiangalia.Nilipoingia katika ukumbi wa chakula nilihisi kitefutefu nusura nichafukwe na moyo. Makapi ya mboga na uchafu usioelezeka ulinikumba,kisha nikapewa kisahani cha plastiki na kupakuliwa kipande cha ugali ambacho bado kilikuwa na unga na kuachiwa

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

hiari ya kukila au kukitupa.Wenzangu wakawa wanakirambatia chakula kwa kasi huku mmoja wao alipoona jinsi nilivyokiangalia changu akanisihi nimpe chote na kukimaliza fyu.Wote walikuwa na furaha kemkem na kuajabia utukufu wa shule iliyotukuka ya kitaifa ila mimi. Baada ya mlo'rojorojo',tukaelekea darasani nilikopigwa na mghuma mkubwa. Tulikuwa wanafunzi hamsini na watano katika darasa moja tu! Mwalimu mmoja akaja na kutukaribisha shuleni kisha akatuarifu kuwa atakuwa mwalimu wa darasa letu.Nilipomsikia akinena nusura niishiwe na stahamala,kimombo chake kilinishangaza,hasa matamshi yake yalipungukiwa na kudhihirisha athari za lugha ya asili.Nilihisi kana kwamba ningemrekebisha lakini sikudhubutu.

Tukafululiza hadi bweni na nikajilaza kitandani chembamba huku mwingine nisiyemjua lakini asiyejua kuwa kuna nguo maalum za kulala akalala uchi katika ghorofa ya juu ya kitanda chetu.Mgeni njoo mwenyeji apone maana baada ya muda wadudu ambao sikuwahi kuwaona aushini mwangu wakaanza kunishambulia. Nikaamka baada ya kumnasa mmoja wa wadudu hawa na kuuliza mmoja wa wenzangu ni wapi wadudu hawa na kwa kutojali hata kidogo,akanieleza kuwa hawana neno bali ni kunguni tu,Sikujua na kwa kweli mama hakuniambia kuwa kuna wadudu wanaotafuna mtu na hunuka fye! Sikulala kwa hofu huku wenzangu wakiforota kwa njia ya kunighasi.Sikuwahi kudhani kuwa watu wengi wanaweza kulala chumba kimoja huku changu kikiwa na hamamu na vifaa vyote muhimu kikibaki bila mtu! Tulisomeshwa na walimu wasiojali kana kwamba tunaelewa au la. Hawakushughulika iwapo tulifanya kazi za ziada aula,ndio,hakujali chochote. Kilichonishangaza ni kuwa wanafunzi waliojiunga nasi kutoka shule za umma wenye alama duni waliwapenda na kuelewa haraka walichosomeshwa na hawakujali matamshi yao,labda hawakuyatambua. Hatimaye tukafanya mtihani wa mwisho wa muhula wa kwanza.Nilishangaa ghaya iliponibainikia kuwa aliyetuongoza alikuwa ghulamu mmoja mshamba niliyempuuza tu mvulana kutoka kijijini ambacho singetambua katika ramani ya nchi ambaye hata vitu vya kimsingi vilimpiga chenga.Nikafanya uchunguzi nikatambua mwenzangu alikuwa na alama mia mbili hamsini na tatu akitoka katika darasa la nane. Nilifanikiwa kuwa nambari mia mbili hamsini na tatu kwa jumla ya wanafunzi mia tatu! Tulipofunga kwa likizo ya Pasaka nikaamua kuchukua hatua nyingine: Sitawahi kuhama kutoka shule hii ya upili wala kuwa zaidi ya nambari kumi!

Maswali

a) Thibitisha kauli kuwa msimulizi ana msimamo thabiti. **(alm2)**

……

……

……

……

b) Tofautisha jinsi mwandishi alivyofunzwa katika shule ya kibinafsi na shule ya upili**.** **(alm2)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

c) Taja mambo matatu yanayotuonyesha kuwa msimulizi alilelewa katika aila ya kikabaila kulingana na aya ya pili. **(alm3)**

……

……

……

……

……

d) Andika masuala matatu yaliyomshangaza katika shule ya upili. **(alm3)**

……

……

……

……

……

e) Andika tamathali mbili zilizotumika katika kifungu. **(alm2)**

……

……

……

……

f) Eleza maana ya msamiati huu kama ulivyotumika katika kifungu. **(alm3)**

i.) Alimstahi

……

……

ii.) Kughairi

……

……

iii.) Kunighasi

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

2.SEHEMU B:UFUPISHO (ALAMA15)

Soma kifungu kisha ujibu maswali.

Ripoti za kila mara kuhusu uharibifu wa pesa za umma katika serikali za kaunti ni za kusikitisha.Kuna mabilioni ya pesa za kulipa ushuru ambazo hufujwa katika serikali kuu,na hivyo basi wananchi wanakosewa sana wanapoona mtindo huu ukiendelea pia katika serikali za kaunti.Wakati katiba ilipopitishwa mwaka wa 2010,Wakenya wengi walikuwa na matumaini mno kwamba ugatuzi ungewatatulia matatizo ambayo walikuwa wakipitia katika tawala zilizotangulia,hasa katika maeneo yaliyotengwa kimaendeleo.

Miaka tisa baadaye,kuna mafanikio ambayo yamepatikana ila hatua kubwa zaidi inaweza kupigwa katika kuboresha maisha ya kila raia kama mianya inayotumiwa kufuja pesa za umma itazibwa.Wizi huu unaojumuisha pia jinsi magavana wanavyobuni nafasi za kazi zisizo na maana ambazo wakati mwingi hupeanwa kwa jamaa na marafiki wao,ni sharti ukomeshwe mara moja.

Kuna wananchi wengi ambao tayari wameanza kufa moyo kuhusu umuhimu wa ugatuzi ilhali ukweli ni kwamba hatungependa kurejelea utawala ulio chini ya serikali kuu pekee.Changamoto za ugatuzi zinazosababishwa na ulafi wa viongozi wachache zinatoa nafasi kwa wakosoaji wa mfumo huu wa uongozi kushawishi wananchi na hata wahisani wasishughulike kuchangia katika maendeleo ya kaunti zao.

Juhudi zozote zile za maendeleo haziwezi kufanikishwa bila ushirikiano kutoka kwa wananchi na wahisani na hivyo basi ni jukumu la viongozi kuonyesha nia ya kutumia mamlaka waliyopewa kwa manufaa ya raia.Tume ya maadili na kupambana na ufisadi (EACC) kufikia sasa imeonekana kufanya kazi nzuri kwa kuwasaka na kuwashtaki magavana walio mamlakani na wengine walioondoka,kwa kushukiwa kufuja mali za umma.Tungependa asasi zote zinazohusika na masuala ya kupambana na uhalifu, pamoja na wadau wengine katika jamii wenye nia njema kwa wananchi wasifumbie macho maovu yanayotendwa katika kaunti zetu.

Nchi hii inatawaliwa kwa misingi ya kisheria na hivyo basi hakuna sababu kumhurumia kiongozi yeyote anayekiuka sharia anapokuwa mamlakani kwa msingi wa mamlaka aliyoshikilia.Ni kupitia adhabu kali za kisheria pekee ambapo tutafanikiwa kukomesha uongozi mbaya kwani kama wananchi watakuwa wakisubiri kuwaadhibu wahusika kwa kuwaondoa mamlakani pekee,watakuwa wametoa nafasi ya ufujaji kwa viongozi wapya kila miaka mitano.

(Kutoka gazeti la Taifa Leo)

(a)Fupisha ujumbe wa aya tatu za kwanza kwa maneno 80. **(alm8,1 ya mtiririko)**

Matayarisho

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

Jibu

……

……

……

……

……

……

……

……

……

……

(b) Fupisha aya mbili za mwisho kwa maneno70. **(alm7, 1 ya mtiririko)**

Matayarisho

……

……

……

……

……

……

……

Jibu

……

……

……

……

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

3.SEHEMU C:

SARUFI NA MATUMIZI YA LUGHA (ALAMA 40)

a) Andika neno lenye muundo ufuatao; **(alm2)**

Kikwamizo sighuna cha mdomo meno,irabu ya mbele juu,nazali ya midomo,kipasuo ghuna cha midomo na irabu ya nyuma wastani.

……

……

b) Tunga sentensi kwa kutumia kiwakilishi huru cha nafsi ya tatu umoja**.** **(alm2)**

……

……

……

……

c) Tambulisha vipashio vitatu vya lugha ya kiswahili**.** **(alm3)**

……

……

……

……

……

d) Tumia neno ‘vibaya’ kama; **(alm2)**

i.) Kivumishi

……

……

ii.) Kielezi

……

……

e) Tunga sentensi moja katika wakati ujao hali endelevu**.** **(alm2)**

……

……

……

……

f) Eleza matumizi ya ‘ni’ katika sentensi hii. **(alm2)**

Ingieni darasani mara moja ili niwape zoezi ambalo ni rahisi.

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

g) Ainisha vielezi vya namna katika sentensi hii**.** **(alm2)**

Mzee huyu mkongwe alicheka kijinga huku akila haraka haraka.

……

……

……

……

h) Tambua miundo mitatu ya ngeli ya LI-YA. **(alm3)**

……

……

……

……

……

i) Bainisha shamirisho na chagizo katika sentensi ifuatayo. **(alm3)**

Kimani aliukata mti kwa kisu jana asubuhi.

……

……

……

……

……

j) Andika kwa usemi wa taarifa: **(alm2)**

Karani: Njoo nikutume kwa baba yangu.

Kamau: Sitaki kupita njia ya kwa babu.

……

……

……

……

k) Nimenunua dawa ili iwamalize wadudu wanaotusumbua hapa kwetu nyumbani. **(alm2)**

Anza: Wadudu

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

l) Andika kwa ukubwa hali timilifu. **(alm2)**

Mtego ulimnasa ndovu huyo.

……

……

……

……

m) Bainisha vishazi katika sentensi fuatayo**.** **(alm2)**

Ingawa alitia bidii masomoni,alifeli mtihani.

……

……

……

……

n) Tambua aina mbili za sentensi ukizingatia uamilifu na utoe mfano mmoja kwa kila moja. **(alm2)**

……

……

……

……

o) Taja na utolee matumizi mawili ya mkwaju. **(alm2)**

……

……

……

……

p) Changanua sentensi hii kwa kutumia kielelezo cha visanduku. **(alm4)**

Waswahili husema chema chajiuza kibaya chajitembeza.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

q) Andika sentensi moja ukitumia kitenzi ulichopewa katika kauli ya kutendewa. **(alm1)**

Ja

……

……

r) Bunda ni kwa noti ,na bumba ni la nyuki ilhali _____ ni kwa karatasi. **(alm1)**

s) Kamilisha methali hii. **(alm1)**

Mfa maji**…….……..**

4.SEHEMU D: ISIMU JAMII (ALAMA 10)

Kibiko: Hujambo dada Cheupe?

Cheupe: (akikohoa) Sijambo ndugu Kibiko.

Kibiko: Unaendelea namna gani?

Cheupe: Niko poa isipokuwa maumivu kidogo ya chest.

Kibiko: Usijali nitakupa pain relievers utakuwa sawa.

Cheupe: Asante sana,nashukuru.

Maswali.

a.) Eleza muktadha wa mazungumzo haya. **(alm2)**

……

……

……

……

b.) Taja na ueleze sifa za lugha iliyotumika katika mazungumzo haya. **(alm8)**

……

……

……

……

……

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

JINA: ……..……..

SHULE: …….

NAMBARI YA USAJILI: …….. SAHIHI: ……..…. TAREHE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

Cheti cha Kuhitimu Kisomo cha Sekondari

102/3 Kiswahili – Fasihi Karatasi ya 3
KIDATO CHA NNE Muda: Saa 2½

Maagizo

(i) Andika jina lako, nambari ya usajili, mkondo, sahihi na tarehe katika nafasi ulizoachiwa hapo juu.

(ii) Jibu maswali manne pekee.

(iii) Swali la kwanza ni la lazima.

(iv) Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki Riwaya, Ushairi, Tamthilia na Fasihi Simulizi.

(v) Usijibu maswali mawili kutoka sehemu moja.

(vi) Maswali yote ni sharti yaandikwe kwa lugha ya Kiswahili.

