

# **KCSE PREDICTION 2**

# **ALL SUBJECTS**

**Class of KCSE March 2022 candidates are encouraged to take this exam serious.**

**All the best!**

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## PREDICTION 2

Name.....Adm No.....Class.....

Index No..... Signature.....

**121/1**  
**MATHEMATICS ALT A**  
**Paper 1**  
**2 ½ Hours**

### INSTRUCTIONS TO CANDIDATES

- Write your name and Admission number in the spaces provided at the top of this page.
- This paper consists of two sections: Section I and Section II.
- Answer *ALL* questions from section I and *ANY FIVE* from section II
- All answers and workings must be written on the question paper in the spaces provided below each question.
- Show all the steps in your calculation, giving your answer at each stage in the spaces below each question.
- Non – Programmable silent electronic calculators and KNEC mathematical tables may be used, except where stated otherwise.

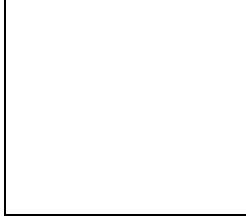
### FOR EXAMINERS USE ONLY

#### 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***

**SECTION 1 (50MARKS)**

*Answer **all** the questions in this section in the spaces provided.*

1. Without using tables, evaluate  $\frac{0.51 \times 5700}{6.8 \times 0.0095}$  giving the answer in standard form.(3mks)

2. The sum of all the interior angles of a regular n-sided polygon is  $2880^{\circ}$ . Calculate the value of n and the size of the exterior angles of the polygon. (3mks)

3. Find the equation of the line which passes through the point of intersection of the lines  $y + 2x = 8$  and  $2y - x = 6$  and the point  $(4, 3)$ . (4mks)

4. Express the inequalities  $\frac{1}{3}x + 4 \leq 7 + 2x \leq 4 + \frac{1}{4}x$  in the form  $p \leq x \leq q$ , where  $p$  and  $q$  are real numbers. (3mks)

5. A translation maps the point  $Q(5, -3)$  onto  $Q^1(2, -5)$

(a) Determine the translation vector. (1 mk)

(b) A point  $R^1$  is the image of  $R(-2, -3)$  under the same translation. Find the length of  $Q^1R^1$ . (2mks)

6. George received 10,000 Euros from his brother who stays in France .He sent to his sister who stays in Japan 10,000 Yen .In addition George bought a car worth sh.200,000. Exchange rates :

	Buying	Selling
1 Euro	73.4226	73.52953
100 Japanese yen	62.8011	62.8822

How much was left in Kenya shillings.

(3mks).

7. Simplify the expression

(3mks)

$$\frac{x^2 - 9y^2}{2x^2 - 7xy + 3y^2}$$

8. Kassim has a money box containing 100 mixed shs 5 and shs 10 coins with a total value of shs 600. How many of each type of coin does the box contain. (3mks)

9. Use square roots, reciprocal and square tables to evaluate to 4 significant figures the expression; ( 4 mks)

$$(0.06458)^{\frac{1}{2}} + \left(\frac{2}{0.4327}\right)^2$$

10. A boy walk directly from point Q towards the foot of a vertical flag post 200m away. After covering a distance of 140m, he observes the angle of elevation of the top of the flag post as  $75^\circ$ . Calculate the angle of depression of point Q from the top of the flag post. (3mks)

11. Two similar blocks have masses of 729g and 216g respectively. If the surface area of the smaller block is  $300\text{cm}^2$ , calculate the surface area of the larger block. (3mks)

12. Evaluate  $\int_{-1}^2 (x^2 + 1)dx$  (3 mks)

13. A two digit number is such that 4 times the units digit exceeds the tens digit by 1. If the digits are reversed, the number formed is decreased by 45. Find the number. (3mks)

14. Given that the column vectors

$$p_{\omega} = \begin{pmatrix} -3 \\ 4 \end{pmatrix}, q_{\omega} = \begin{pmatrix} 16 \\ -4 \end{pmatrix}, r_{\omega} = \begin{pmatrix} 9 \\ 6 \end{pmatrix} \text{ and } a_{\omega} = 2p_{\omega} - \frac{3}{4}q_{\omega} + \frac{2}{3}r_{\omega}$$

Express as a column vector and hence calculate its magnitude (3mks)