Kwa matumizi ya mtahini pekee

SWALI	UPEO	ALAMA
1	20	
	20	
	20	
	20	
JUMLA	80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SEHEMU A: HADITHI FUPI (LAZIMA)

D.W. Lutomia na Phibbian Muthama : Mapambazuko Ya Machweo Na Hadithi Nyingine

1.Lazima

Athari ya mawazo yake ilijiandika dhahiri shahiri usoni mwake. Alianza kwa kuachia tabasamu pana mithili ya msafiri aliyefika salama. Baada ya dakika chache, machozi yalianza kumtoka njia mbilimbili huku kajishika tama. Alifikiria kuhusu mtihani uliodhamiriwa kuanza siku ya Jumanne. Mtihani ambao ungemwezesha kupata ufadhili katika shule ya upili ya bweni ikiwa angepita vyema. Hili ndilo wazo lililozua tabasamu. Lakini, angefeli je? Hatima yake ingekuwa ipi? Maswali haya yalimliza yakamwacha akisinasina kama mgonjwa wa mafua. Akiwa katika hali hii, aliyakumbuka maneno ya mwalimu mkuu, "Mizizi ya elimu ni michungu ila matunda yake ni matamu. Ikiwa mnataka kuyaonja matunda ya elimu, lazima mtie bidii kwani mtaka cha mvunguni sharti ainame."

Akiwa amezama kwenye lindi la mawazo, alizinduliwa na sauti ya Yunuke ikimwita, "Sabina! Sabina! Sabinaa!"

(a) Changanua mtindo kwenye kifungu. **(alm8)**

(b) Suala la kazi na bidi limeangaziwa kwa kina kwenye diwani ya mapambazuko ya machweo.

Tetea ukweli wa kauli hii kwa kurejelea hadithi zifuatazo:

i. Fadhila za punda

ii. Mapambazuko ya machweo

iii. Sabina **(alm12)**

SEHEMU B: RIWAYA

A.Matei: Chozi la Heri.

Jibu swali la 2 au la 3

2. Naona wingu kubwa angani likitembea kwa kedi na madaha na kulifunika jua...Mawingu yaliyoshiba yakataka kutapika yanagooka, yanakaribiana, kupigana busu na kusababisha mwanguko wa matone mazito ya mvua; matone yanayoanguka kwenye ngozi laini zą wanangu wakembe... ubavuni mwangu amelala maskini mke wangu... Sijui kama inahalisi kumwita mke wangu.... Siye, siye, siye-e-e-e. Tazama uso wake ulivyovamiwa na majeraha kikwi... Amevimba na kuvimbiana kama dongo la unga ngano baada ya kutiwa hamira. Lakini yeye hana la hamira!

a) Eleza muktadha wa dondoo hili. **(alm4)**

b) Jadili aina ***nne*** za taswira katika dondoo hili **(alm4)**

c) Bainisha vipengele vingine **vinne** vya kimtindo katika dondoo hili **(alm4)**

d) Bainisha toni ya dondoo hili. **(alm2)**

e) Fafanua umuhimu wa mandhari katika dondoo hili **(alm6)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

3.“Alijiona kama mfa maji ambaye anakabiliwa na mtutumo wa **mawimbi ya misiba** ,mmoja baada ya mwingine.”

a)Eleza muktadha wa dondoo hili. **(alm4)**

b)Ukimrejelea msemewa wa maneno haya na wahusika wengine kutoka kwenye riwaya,onyesha jinsi walivyokumbwa na mawimbi ya misiba**.** **(alm16)**

SEHEMU C: TAMTHILIA

Timothy Arege: Bembea Ya Maisha

Jibu swali la 4 au la 5

4. “Hata nikiitwa nitaondoka nikiwa nimeridhika.”

a)Eleza muktadha wa dondoo hili **.** **(alm4)**

b)Kwa hoja **tano**, eleza sifa za msemaji wa maneno haya . **(alm5)**

c)Tambua mbinu **moja** ya lugha iliyotumika katika dondoo hili**.** **(alm1)**

d) Wahusika mbalimbali kwenye tamthilia wamekubwa **na majonzi na furaha**. Thibitisha. **(alm10)**

5. “...Tayari unakuwa umeonja seli.Hata wahudumu wenyewe hawana mlahaka mwema .amri na vitisho kama askari.Unashindwa kama uuguze moyo ama ugonjwa.Katika wodi hewa iliyojaaa harufu ya dawa imezagaa,vitanda vimesalimu amri mpaka shiti zikagura.Yaani hali nzima haikupi matumaini ya kutoka ukiwa bora.matumaini yanadidimia .Tumaini lako unaliweka katika sala. ”

(a) Tambua toni mbili katika kifungu hiki **(alm2)**

(b) Tambua aina mbili za taswira katika dondoo hili **(alm2)**

(c) Kando na taswira chambua vipengele vingine vya kimtindo **(alm6)**

(d) Fafanua namna mandhari ya dondoo hili yalivyochangia kujenga tamthilia ya Bembea ya Maisha. **(alm10)**

SEHEMU D: USHAIRI.

Jibu swali la 6 au la 7

6. Soma shairi lifuatalo kisha ujibu maswali

<u>Taifa ni Ushuru</u>

Lau kama ingakuwa, madhali tuna uhuru
Watu kodi kutotowa, na kuifanya kufuru
Vipi nchi ingakuwa, taifa bila ndururu
Taifa halingakuwa, bilashi bila ushuru

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Hivi taifa kumea , nakuendelea mbele
Kwamba lajitegemea, haliwategei wale
Yataka kujitolea, ushuru bila kelele
Taifa halingakuwa, bilashi bila ushuru

Wafanyikazi wa umma, mfano mwema walimu
Wauguzi mahashuma, daktari wahadimu
Bila hizi darahima, vipi wangalihudumu?
Taifa halingakuwa, bilashi bila ushuru

Si vyema kuombaomba, kwa wageni kila mara
Huwa twajifunga Kamba, na kujitia izara
Adha zinapotukumba, kujitegemea bora
Taifa halingakuwa,bilashi bila ushuru

Miradi ya maendeleo, yahitaji darahima
Ndo tufikie upeo, ulio dunia nzima
Wadogo na wenye vyeo, bila kodi tutakwama
Taifa halingakuwa, bilashi bila ushuru

Ushuru si kwa wanyonge, wasokuwa na uwezo
Watozwe hata wabunge, na wengine wenye nazo
Yeyote asijitenge, kodi akalipa bezo
Taifa halingakuwa, bilashi bila ushuru

Kwetu kutoa ushuru,ndiko kujitegemea
Pasiwepo na udhuru, usio wa kuelea
Huwa ni kama kiguru, asenao kutembea
Taifa halingakuwa, bilashi bila ushuru

Maswali

(a) Tambua hadhira inayolengwa katika shairi hili**.** **(alm1)**

b) Huku ukitoa mfano,onyesha mbinu **tatu** ambazo mshairi ametumia kutosheleza uhuru wake. **(alm3)**

c) Bainisha aina **tatu** za urudiaji zinazojitokeza katika utungo huu**.** **(alm3)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

d) Eleza muundo wa ubeti wa sita. **(alm4)**

e) Andika ubeti wa **nne** katika lugha ya nathari/tutumbi **(alm4)**

f) Kwa kutolea mfano,taja mbinu **tatu** za kimtindo zilizotumika katika shairi hili. **(alm3)**

g) Weka shairi hili katika bahari yake ukirejelea : **(alm2)**

i)Vipande

ii) Vina

7. Soma shairi lifuatalo kisha ujibu maswali

Sikilizeni wimbo huu:
Niliokuwa mtoto nilitwa chacha Kwa matamshi yangu ya sasa
Nilipokuwa mtu mzima niliitwa Manywele Nilipokuwa mwalimu nikaitwa Bure.

Huu utakuwa wimbo wako Utakapostaafu urudipo nyumbani Umelewa kangara na nyayo zako
Zikishindwa kulenga njia nyembamba vijijini. Utakuwa kichekesho cha watoto Watakaoukuita, Ticha! Popote upitapo.

Kumbuka mwalimu utakapostaafu, Mijusi watataga mayai ndani ya viatu Vyako vilivyokwisha visiginino.
Na ndani ya sidiria chakavu Zilizoshikizwa Kamba kwa pini
Mende watazaliana ndani ya chupa tupu Za marashi na za bia.

Na manyigu yatajenga ndani ya kofia Zilizosahaulika kutani
Utakapokufa nge watazaliana Chini ya jiwe juu ya kaburi lako, Na mlevi fulani akipita atapenga
Na kupangusa vidole kwenye jiwe pweke
Mwanzo na mwisho wako ndio huo.

Lakini wakati ungali hai
Unaweza kubadilisha mkondo wa maji Lakini kwanza mzungumze. Wewe na mimi. Acha mioyo yote izungumzwe
Baada ya kunyanyaswa Na kisha nusu mshahara.

Utafundisha tena nyimbo kuwasifu viongozi? Utafundisha tena ngonjera?
Utapeleka tena wanafunzi asubuhi Wakajipange barabarani kusubiri Mgeni afikaye saa kumi na apitapo
Apunga tu mkono kuwatia kichaa cha shangwe
Na huku nyuma mwasambaa na njaa?

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Tazama hilo runda madaftari mezani Utalimaliza kwa mshahara mkia wa mbuzi? Tuzungumze. Ninyi na mimi.

Acha mioyo yetu izungumze

Mkiwa waoga na kujikunja kama jongoo Mtawekwa kwenye vijiti na kutupwa Nje ya ua, ndani mtawaacha

Wacheza ngoma wakitunga nyimbo mpya

Sikilizeni walimu,

Anzeni kufundisha hesabu mpya

Mjinga mmoja kujumlisha na wezi ishirini Ni sawa na sifuri. Hapana utawala Fundisheni historia historia mpya

Hapo zamani za sasa Hapakuwa na serikali.

Sikilizeni kwa makini Umoja hatuna

Twasambaratika kama nyumba Tulicho nacho ni woga,

Na kinachotuangusha ni unafiki. Lakini tusikate tamaa kama mbuni. Tukiupata umoja bado tunayo silaha. Kura.

Maswali

(a) Fafanua sifa za shairi huru zinazojitokeza katika shairi hili. **(al.5)**

(b) Eleza jinsi maudhui ya utamaushi yanavyojitokeza ukimrejelea nafsi-nenewa. **(al.4)**

(c) Nafsi-nenewa anapaswa kujilaumu kwa masaibu yake. Thibitisha. **(al.2)**

(d) (i) Bainisha nafsi-neni katika shairi hili. **(al.1)**

(ii) Taja toni ya shairi hili. Toa mfano. **(al.2)**

(iii) Eleza matumizi mawili mawili ya usambamba na jazanda katika shiri hili. **(al.4)**

(iv) Eleza maana ya kufungu kifuatacho:

Mjinga mmoja kujumlisha na wezi ishirini ni sawa na sufuri. **(al.2)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SEHEMU E: FASIHI SIMULIZI

8. **Soma utungo ufuatao kisha ujibu maswali**

1. Angole angole mwanangu
Mwanangu nakuchombeza
Nakuchombeza ulale
Ulale ukiamka
Nikupikie ubwabwa
Na mchuzi wa papa
Ukilia waniliza, wanikumbusha
Ukiwa wa baba na mama

2. Baba na mama watende
Ilimu kunikatizia
Ng'ombe, mbuzi kupokea
Kunioza dumu kongwe
Haliuki na halende
Kazi kupiga matonge

3. Likingia mvunguni
Lavunjavunja vikombe
Likilala kitandani
Languruma kama gombe

a) Bainisha kipera cha utungo huu. Thibitisha. **(alm2)**

b) Eleza ujumbe unaofumbwa katika wimbo huu. **(alm5)**

c) Tambua mbinu za kifani ambazo zimetumiwa kuwasilisha utungo huu. **(alm3)**

d) Bainisha shughuli mojamoja ya kijamii na ya kiuchumi ambazo huendelezwa katika jamii ya utungo huu. **(alm2)**

e) Unakusudia kukusanya data kuhusu kipera hiki. Eleza manufaa manne ya kutumia mahojiano. **(alm4)**

f) Kipera hiki kinazidi kufifia katika jamii yako. Fafanua njia nne ambazo jamii ya kisasa inaweza kutumia kukuza na kuendeleza kipera hiki. **(alm4)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

121/1
MATHEMATICS
PAPER 1

MATHEMATICS PAPER 1- ALT A

TIME: 2 ½ HOURS

Instructions to candidates

(a) Write your name and admission number in the spaces provided above.

(b) Sign and write the date of examination in the spaces provided.

(c) This paper consists of two sections: **Section I** and **Section II**.

(d) Answer all questions in **section I** and **only five** questions from section **II**.

(e) Show all the steps in your calculations, giving the answers at each stage in the spaces provided below each question.

(f) Marks may be given for correct working even if the answer is wrong.

(g) Non-programmable silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

(h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

(i) Candidates should answer the questions in English.