15. A liquid spray of mass 384g is packed in a cylindrical container of internal radius 3.2 cm. Given that the density of the liquid is  $0.6\text{g/cm}^3$ , calculate to 2dp the height of the liquid in the container. (3 mks)



16.(a) Find the inverse of the matrix  $\begin{pmatrix} 4 & 3 & 3 & 5 \end{pmatrix}$  ( 1 mk)

(b) Hence solve the simultaneous equation using the matrix method ( 2mks)

$$4x + 3y = 6$$

$$3x + 5y = 5$$

## SECTION II

*Answer any **Five** Questions in this Section in the spaces provided*

17. Three businessladies Wanjiku, Muthoni and Njoki decided to buy a lorry. The marked price of the lorry was 2.8million shillings. The dealer agreed that the ladies could pay a deposit of 60% of the marked price and the rest to be paid within a year. The ladies raised the deposit in the ratio of 3:2:5 respectively. At the end of the year the lorry had realized 2.08million shillings which the three shared in the ratio of their contribution. However, they were required to contribute for the balance of the lorry from these earnings again in the ratio of their original contributions.

a) calculate amount to be paid as deposit (1mk)

b) How much did each contribute to pay for the deposit? (3mk)

c) How much did Njoki receive at the end of the year? (1mk)

d) Calculate the total amount Muthoni and Njoki contributed to pay for the balance. (3mk)

e) How much money did Wanjiku remain with after paying her share of the balance? (2mk)

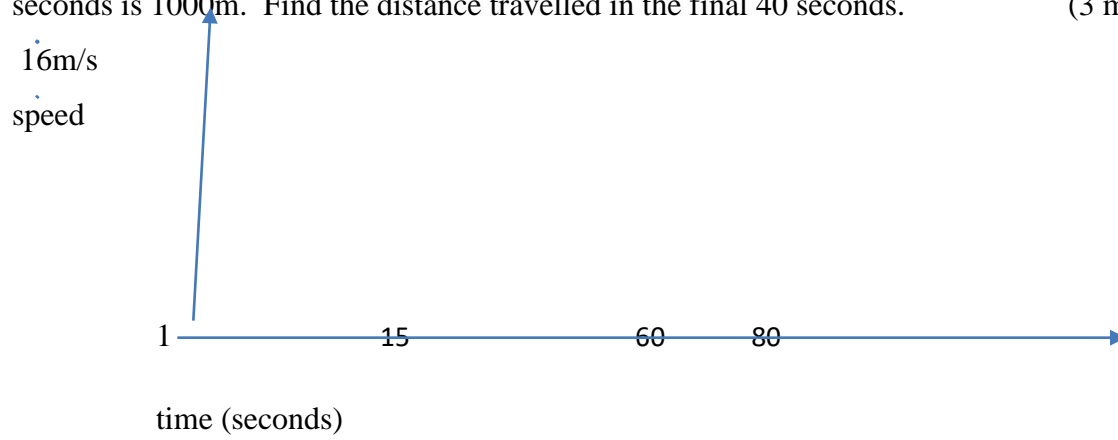
18. a) A bus left Kisumu at 9.30 am towards Nairobi at an average speed of 81km/hr. A matatu left Nairobi for Kisumu at 10.10 a.m at an average speed of 72km/hr. The distance between Kisumu and Nairobi is 360km. Determine:

(i) The time taken before the two vehicles met. (3mks)

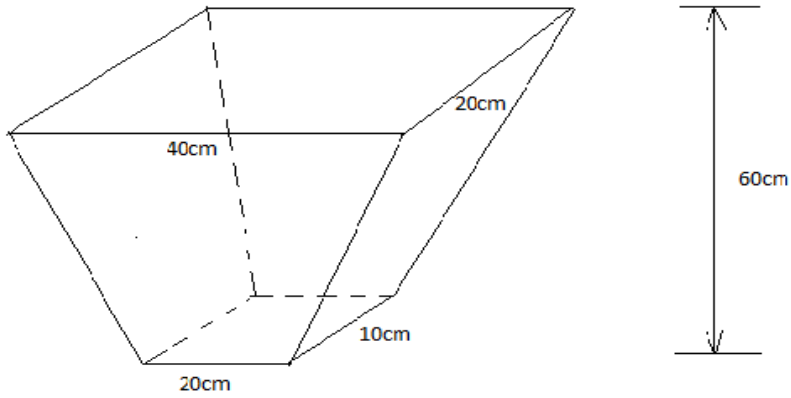
(ii) The distance between two vehicles 40 minutes after meeting. (2mks)