For Examiner's Use Only

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**Total**

SECTION II

17	18	19	20	21	22	23	24	**Total**

Grand Total

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION I (50 MARKS)

*(Answer **all** questions in this section in the spaces provided below each question)*

1. Simplify $\frac{12x^2+ax-6a^2}{9x^2-4a^2}$ **(3mks)**

2. Paul bought a refrigerator on hire purchase by paying monthly instalments of Ksh. 2000 per month for 40 months and a deposit of Ksh. 12,000. If this amounted to an increase of 25% of the original cost of the refrigerator, what was the cash price of the refrigerator? **(3mks)**

3.Without using calculator, evaluate

$\left(\frac{7}{3}\left[\frac{2}{5}of\,1\frac{2}{3}-\frac{1}{2}\left(\frac{1\frac{2}{3}-2\frac{1}{2}}{\frac{1}{3}-\frac{19}{27}}\right)^{\frac{1}{2}}+\frac{2}{3}\right]\right)^{\frac{1}{2}}$ leaving the answer as a mixed fraction. **(4mks)**

4. During a certain month, the exchange rates in a bank were as follows;

	Buying (Ksh.)	Selling (Ksh.)
1 US $	91.65	91.80
1 Euro	103.75	103.93

A tourist left Kenya to the United States with Ksh.1 000,000.On the air port he exchanged all the money to dollars and spent 190 dollars on air ticket. While in US he spent 4500 dollars for upkeep and proceeded to Europe. While in Europe he spent a total of 2000 Euros. How many Euros did he remain with? **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

5. A regular *n*-sided polygon has its interior angle equal to 4 times its exterior. Find *n.* **(3mks)**

6. The ratio of the lengths of the corresponding sides of two similar rectangular petrol tanks is 3:5.The volume of the smaller tank is $8:1m^3$.Calculate the volume of the larger tank. **(3mks)**

7. A man walks directly from point A towards the foot of a tall building 240m away. After covering 180m, he observes that the angle of elevation of the top of the building is 45^0.Determine the angle of elevation of the top of the building from A. **(3mks)**

8. The G.C.D. and L.C.M. of three numbers are 3 and 1008 respectively. If two of the numbers are 48 and 72, find the least possible value of the third number. **(3mks)**

9. Solve for x in the equation below without introducing logarithms

$5^{2x-1} = 60^{2x-1}$ **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

10. The table below shows masses of fifty students in a form one class.

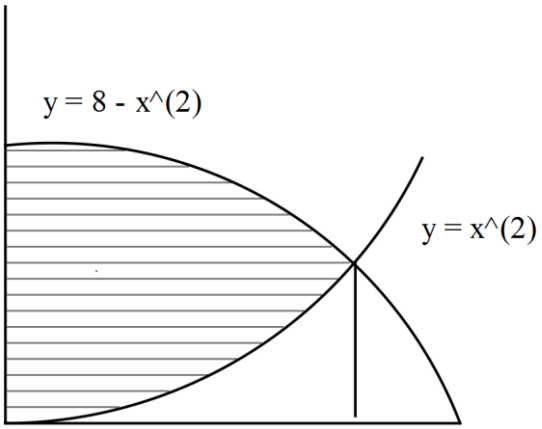
Mass (kg)	Frequency
25-30	6
30-35	10
35-40	24
40-45	7
45-50	4

a) State the modal class. **(1mk)**

b) Calculate to 3 d.p the median mass. **(2mks)**

11. Given that the position vectors of points P and Q are $\boldsymbol{p} = \begin{pmatrix} -4 \\ -2 \end{pmatrix}$ **and** $\boldsymbol{q} = \begin{pmatrix} 5 \\ 4 \end{pmatrix}$. M is a point on PQ such that PM:MQ = 2:1. Find the coordinates of M. **(3mks)**

12. Calculate the area of the shaded region. (3 marks)



2

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

13. Solve the simultaneous equations. **(4mks)**

$\frac{p}{q+1} = \frac{1}{4}, \frac{p-3}{p+q} = \frac{2}{3}$

14. The ratio of boys to girls in a school is 4:5. One day $\frac{1}{3}$ of the boys and $\frac{1}{5}$of the girls were absent. If 8 less pupils had been absent, $\frac{3}{4}$ of the school would have been present. Calculate the number of pupils in the school on that day. **(3mks)**

15. Tap A can fill a tank in 10 minutes; tap B can fill the same tank in 20 minutes. Tap C can empty the tank in 30 minutes. The three taps are left open for 5 minutes, after which tap A is closed. How long does it take to fill the remaining part of the tank? **(3mks)**

16. A solid in a shape of a right pyramid on a square base of side 8cm and height 15cm is cut at 6cm height from the base. Find the volume of the frustrum formed. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION II (50 MARKS)
(Answer ANY FIVE questions in the spaces provided)

17. The points $A^{I}B^{I}C^{I}$ are the images of $A(4,1), B(0,2) and\ C(-2,4)$ respectively under a transformation represented by the matrix $M = \begin{pmatrix} 1 & 1 \\ 1 & 3 \end{pmatrix}$.

(a) Write down the coordinates of $A^{I}B^{I}C^{I}$ **(3mks)**

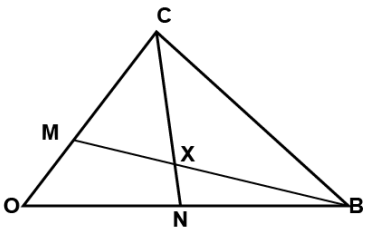
(b) $A^{II}B^{II}C^{II}$ are the images of $A^{I}B^{I}C^{I}$ under another transformation whose matrix is $N = \begin{pmatrix} 2 & -1 \\ 1 & 2 \end{pmatrix}$. Write down the co – ordinates of $A^{II}B^{II}C^{II}$ **(3mks)**

(c) Transformation M followed by N can be replaced by a single transformation P. determine the matrix for P. **(2mks)**

(d) Hence determine the inverse of matrix P. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

18. The figure below shows a triangle OAB with O as the origin. ***OA=$\underline{a}$ OB = $\underline{b}$, OM 2/5$\underline{a}$ and ON = 2/3$\underline{b}$.***



a) Express in terms of $\underline{a}$ and $\underline{b}$ the vectors

(i) BM **(1mk)**

(ii) AN **(1mk)**

b) Vector OX can be expressed in two ways: OB + KBM or OA + hAN, where K and h are constants.

Express OX in terms of:

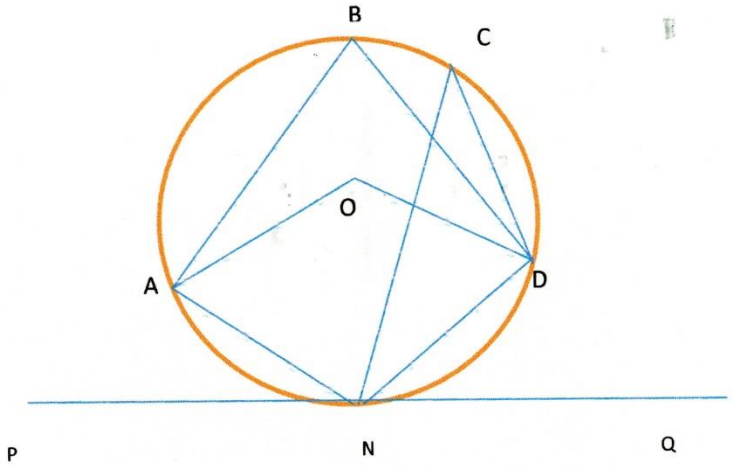
i. $\underline{a}$, $\underline{b}$ and k. **(2mks)**

ii. $\underline{a}$, $\underline{b}$ and h. **(2mks)**

c) Find the values of k and h. **(4mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

19. In the figure below, O is the center of the circle. PQ is a tangent to the circle at N. Angle NCD is 10° and angle ANP is 30°



Giving reasons find;

a) Angle DON **(2mks)**

b) Angle DNQ **(2mks)**

c) Angle DBA **(2mks)**

d) Angle ONA **(2mks)**

e) Angle ODN. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

20. The displacement h metres of a particle moving along a straight line after t seconds is given by

$$h=-2t^3+\frac{3}{2}t^2+3t.$$

a) Find its initial acceleration **(3mks)**

b) Calculate;

i) The time when the object was momentarily at rest **(3mks)**

ii) Its displacement by the time it comes to rest **(2mks)**

c) Calculate the maximum speed attained **(2mks)**

21. A metal R is an alloy of two metals X and Y. Metal X has a mass of 70g and a density of $16g/cm^3$. Metal Y has a mass of 19g and a density of $4g/cm^3$.

(a) Calculate the density of the metal R. **(4mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) If metal R is divided into two equal parts and each half reinforced by adding metal X to get to initial volume. Find the density of the new alloy. **(4mks)**

(c) The two metals are mixed in a ratio of 4:1 respectively. What is the density of the alloy? **(2mks)**

22. A trailer moving at a speed of 80km/h is being overtaken by a car moving at 100km/h in a clear section of a road. Given that the bus is 21m long and the car is 4m long.

a) How much time (in seconds) will elapse before the car can completely overtake the bus? **(3mks)**

b) How much distance (in metres) will the car travel before it can completely overtake the bus? **(2mks)**

c) Given that as soon as the car completed overtaking the trailer, a bus heading towards the trailer and the car and moving at a speed of 90km/h became visible to the car driver. It took exactly 18 seconds for the car and the bus to completely by pass each other from the moment they first saw each other.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

i. How far was the tail of the bus from the tail of the car at the instance they first saw each other given that the bus is 12 metres long? **(3mks)**

ii. How far a part was the trailer and the bus just immediately after the car and the bus had passed each other? (**2mks)**

23. Every Sunday Alex drives a distance of 80km on a bearing of 074^0 to pick up his brother John to go to church. The church is 75km from John's house on a bearing of **S**50^0**E**. After church they drive a distance of 100km on a bearing of 260^0 to check on their father before Alex drives to John's home to drop him off then proceeds to his house.

(a) Using a scale of 1cm to represent 10km, show the relative positions of these places. **(4mks)**

(b) Use your diagram to determine:

(i) The true bearing of Alex's home from their father's house. **(1mk)**

(ii) The compass bearing of the father's home from John's home. **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(iii) The distance between John's home and the father's home. **(2mks)**

(iv) The total distance Alex travels every Sunday. **(2mks)**

25. **P** and **Q** are two points on a geographical globe of diameter 50 cm. They both lie on a parallel latitude 50° North. **P** has longitude 90° West and Q has longitude 90° East. A string **AB** has one end at point **P** and another at point **Q** when it is stretched over the North pole. Taking $\pi = 3.142$;

(a) Calculate the length of the string. **(3mks)**

(b) If instead the string is laid along the parallel of latitude 50°N with **A** at point **P**, calculate the longitude of point **B.** **(3mks)**

(c) State the position of **B** if the string is stretched along a great circle of **P** towards the South pole if point **A** is static at **P**. **(4mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..…….

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

121/2
MATHEMATICS ALT A
PAPER 2
TIME: 2½ HOURS

INSTRUCTION TO CANDIDATE'S:

(a) Write your name, index number and school in the spaces provided at the top of this page.

(b) Sign and write the date of examination in spaces provided above.

(c) This paper consists of **TWO** sections: **Section I** and **Section II**.

(d) Answer **ALL** the questions in **Section I** and any **five** questions from Section **II**.

(e) **Show all the steps in your calculation, giving your answer at each stage in the spaces provided below each question**.

(f) Marks may be given for correct working even if the answer is wrong.

(g) **Non-programmable** silent electronic calculators and **KNEC** Mathematical tables may be used, except where stated otherwise.

(h) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing**.

(i) **Candidates should answer the questions in English**.

FOR EXAMINER'S USE ONLY:

SECTION I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL

SECTION II

17	18	19	20	21	22	23	24	TOTAL

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A (50 MARKS)

Answer all questions in this section in the spaces provided

1. A piece of wire 10cm long is to be cut into two parts. If the parts are bent to form a square and a circle respectively, find the length each of the two parts, and hence find the radius of the circle formed, if the sum of their areas is minimum. **(4mks)**

2. In 2022, the cost of processing a bag of wheat was Ksh 250, and this was divided between electricity costs and labour in the ratio 2:3. In the year 2023, the cost of electricity doubled, while the cost of labour increased by x%. Calculate the value of x given that the cost of processing a bag of wheat in 2023 is 425. **(2mks)**

3. A triangle PQR is such that the equation of line PQ is 3y-2x - 11 =0, while that of line QR is 2y - 3 = -3x. Find the coordinates of the point of intersection of the two lines. **(3mks)**

4. Three quantities **b, n** and **m** are such that **b** varies directly as the product of **m** and **n**, and inversely as the square root of the difference of $\mathbf{n^2}$ and **m**. Form an equation connecting b, n and m. Express **n** in terms of **b**, **m** and **k,** where k is the constant of proportionality. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

5. The locus of points 3 cm away from a point (m,m) passes through the point (2,5). Find the value of m. **(3mks)**

6. Using a ruler and pair of compasses only, construct triangle MNP in which MN = 5cm, NP = 4.4cm and angle PNM = 45^0. Draw a circle passing through all the vertices of the triangle and measure its radius. **(3mks)**

7. The deviations from the mean of a set of data are given as -4, -1, x^2, 1, x, and -2. Find the value of x, hence find the standard deviation of the data, given that x is positive. **(3mks)**

8. Two parallel chords of length 4.6cm and 6.8cm are on the same side of a circle of radius r cm. calculate the radius of the circle, correct to four significant figures, given that distance between the two chords is 2cm. **(3mks)**

9. A piece of land is in the shape of a quadrilateral ABCD such that side AB=AD=50m, < DAB= 100^0, < ABC = 87^0 and < ADC = 79^0Determine the length of barbed wire that would go around the land to the nearest metre. **(4mks).**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

10. OABC is parallelogram in which **OA** =**a** and **OC** =**c**. Y is the mid-point of **OC**, and **AY** meets **OB** at X. X divides line **OB** and **AY** in the ratio 3:4 and 1:2 respectively. Find **OB** in terms of **a** and **c.** **(3mks)**

11. Simplify without using tables or calculators: **(3mks)**

$$\frac{\sin 480^0 - \cos 765^0}{\tan 225^0 - \cos(-330^0)}$$

12. Use the first four terms of the expansion $(2a + b)^8$ to find the value of 2.05^8 correct to 4 significant figures. **(3mks)**

13. Bazu owns a total more than 10 buses and matatus combined. There are four more matatus than buses, and the buses are not more than 8 in number. By taking x to represent the number of buses, write down all the inequalities for the information and hence state all possible solutions of x. **(3mks)**

14. Two similar metallic cylinders have masses of 64g and 125g respectively. The smaller cylinder has a volume of $21.56cm^3$. The larger cylinder is molded into a sphere of radius r. Find the value of r correct to 3 decimal places. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

15. A ship is observed from the top of a cliff 200 m high in a direction $N18^0E$ at an angle of depression of 15^0. Thirty minutes later, the same ship is observed in a direction $S72^0E$ at an angle of depression of 10^0. Find the distance travelled in the 30 minutes assuming that the ship travelled along a straight line. **(4mks)**

16. A right pyramid VABCD has its vertex at V and a rectangular base ABCD. AB= 8cm, BC=6cm and all the slant edges of the pyramid are 10cm. Find the angle between plane VBC and plane VAD correct to two decimal places. **(3mks)**

SECTION B (50 MARKS)

Answer only FIVE questions in this section in the spaces provided

17. The table below shows the income tax rate for a certain year

Income in Ksh. p.m	Tax rate(%)
1 – 11180	10
11181 – 21714	15
21715 – 32248	20
32249 – 42781	25
42782 and above	30

In a certain month, Mr Zakayo paid a net tax of Ksh 26416. He was entitled to a monthly personal relief of Ksh 1648. He also paid insurance premiums amounting to 18200 and was entitled to an insurance relief at 15% of premiums paid, subject to a maximum of Ksh 2000 per month. He also lived in a company house for which he paid a nominal rent of 5200 per month. Other taxable allowances amounted to sh. 22400.

a) Calculate Mr Zakayo's monthly gross tax **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) Calculate Mr Zakayo's total taxable income in that month **(4mks)**

c)Calculate Mr Zakayo's net monthly income. **(4mks)**

18. The equation of a curve is given as $y = \frac{x(x-2)}{(x-1)^{-1}}$.

a) Sketch the curve. **(7mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

c) Determine the exact area bounded by the curve and the x-axis. **(3mks)**

19. Water flows through a cylindrical pipe of diameter 2.8cm at a speed of 25m/min.

a) Calculate the volume of water delivered by the pipe per minute in litres. **(3mks)**

b) A cylindrical storage tank of depth 2.5m is filled by water from this pipe and at the same rate of flow. Water begins flowing into the empty storage tank at 8:00am and is full at 2:00pm. Calculate the area of the cross section of this tank in m^2. **(4mks)**

c) A family consumes the capacity of this tank in one month. The cost of water is sh. 150 per 1000 litres plus a fixed maintenance charge of sh. 200. Calculate this family's water bill for a month. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

20. The second, 4^{th} and 7^{th} terms of an AP form the first three consecutive terms of a GP.

a) Find the common ratio of the G.P **(5mks)**

b) The first term of the GP if the common difference of the AP is 3 **(2mks)**

c) The seventh and the fifth terms of the G.P form the first two consecutive terms of an AP. Find the sum of the first 20 terms of the AP formed. **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

21. Use a ruler and a pair of compasses only for all constructions in this question.

(a) Construct parallelogram ABCD such that $<ABC = 67.5^0$, BA = 7.8cm and CB = 5.6cm. **(3mks)**

(b) Construct a perpendicular from A to meet DC at E. Measure AE, hence find the area of the parallelogram. **(2mks)**

(c) On the same side of AB as C and D, construct the locus of points P such that $< APB = 45^0$ **(2mks)**

(d) Identify by shading the unwanted region, the locus of points R such that AR > 2.8 cm, AR≤ RB and $<ARB \geq 45^0$. **(3mks)**

22. In a form 4 chemistry classes consisting of both boys and girls, $^2/_5$ of the students are girls. $^2/_3$ of the boys and $^7/_{10}$ of the girls are right handed. The probability that a right-handed student breaks a conical flask in any practical session is $^3/_7$ and the corresponding probability of a left-handed student is $^4/_9$, independent of the student's gender.

a) Draw a tree diagram to represent the above information **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) Determine the probability that a student chosen at random from the class is left handed and does not break a conical flask during a practical session in simplest form**.** **(3mks)**

c) Determine the probability that a conical flask is broken in any chemistry practical session in simplest form.**(3mks)**

d) Determine the probability that a conical flask is not broken by a right-handed student in the simplest form. **(2mks)**

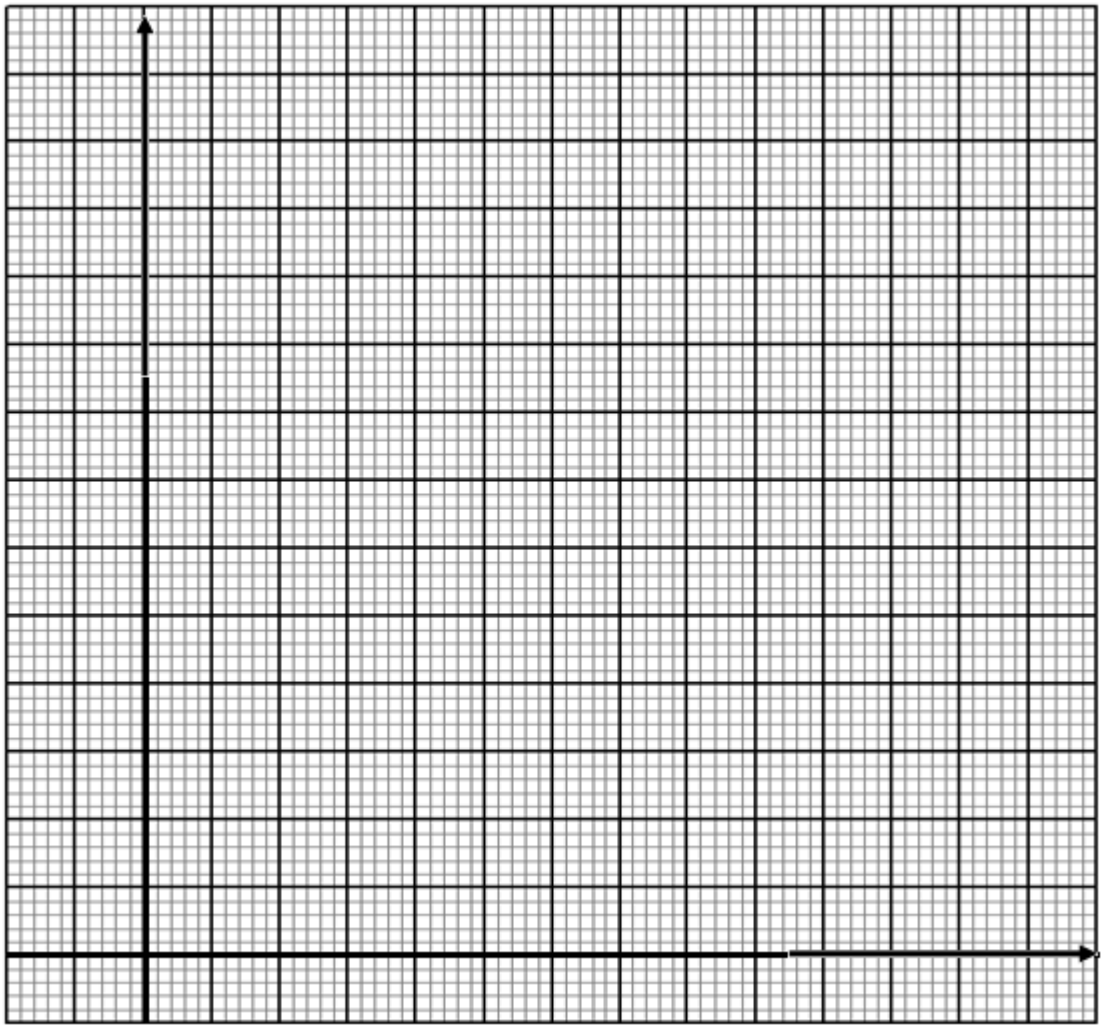
23. A farmer wishes to grow two crops, maize and beans. He has 70 acres of land available for this purpose. He has 240 man-days of labour available to work out the land and he can spend up to sh. 180,000. The requirements of the crops are as follows:

	Maize	Beans
Minimum number of acres to be sown	10	20
Man – day per acre	2	4
Cost per acre in sh.	3,000	2,000
Profit per acre in sh.	15,000	10,000

a) If x and y represent the number of acres to be used for maize and beans respectively, write down in their simplest form, all the inequalities which x and y must satisfy. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

b) Represent the inequalities on the grid provided **(5mks)**



c) Profit per acre of maize and beans is sh. 15,000 and 10,000 respectively. Draw a suitable search line on the graph and use it to find the number of acres to be used for maize and beans so as to give maximum profit. **(2mks)**

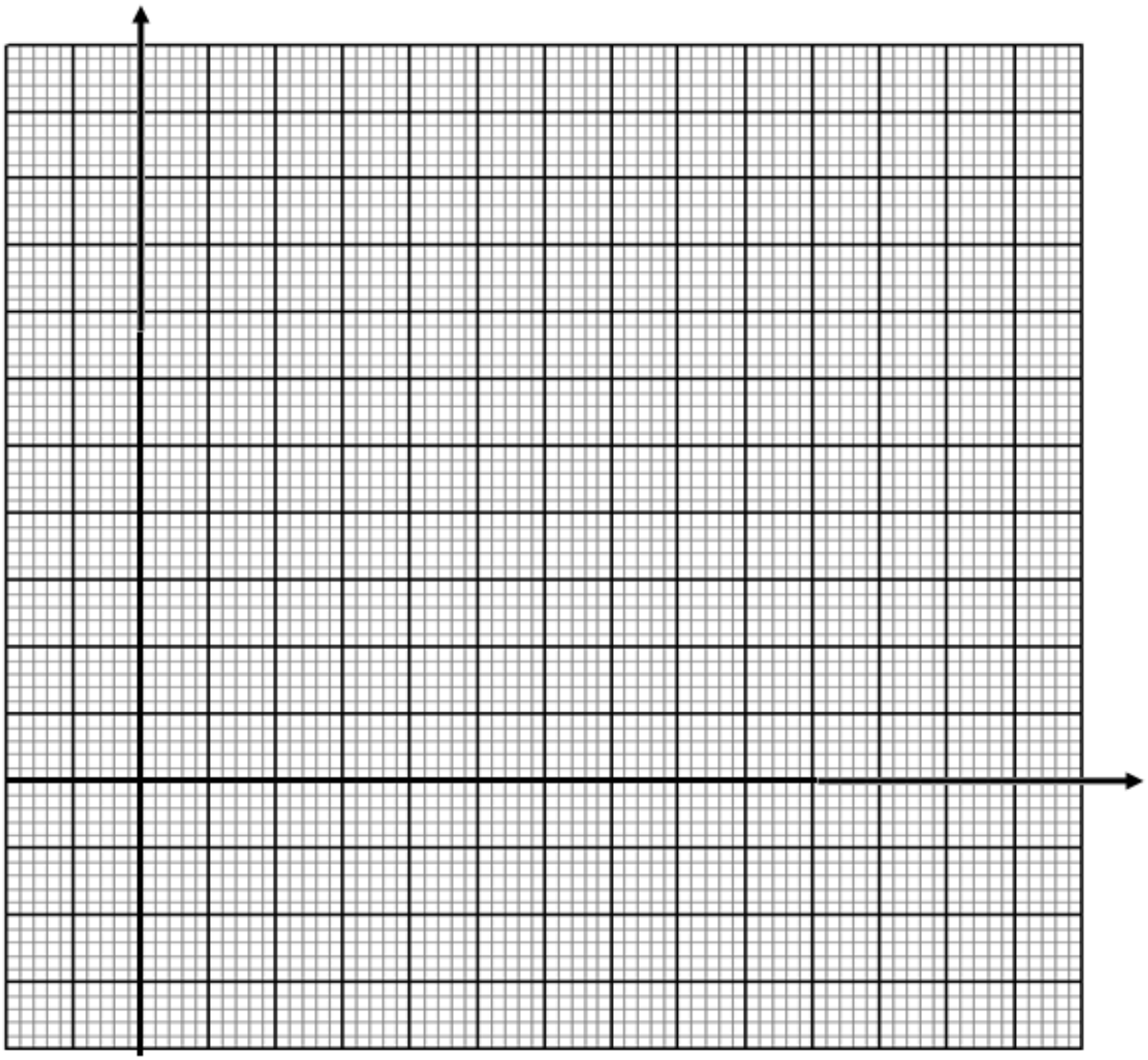
d) Find the maximum profit. **(1mk)**

24. The table below gives values of P with corresponding values of G.

P	90.1	223.3	371.2	693.3	4450.1	11000
G	60	105	147	226	780	1500

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

a) Using the data from the table above, draw a suitable straight line graph given that P and G are connected by the equation $\log P = n\log G + \log K$ **(5mks)**



b) Use the graph to determine:

i) The values of k and n **(3mks)**

ii) The value of P when G is 113 **(1mk)**

iii) The value of G when P is 400 **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