(iii) A car left Kisumu towards Nairobi at 9.50am at an average speed of 90km/hr. Determine the time the car caught up with the bus. (3mks)

(b) The figure below shows speed time graph of a journey. If total distance travelled in 80 seconds is 1000m. Find the distance travelled in the final 40 seconds. (3 mks)



19. The Figure shows a frustum of a right pyramid open container for storing water.



Calculate:

a) The height of the pyramid from which the frustum was cut from. (2mks)

b) The capacity of the frustum in litres (4mks)

c) The surface area of the frustum (4mks)

20. The table below represent marks in percentage scored by 50 students in a class

Marks	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84
Frequency	6	4	7	6	12	4	5	3	3

a) State the modal class (1mk)

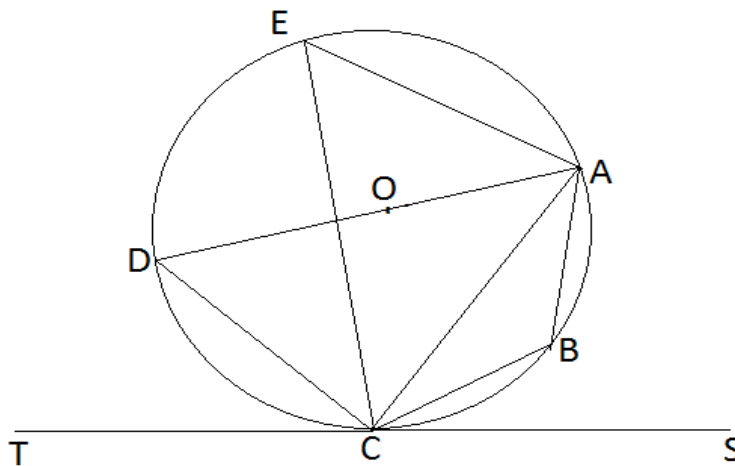
b) Estimate:

i. The mean mark ( 4 mks)

ii. the median. (3mks)

- c) Calculate the percentage of students who scored between 50-64 marks (2 mks)

21. In the figure below DA is a diameter of the circle ABCDE centre O. TCS is a tangent to the circle at C,  $AB = BC$  and angle  $DAC = 38^\circ$



Giving reasons, determine the following angles:

- (a)  $\angle DCT$  (2 mks)

(b)  $\angle DEA$  (2 mks)

(c)  $\angle ACB$  (2 mks)

(d)  $\angle BDC$  (2 mks)