232/1
PHYSICS
Paper 1 (Theory)
Time: 2 Hours

INSTRUCTIONS TO CANDIDATES

* Write your name and index number in the spaces provided above.
* Sign and write the date of examination in the spaces provided above.
* This paper consists of two sections; A and B
* Answer **all** the questions in section A and B

* All working and answers must be written on the question paper in the spaces provided below each question.

* Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

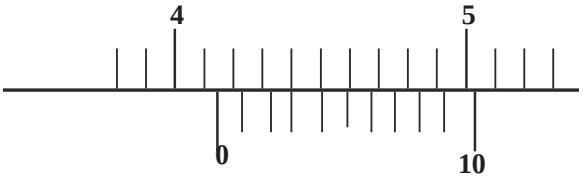
For Examiner's Use Only

Section	Question	Maximum	Candidate's
A	1 - 12	25	
	13	10	
	14	12	
	15	11	
	16	12	
	17	10	
Total Score		80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION I :

1. Figure 1 below shows a scale of a Vernier calliper.

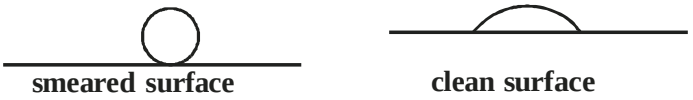


a) Record the reading indicated. **(1mk)**

b) Given that the instrument above had a zero error of negative 0.03cm. State the actual reading. **(1mk)**

.

2. Figure 2 shows water drops on two surfaces. If the first is smeared with oil while the second is clean.



Explain the difference in the shapes of the drops**.** **(2mks)**

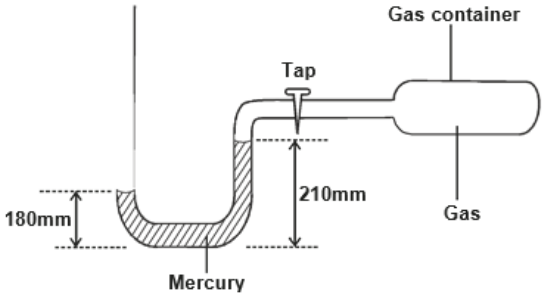
……

……

……

……

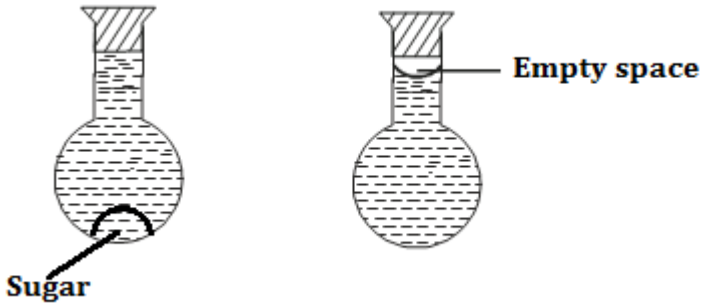
3. A U-tube manometer is used to measure the pressure of gas in a container as shown below. (The liquid in the manometer is mercury of density 13.6g/cm^3)



Find the pressure of the gas in the container. (Take atmospheric pressure as 102,000N/m^2 and g = 10N/kg) **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

4. Sugar was put in a flask then water was added slowly until it was full then the flask was corked. The figure below shows the observation at the beginning of the experiment and at the end of the experiment.



Account for the empty space**.** **(1mk)**

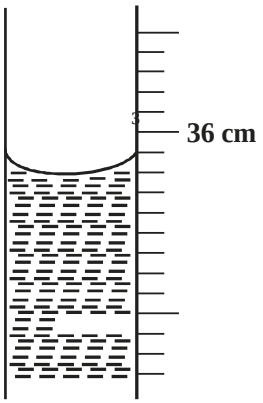
……

……

……

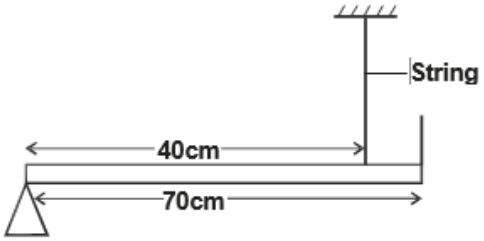
……

5. In an experiment to measure the density of a liquid, a student filled a burette with a liquid to the $0cm^3$ mark. The figure below shows a section of burette showing the level of the liquid after 109g of the liquid had been run out.



Determine the density of the liquid. **(3mks)**

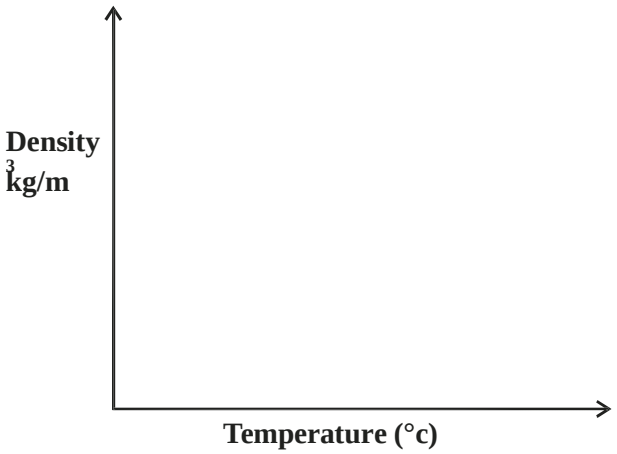
6.A uniform metal rod of weight 50N is balanced as shown below.



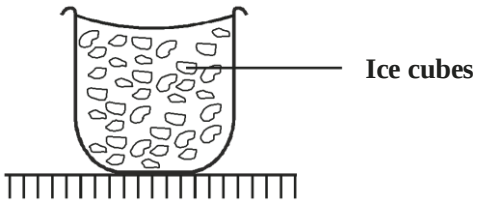
Find the tension on the string**.** **(3mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

7. On the axis provided plot graphs of density against temperature for water and mercury when they are heated from 0^0 to 10^0C **(2mks)**



8.The figure below shows a beaker containing ice at 0^0C. The beaker is placed on a bench.



State and explain the changes in stability or beaker when ice melts to water. **(2mks)**

……

……

……

……

9. Define elastic limit**.** **(1mk)**

……

……

……

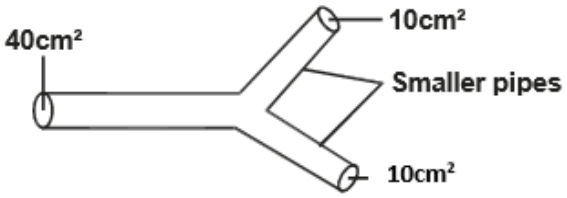
10. Explain why it will feel cooler in a white car than a black one if both of them are left in the sun for a long time. **(1mk)**

……

……

……

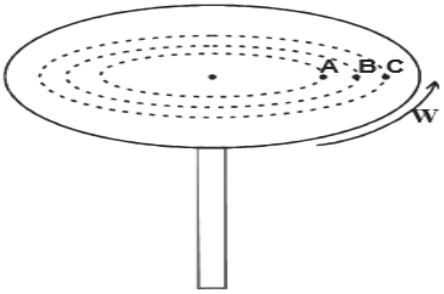
1 1 The figure below shows a horse pipe of a cross-sectional area of $40cm^3$.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

If the horse pipe is connected to two smaller pipes of cross section $10cm^3$. Calculate the velocity of water in each of the two pipes. **(3mks)**

12. The figure shows masses A, B and C. Placed at different points on a rotating table.



State two factors that determine whether a particular mass slides off the table or not. **(2mks)**

……

……

……

……

SECTION B

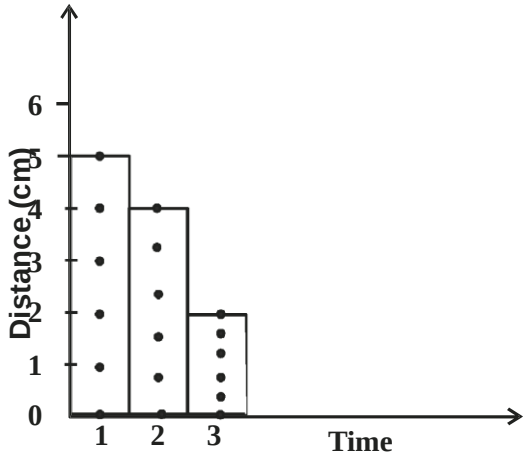
13.a) Define acceleration. **(1mk)**

……

……

……

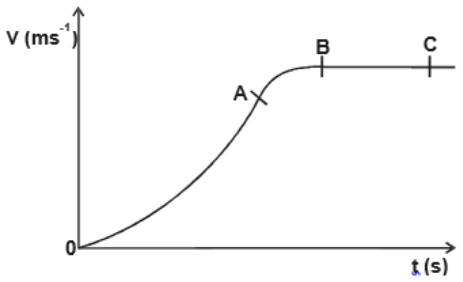
b) The figure below shows a tape chart from paper tape pulled through a 50Hz ticker timer by a trolley.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Calculate the acceleration of the trolley in cms^{-2} **(3mks)**

c) The figure below shows a velocity-time graph for the motion of a certain body.



Describe the motion of the body in the region.

i) OA **(1mk)**

……

……

……

ii) AB **(1mk)**

……

……

……

d) A particle starts from rest and accelerates uniformly in a straight line. After 4 seconds it is 20m from the starting point. Determine the acceleration of the particle**.** **3mks)**

e) Sketch a displacement-time graph for a body, falling through a fluid**.** **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

f) Distinguish between elastic and inelastic collision**.** **(1mk)**

……

……

……

14.a) State the class of lever to which a fishing rod belongs. **(1mk)**

……

……

……

b) State two reasons why the efficiency of hydraulic machine cannot be 100%. **(2mks)**

……

……

……

……

c) A crane lifts a load through a vertical distance of 8m in 12 seconds.

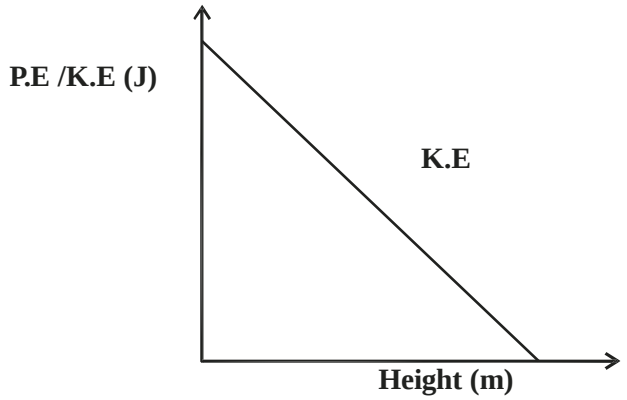
i) Given that the work done by the crane was 96000J. Calculate the amount of load lifted. **(2mks)**

ii) Calculate the power developed by the crane**.** **(2mks)**

iii) Given that efficiency of the crane was 80% and it was operated using an electric motor. Calculate the rating of the motor**.** **(2mks)**

d) The figure below shows how kinetic energy (K.E) at a ball thrown vertically upwards varies with height.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes



On the same axis, plot a graph of potential energy of the ball**.** **(1mk)**

e) Sketch a labelled diagram to show how an arrangement of a single pulley may be used to provide velocity ratio of 2**.** **(2mks)**

15. Akinyi wanted to determine specific heat capacity of iron. She was to use - metal block, thread, water, copper, calorimeter, stirrer, thermometer and cardboard cover, beaker and source of heat.
A metal block is dipped in water and water heated to a certain temperature and then transferred to a calorimeter containing some 50 grams of water.

I. State two precautions to be taken to minimize heat losses to the surroundings. **(2mks)**

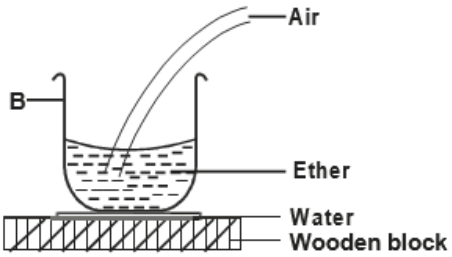
……

……

……

……

II. The following figure shows a beaker B placed on a little water on a wooden block and some liquid ether (spirit) then poured into the beaker. Air is now blown into the ether with a foot pump.



It was found after sometime, the water on the wooden block turned into ice. Explain. **(3mks)**

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

……

……

III. A lump of copper of mass 0.75kg is placed in an oven for some time and then transferred quickly to a large block of ice at 0^oC. When the temperature of the lump of copper reaches 0^oC, 0.45kg of ice is found to have melted. Determine the temperature of the oven. (Take the specific heat capacity of copper as 400J/kg/k and the latent heat of fusion of ice as 3.2×10^5J/kg) **(4mks)**

b) Give two reason why the actual temperature of the oven may be higher than the above value. **(2mks)**

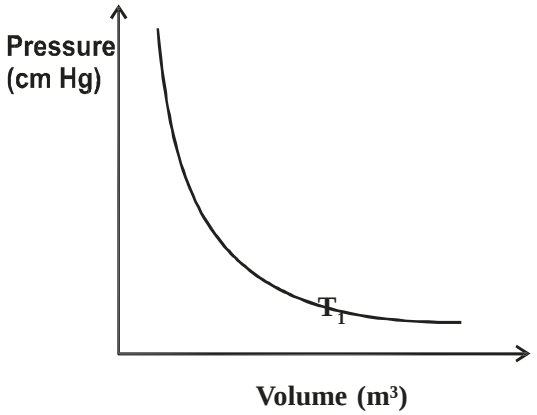
……

……

……

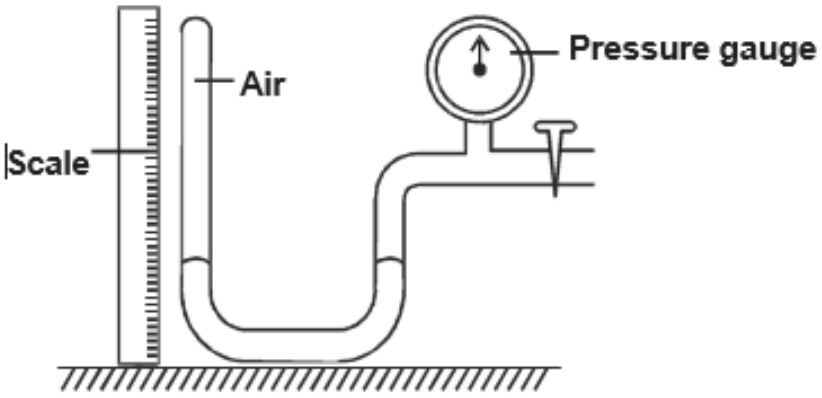
……

16. a) The figure below shows a graph of pressure against volume for a fixed mass of gas at constant temperature.



Sketch on the same axis, a graph for the same mass of gas with a temperature T_2 lower than T_1. **(1mk)**

b) The figure below shows a simple set up for Boyle's law apparatus.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Describe how the apparatus may be used to verify Boyle's law. **(5mks)**

……

……

……

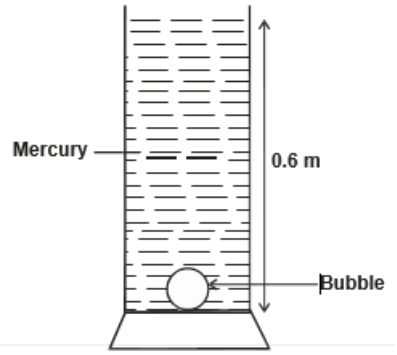
……

……

……

……

c) The diagram below shows a measuring cylinder with an air bubble at the bottom.Determine the volume of the air bubble just before the surface of mercury if the atmospheric pressure is 76cmHg and volume of the bubble at the bottom is $10cm^3$ **(3mks)**



d) Using the kinetic theory of gases. Explain how a rise in the temperature of a gas causes a rise in the pressure of the gas if the volume is kept constant**.** **(3mks)**

……

……

……

……

……

17. a) State Archimedes principle. **(1mk)**

……

……

……

b) Why is the hydrometer made of:

i) wide bulb containing air **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

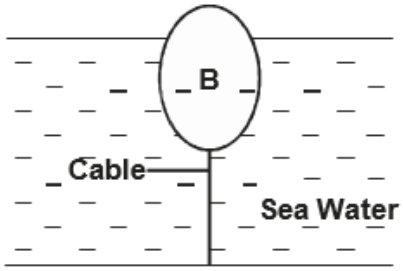
ii) a narrow stem **(1mk)**

……

……

c) A piece of metal weighs 4N in air and 2N when totally immersed in water. Determine the relative density of metal.(Density of water: 1000 kg/m^3 **(3mks)**

d) The figure below shows a buoy B, volume 5m^3 and mass 2 tons. It is held in position in sea water of density 1030kg/m^3 by a light cable fixed to the bottom so that $^3/_5$ of the volume buoy is below the surface of the sea water. Calculate the tension on the cable. **(3mks)**



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……..…

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

232/2
PHYSICS
(THEORY)
PAPER 2
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

(a) Write your **Name** and **Index Number** in the spaces provided **above**.

(b) **Sign** and write the **date** of examination in the spaces provided **above**.

(c) This paper consists of **two** Sections; **A** and **B**.

(d) Answer **ALL** the questions in sections **A** and **B** in the spaces provided.

(e) All workings must be clearly shown.

(f) Non-programmable silent electronic calculators and KNEC Mathematical tables **may be** used.

FOR EXAMINER'S USE ONLY:

Section	Question	Maximum Score	Candidate's Score
A	1 – 13	25	
	14	10	
	15	13	
B	16	12	
	17	8	
	18	12	
Total Score		80	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

SECTION A: (25 MARKS)

Answer **all** questions in this section in the spaces provided:

1. State t**wo** conditions under which a pinhole camera may form an image on its screen which has the same size as the object. **(2mks)**

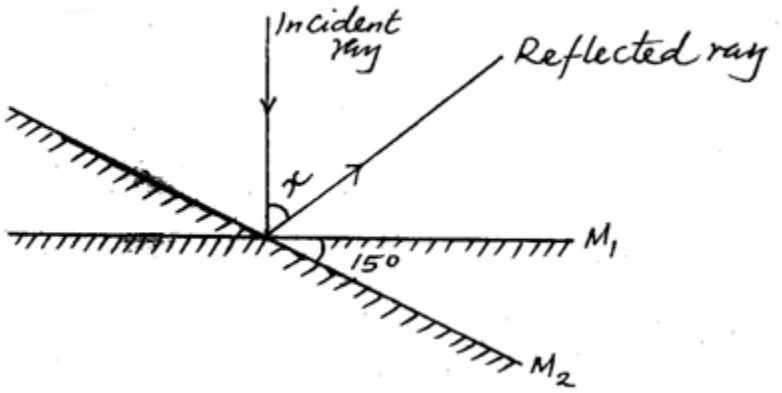
……

……

……

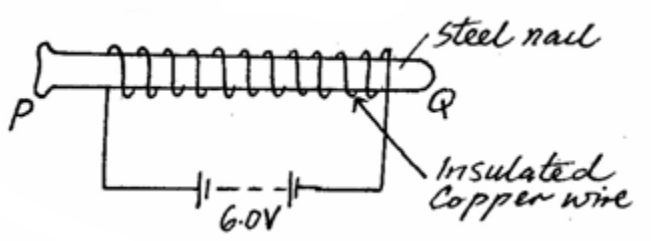
……

2. The figure shows a ray of light incident along the normal. The mirror is rotated at an angle of 15º in a clockwise direction without changing the position of the incident ray,



Determine the angle between the reflection ray and the incident ray. **(2mks)**

3. A steel is to be magnetized by electrical method as shown below. Identify the pole **P** and **Q** of the resulting magnet. **(1mk)**



P: _____

Q: _____

4. A small chain is often seen hanging at the back of a petrol carrying lorry. State and explain its significance. **(2mks)**

……

……

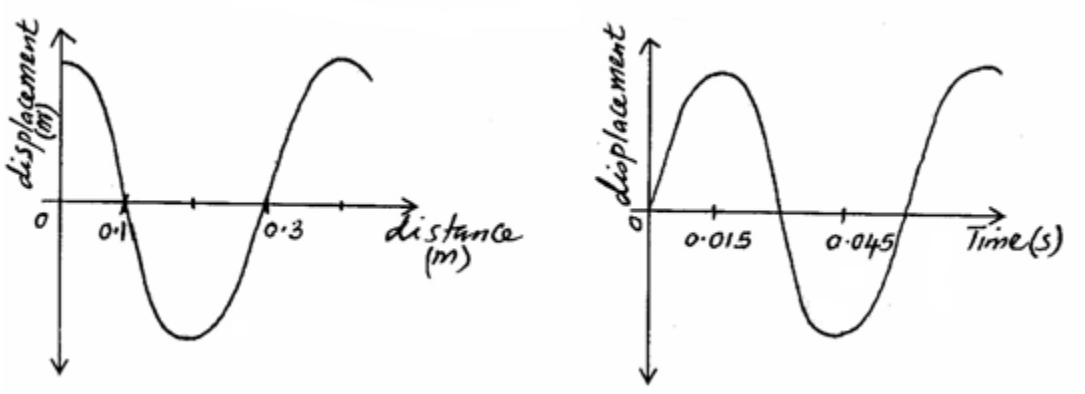
……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

……

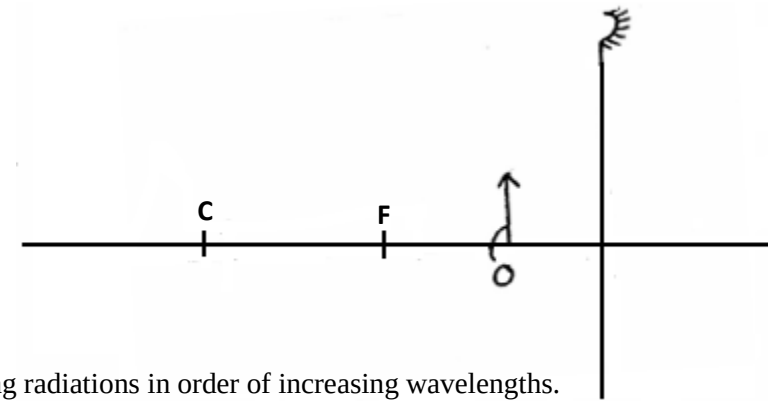
……

5. The figure **below** shows two waveforms representing the same wave motion.



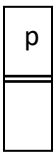
Determine the velocity of the wave. **(3mks)**

6. An object O is placed in front of a concave mirror and on the principal axis, as shown in the figure **below**. Complete the light ray diagram to locate the position of the image. **(3mks)**



7. Arrange the following radiations in order of increasing wavelengths. **(1mk)**
Infrared, blue light, ultraviolet, radiowaves, χ-rays.