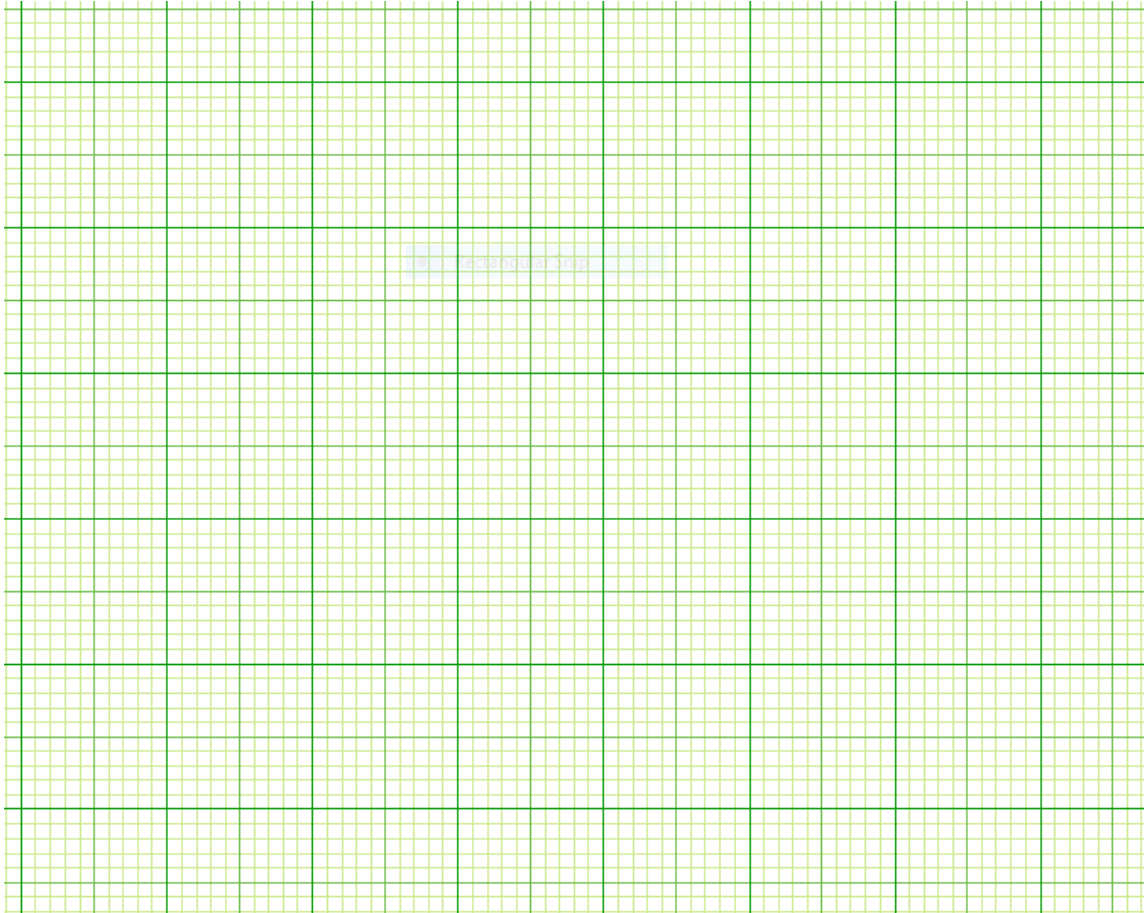
(e)  $\angle BOA$  (2 mks)

22. (a) Complete the table below for the function  $y = -2x^2 - 7x + 4$ . (2 mks)

X	-5	-4	-3	-2	-1	0	1
$Y = -2x^2 - 7x + 4$							

(d) Draw the graph of  $y = -2x^2 - 7x + 4$  for  $-5 \leq x \leq 1$  (3mks)





(c) Use your graph to solve

(i)  $-2x^2 - 7x + 4 = 0$  (1 mk)

(ii)  $-2x^2 - 4x - 2 = 0$  (2mks)

(iii)  $x^2 + \frac{7}{2}x - 1 = 0$  (2mks)

23.(a) Complete the table below for the function  $y = x^2 + 3$  (2mks)

$x$	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
$y$	4		7			15.25	19		27		39

(b) Use the mid-ordinate rule with five strips to estimate the area bounded by the curve, the line  $x = 1$  and the line  $x = 6$ . (2mks)

(c) Use integration to find the exact area in (b) above. (3mks)

(d) Calculate the percentage error arising from the use of mid-ordinate rule. (3mks)

24. Mwikali planned to spend sh. 16,800 to buy a number of bags of maize. When she went to the market, she discovered that the price of maize had increased by sh. 200 per bag. She could now afford to buy two bags less than she had planned to buy with the same amount of money. Taking the original number of bags she intended to buy to be  $y$ :

(a) write an expression in terms of  $y$  for:

i) original price per bag (1 mk)

ii) price per bag after the increase in price. (1 mk)

b) Determine the number of bags that she originally intended to buy. (4 mks)

c) She later sold the maize at sh. 1750 per bag. Find the percent profit she made. (4 mks)

# PREDICTION 2

NAME: ..... INDEX NO: .....

SCHOOL: ..... DATE : .....

CANDIDATE'S SIGNATURE: .....