8. The figure **below** shows a block diagram of a p-n junction diode.



On the same diagram, show how a cell may be connected so that it is reverse biased. **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

9. A girl standing at a distance claps her hands and hears an echo from a tall building 2 seconds later. If the speed of sound in air is 340m/s, determine how far the building is. **(3mks)**

10. What do you understand by polarization as used in a simple cell? **(1mk)**

……

……

……

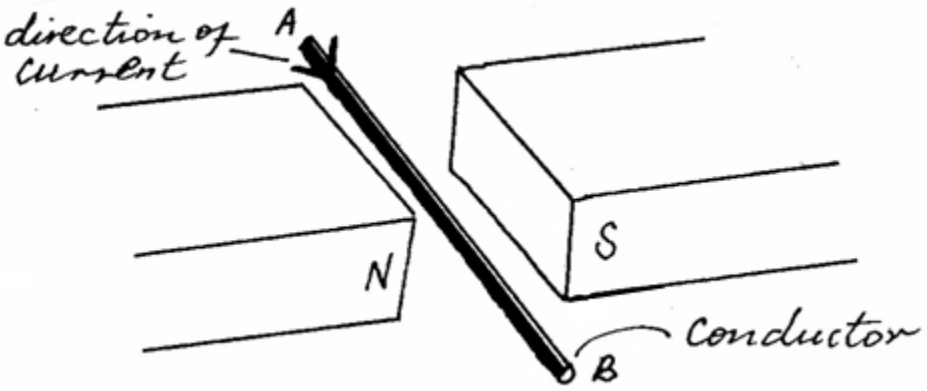
11. State how the defect mentioned in question 10 above is minimized in a simple cell. **(1mk)**

……

……

……

12. A current-carrying conductor **AB** is in a magnetic field as shown in the figure **below**.



(a) Indicate the direction of force F acting on the conductor. **(1mk)**

(b) State **two** factors that determine the direction of the force F. **(2mks)**

……

……

……

……

13. You are given three resistors of values 5Ω, 8Ω and 12Ω. Show in a circuit diagram how you would connect them so as to give:

(a) An effective resistance of 9.8Ω. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) The least effective resistance. **(1mk)**

SECTION B: (55 MARKS)

Answer question in this section in the spaces provided.

14.(a) Define refractive index. **(1mk)**

……

……

……

……

(b) The critical angle of a certain material medium is 43.2º. Determine the refractive index of the material. **(2mks)**

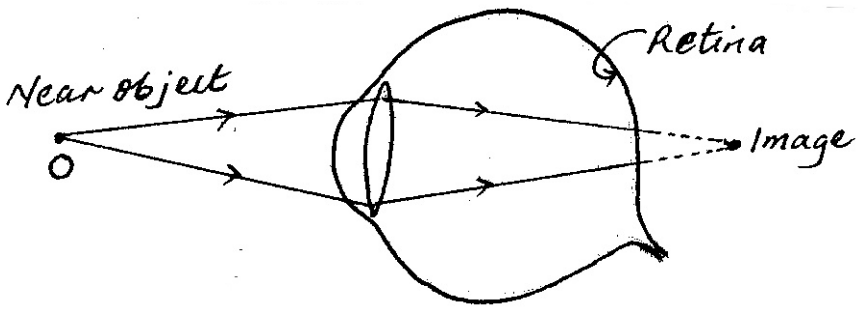
(c) (i) What do you understand by the term accommodation? **(1mk)**

……

……

……

(ii) The diagram **below** shows a certain defect of vision. Name the defect**.** **(1mk)**

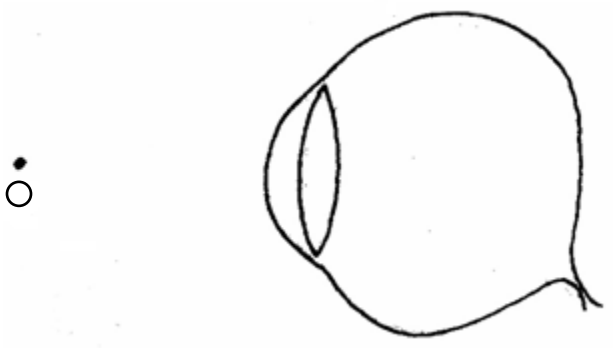


……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(iii) On the figure **below** show how the defect can be corrected. **(2mks)**



(d) An object is placed 40cm in front of a concave lens of focal length 20cm; determine the position of the image. **(3mks)**

15.(a)(i) State Lenz's a law of electromagnetic induction. **(1mk)**

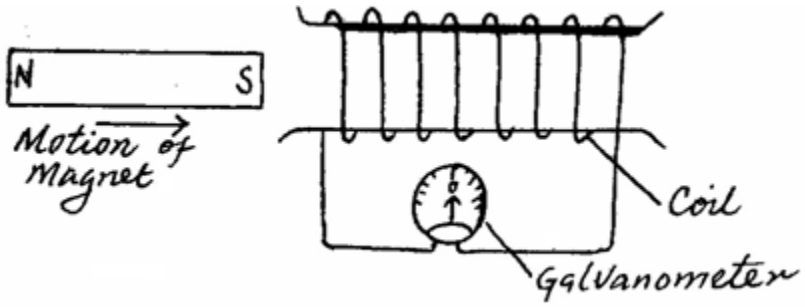
……

……

……

……

(ii) A bar magnet is moved into a coil of insulated copper wire connected to a centre-zero galvanometer, as shown in the figure **below**.



i. Show on the diagram the direction of induced current in the coil. **(1mk)**

ii. State and explain clearly what is observed on the galvanometer when the S-pole of the magnet is moved into and then withdrawn from the coil. **(4mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b) A transformer has 800 turns in the primary and 40 turns in the secondary winding.
The alternating e.m.f connected to the primary is 240V and the current is 0.5A.

(i) Determine

I. The secondary e.m.f **(2mks)**

II. The power in the secondary if the transformer is 95% efficient. **(2mks)**

(ii) Explain how energy losses in a transformer are reduced by having:

I. A soft-iron core. **(2mks)**

……

……

……

……

II. A laminated core. **(1mk)**

……

……

……

16.(a)(i) Distinguish between thermionic emission and photoelectric emission. **(2mks)**

……

……

……

……

(ii) State **one** factor which affects the rate of each of the above types of emission.

Thermionic emission. **(1mk)**

……

……

Photoelectric emission. **(1mk)**

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(b)Sodium has a work function of 2.3eV. Given that: Planck's constant h = 6.63×10^{-34}JS, velocity of light in vacuum, C = 3.0×10^{8}m/s, 1 electron-volt (1eV) = 1.6×10^{-19} C and mass of an electron, $m_e = 9.1 \times 10^{-31}$kg, calculate:

(i) Its threshold frequency. **(2mks)**

(ii) the maximum velocity of the photoelectrons produced when the sodium is illuminated by light of wavelength 5.0×10^{-7}m. **(4mks)**

(iii) The stopping potential V, with the light of this wavelength. **(2mks)**

17.(a) State **two** advantages of using a Cathode Ray Oscilloscope (C.R.O) as a voltmeter over the ordinary voltmeter. **(2mks)**

……

……

……

……

(b) An X-ray operates at 30000V and the current through it is 2mA. Given that the charge of an electron is 1.6×10^{-19}C, h = 6.63×10^{-34}JS, speed of light, C = 3.0×10^{8}m/s,

Calculate:-

(i) The maximum kinetic energy of the electrons when hitting the target. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(ii) The number of electrons hitting the target per second. **(2mks)**

(iii) The minimum wavelength of the X-rays emitted. **(2mks)**

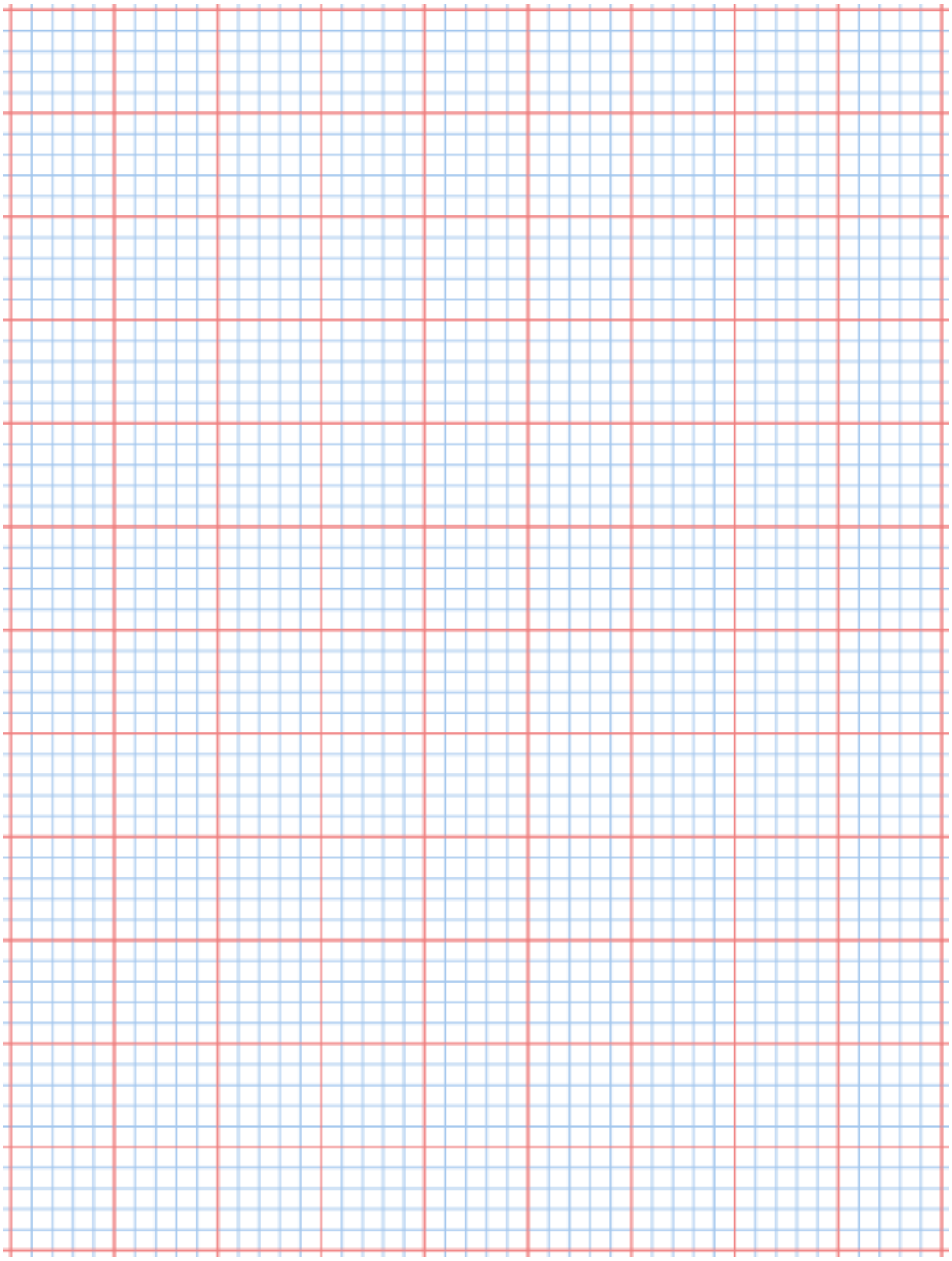
18.(a) A radioactive carbon-14 decays to nitrogen by beta particles as shown **below**.

$$^{14}_{6}C = ^{\chi}_{7}N + ^{0}_{y}e$$

Determine the values of χ and y. **(2mks)**

(b) The graph **below** shows the activity (disintegrations per minute) of a sample of carbon-14 against the time in years.

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

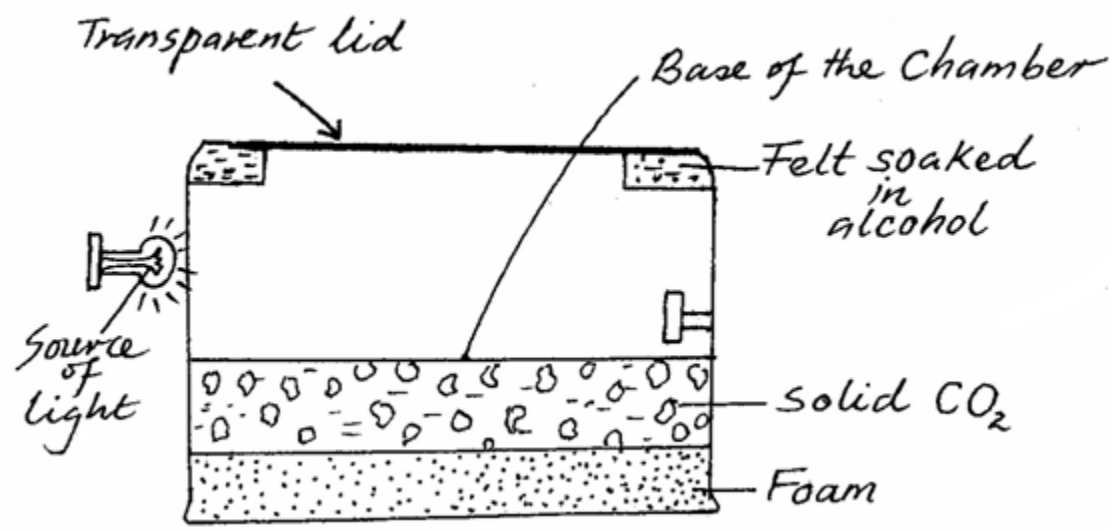


(i) From the graph determine the half-life of carbon-14. **(2mks)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

(ii) A mass of 100g of carbon-14 decays and the mass taken after 15000 years.
Determine the mass that remains. **(3mks)**

(c) The figure **below** shows the cross-section of a diffusion cloud chamber used to detect radiation from radioactive sources.