121/2

**MATHEMATICS**

**PAPER 2**

**TIME: 2½ HOURS**

## **INSTRUCTIONS TO CANDIDATES**

- Write your Name and Index Number in the spaces provided at the top of this page.
- Sign and write the date of examination in the spaces provided above.
- This paper contains TWO sections: section I and section II
- Answer all the questions in section I and any FIVE questions from section II.
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## **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**

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## **SECTION I: (50 MARKS)**

**Answer ALL Questions in this section**

1. Use logarithm table to evaluate:

(4mks)

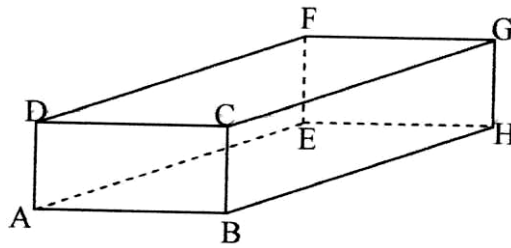
$$\sqrt{\left(\frac{0.7493\cos^2 16.335^\circ}{\text{Log } 559.3 + 10\tan 3^\circ}\right)}$$

2. What must be added to  $\frac{1}{4}x^2 + \frac{1}{9}$  in order to make it a perfect square? (2mks)

3. Expand  $(x - a/x^2)^6$  in ascending powers of  $x$ , up to the term independent of  $x$ . If this independent term is 1215, find the value of  $a$ . (3mks)

4. An angle of 1.75 radians at the centre of a circle subtends an arc of length 24.8cm. Find the diameter of the circle. (2mks)

5. ABCDEFG is a rectangular box in which AB, AD, AE are 3cm, 4cm and 5cm long respectively. M is the midpoint of FG.



Find the length AM and determine the inclination of AM to EFGH.

(3mks)

6. Use square roots, reciprocals and square tables to evaluate the expression: (3mks)

$$(0.00546667)^{\frac{1}{2}} + \left( \frac{3}{0.043279} \right)^2$$

7. A member of a county assembly sold his car for shs. 1,250,000 and deposited this money in a savings account in one of the banks in Kaiboi town. The banks paid 18%p.a compounded quarterly. After two years, the member of the county assembly withdrew a half of the amount from the account. He left the rest for a further two and a half years. Calculate the total interest he earned in the 4½ year period. (4mks)

8. Given that  $x^0$  is an angle in the third quadrant such that  $16\sin^2x^0 + 4\cos x^0 = 10$ . Find  $\tan x$ . (3mks)

9. Two variables  $P$  and  $L$  are such that  $P$  varies partly as  $L$  and partly varies inversely as the square root of  $L$ .
- (a) Determine the relationship between  $P$  and  $L$  given that  $L = 16$  when  $P = 500$  and  $L = 25$  when  $P = 800$ . (3mks)

(b) Hence find  $P$  when  $L = 81$ . (1mk)

10. The angle of elevation from the base of a wall to the top of the flag post 70 metres away is  $62^\circ$ . The angle of depression from the top of the flag post to the wall is  $25^\circ$ . Calculate:-

(a) The height of the flag post. (1mk)

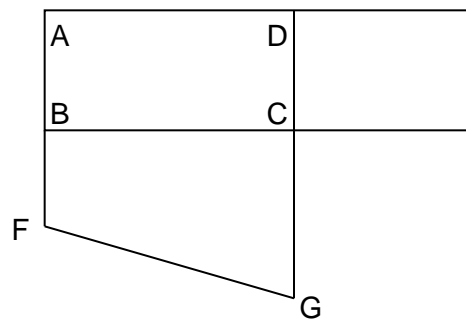
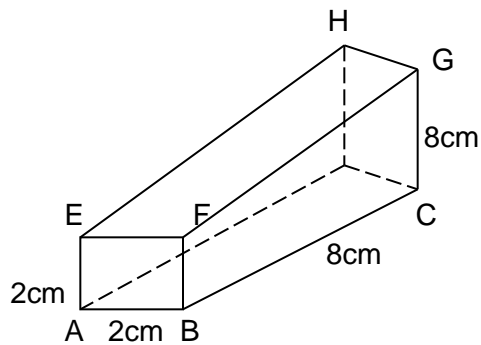
(b) The height of the wall. (2mks)

11. Given that  $\log 3 = 1.583$  and  $\log 5 = 2.322$ , evaluate without using table or calculator:  
Log 135 (2mks)

12. Two values of **a** and **b** are such that  $7.1 \leq a \leq 7.3$  and  $12.5 \leq b \leq 12.7$ . Calculate the percentage error in **b**, giving your answer correct to 2 decimal places. (3mks)

13. The following figure is a solid and its incomplete net.

(a) Complete and label the net.