(i) State the function of the following:

I. Alcohol. **(1mk)**

……

……

II. Solid CO_2. **(1mk)**

……

……

(ii) Explain briefly how the diffusion cloud chamber can be used to detect and identify alpha particles. **(3mks)**

……

……

……

……

……

……

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

NAME: ……..……

SCHOOL: ……..

INDEX NO: ……..... SIGN: ……..……. DATE: …….

EXCELLING STUDENTS K.C.S.E 2023
PREDICTION SERIES 2

232/3
PHYSICS
PRACTICAL
TIME: 2 ½ HRS

Instructions

- *Write your name, admission number, class and signature in the spaces provided at the top of the page.*
- *Answer **all** the questions in the spaces provided in this paper.*
- *You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper carefully before your start.*
- *Marks will be given for clear record of observations actually made, for their suitability and accuracy, and the use made of them.*
- *Candidates are advised to record their observations as soon as they are made.*
- *Electronic calculators and mathematical tables may be used.*

FOR EXAMINER'S USE ONLY

Question(s)	Maximum Score	Candidate's Score
1	20	
	11	
	9	
TOTAL	**40**	

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

QUESTION ONE.

You are provided with the following;

- 2 new dry cells
- Cell holder
- Ammeter (0-1A)
- Voltmeter
- 6 connecting wires (at least 3 with crocodile clips)
- Nichrome wire mounted on millimeter scale
- Micrometer screw gauge (may be shared)
- Jockey .

Proceed as follows;

a) Using micrometer screw gauge, measure the diameter, D of the nichrome wire.

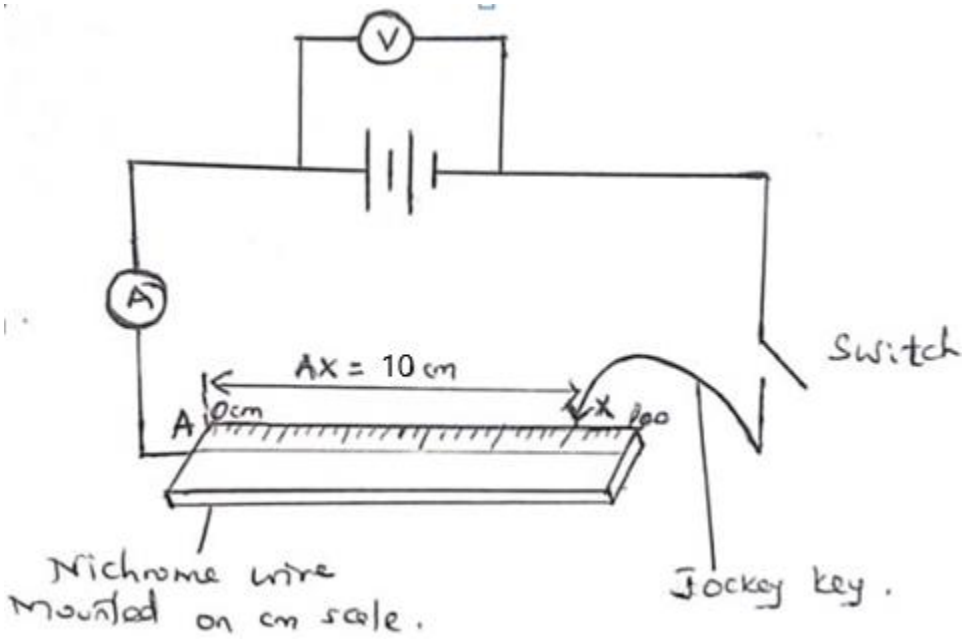
i) D = _____ mm

ii) D = _____ m **(1mk)**

iii) The cross sectional area A is obtained by; $A = \pi r^2$ Where r = D/2

Determine the cross sectional area (A) in SI units**.** **(2mks)**

b) Set up the apparatus as shown below.



c) Record the e.m.f across the terminals of the dry cells when the switch is open.

Emf = _____

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

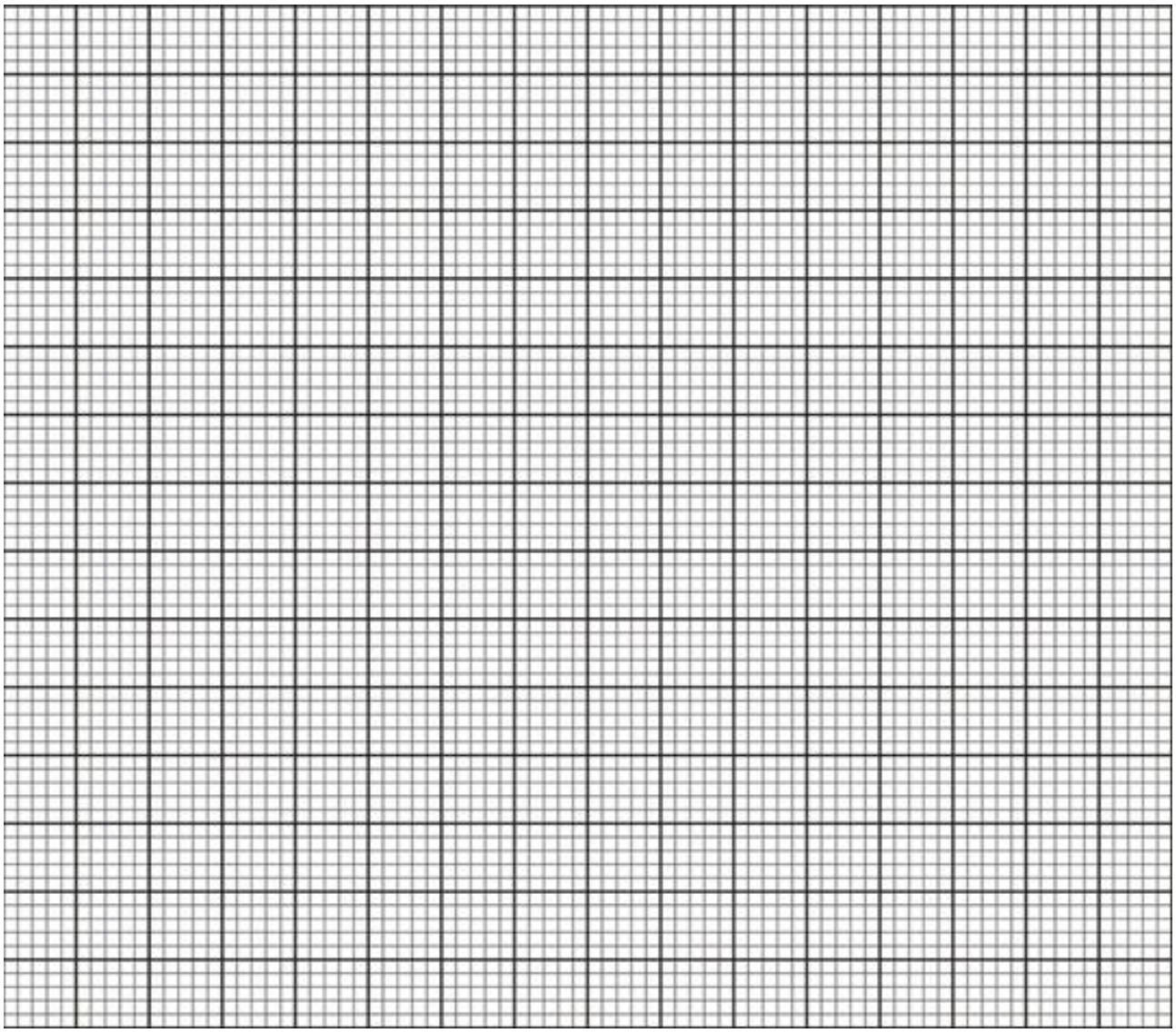
d) Adjust the position of jockey key such that length AX= 10cm.
Close the switch and record the voltmeter and ammeter reading on the table given.

e) Repeat step d) above for the other lengths shown on the table.

f) Complete the table**.** **(5mks)**

Length, L AX (cm)	10	20	30	50	70	80
Voltage (V)						
Current (A)						
Resistance(V/I) (Ω)						

g) Plot a graph of resistance (Ω) against Length (cm) on the graph provided below. **(5mks)**



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

h) **i)** Determine the slope of your graph**.** **(3mks)**

ii) The relationship between L and R is given by the equation; $\boldsymbol{R = \frac{\rho L}{A}}$**,** determine the value of ρ. **(2mks)**

iii) Suggest what constant ρ represents. **(1mk)**

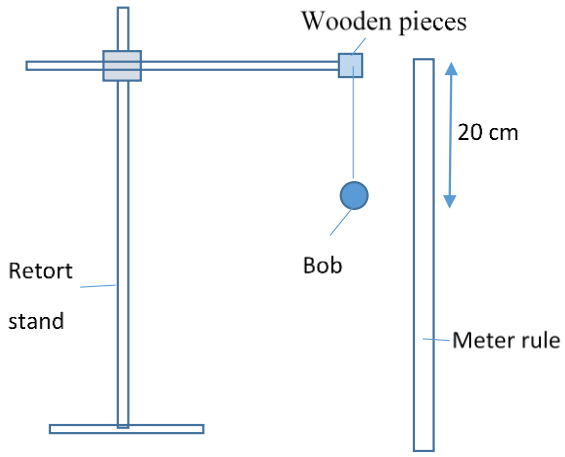
QUESTION TWO (A)

You are provided with the following apparatus;

- Retort stand, clamp and boss
- A piece of thread
- Two small pieces of wood blocks
- Pendulum bob
- Meter rule
- Stop watch

Procedure;

Tie the bob to one end ***20cm length*** of the thread and suspend it from the retort stand with the help of the wooden blocks as shown in the diagram.



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Displace the bob by a small angle say 10^0; start the stopwatch simultaneously and allow it to swing to make **ten** oscillations. Stop the clock and record the time taken in the table below.

Length L (m)	0.20	0.40	0.60	0.80
Time t for 10 oscillations (s)				
Period T (s)				
T^2 (s^2)				
$Q = \frac{4\pi^2 L}{T^2}$				

Repeat the same procedure for different lengths of thread 40cm, 60cm, 80cm and record the corresponding times t taken in the table above.

Fill in the table above by determining the various values of T, T^2 and Q as stated in the table. **(8mks)**

Determine the average value of quantity **Q** and state its SI units **(2mks)**

Name the physical quantity represented by Q **(1mk)**

……

……

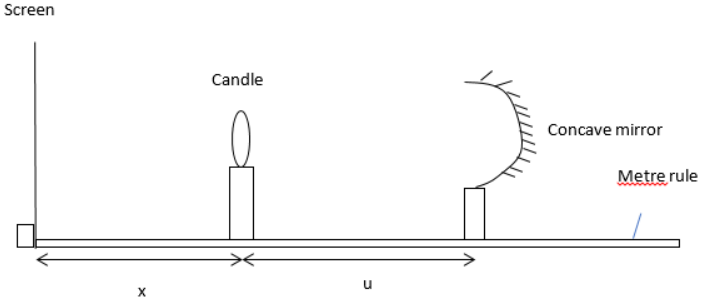
QUESTION TWO (B)

You are provided with the following apparatus.

- A concave mirror
- Mirror holder
- White screen
- Meter rule
- A candle

Procedure

i) Set the apparatus as shown in the diagram below



Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

ii) Place a candle at a distance of x = 10 cm from the screen. Move the mirror to and fro to focus a clear, sharp image of the candle flame on the screen.

iii) Measure the distance u between the mirror and the candle and the distance v between the candle and the screen.

iv) Repeat the experiment for x = 15 cm and 20 cm. Complete the table below**.** **(6mks)**

X (cm)	10	15	20	25
u(cm)				
$V = (u + x)$(cm)				
$Z = \frac{uv}{u+v}$ (cm)				

v) Determine the average value of Z. **(2mks)**

vi) What is the significance of Z? **(1mk)**

Prefer Calling Amobi Group of Examiners @ 0743 333 000 or 0706 851 439 for Marking Schemes

Amobi Group Of Examiners

Call Us @

0743 333 000 or 0706 851 439

CALL 0743 333 000 OR 0706 851 439

- Mid/End Term, Pre/Mock Exams
- K.C.S.E Prediction/Forecast Exams
- F1-F4 All Subjects Notes/Topical Qsns
- Updated Schemes of Work/Syllabus
- Acted Set Books Videos/ Guides
- Set Books Essays/Excerpts Qsns
- Past K.C.S.E Papers & Holiday Assignments
- 70 Biology Graphical/Essays Qsns
- 70 Biology Pictorial Practical Qsns
- Poetry & Ushairi Qsns.... e.t.c