(b) Hence or otherwise, find the surface area of the solid. (2mks)

14. Solve for  $x$  in the equation:  $9^{x+1} - 54 = 3^{2x+1}$  (3mks)



15. The points P (-6, 5) and Q (2, -1) are the ends of a diameter of a circle centre M.

Determine:-

(a) The coordinates of M. (1mk)

(b) The equation of the circle in the form  $x^2 + y^2 + ax + by + c = 0$ . (2mks)

16. Solve the simultaneous equations: (3mks)

$$y + 2x + 1 = 0$$

$$x^2 + xy = -6$$

**SECTION II (50 MARKS)**

**Answer ONLY FIVE questions in this section in the spaces provided**

17. Mr. Maiyo, who works in a sugarcane plantation, owns a bicycle which he sometimes rides to work. Out of the 21 working days in a month, he rides to work for 18 days. If he rides to work, the probability that he is bitten by a rabid dog is  $\frac{4}{15}$  otherwise it is only  $\frac{1}{13}$ . When he is bitten by the dog, the probability that he will get treated is  $\frac{4}{5}$  and if he does not get treated, the probability that he will get rabies is  $\frac{5}{7}$ .

(a) Draw a tree diagram using the given information. (3mks)

(b) Using the tree diagram in (a) above, determine the probability that;

(i) Maiyo will not be bitten by a rabid dog. (2mks)

(ii) He will get rabies. (3mks)

(iii) He will not get rabies. (2mks)

18. Tax rates in operation in a certain year in Kenya are as given in the table below.

Income	Tax Rates
--------	-----------

(kf p.a.)	(sh. Per £)
1 – 4,512	2
4,513 – 9,024	3
9,025 – 13,536	4
13,537 – 18,048	5
18,049 – 22,560	6
Over 22,560	6.5

- (a) Mr. Koech pays Ksh. 2,172 P.A.Y.E. monthly. He was entitled to a house allowance of Ksh. 5,000 and a medical allowance of Ksh. 2,000 and gets a monthly tax relief of Ksh. 1,093. Calculate his monthly basic salary. (8mks)

- (b) Mr. Koech's other deduction per month were as follows:-

NHIF – Kshs. 320

Co-op Loan – Kshs. 4,000

Calculate Koech's net pay per month.

(2mks)

19. Using a ruler and a pair of compasses only:

- (a) Three points A, B and C are vertices of a triangle ABC such that AB = 8cm, BC =

- 5cm and  $AC = 6.4\text{cm}$ . Draw triangle ABC with AB as the base. (2mks)
- (b) Construct the locus of P such that it is equidistance from the sides AB, BC and AC. (3mks)
- (c) On the opposite side of point C on AB, construct the locus L such  $\angle ALB = 60^\circ$ . (3mks)
- (d) Hence determine the area of the major sector bounded by the locus L. (2mks)

- 20.(a) Complete the table below for the functions  $y = 4 \cos 2x$  and  $y = 3 \sin (2x + 30^\circ)$  giving the values to 1 decimal place. (2mks)

	$-30^\circ$	$0^\circ$	$30^\circ$	$60^\circ$	$90^\circ$	$120^\circ$	$150^\circ$	$180^\circ$	$210^\circ$	$240^\circ$	$270^\circ$
$4 \cos 2x$	2.0	4.0	2.0		-4.0	-2.0		4.0	2.0		-4.0
$3 \sin (x+30^\circ)$	0.0	1.5	2.6	3.6		1.5	0		-2.6		-2.6

(b) Draw the graphs of  $y = 4 \cos 2x^\circ$  and  $y = 3 \sin (x + 30^\circ)$  for  $-30 \leq x \leq 270^\circ$  on the same axes. Use a scale of 1cm for  $30^\circ$  on x-axis and 1cm for 1 unit on the y-axis.

(4mks)



(c) Use your graphs in (b) above to solve the equation:

(i)  $3 \sin (x + 30^\circ) - 4 \cos 2x = 0$ .

(2mks)

(ii)  $3 \sin (2x + 30^\circ) + 1 = 0$

(1mk)

(d) Determine the period of the function  $y = 4 \cos 2x$ .

(1mk)

21. An aircraft takes off from the airport X( $65^\circ\text{N}$ ,  $36^\circ\text{E}$ ) and flies by the most direct route to another airport Y ( $R^\circ\text{N}$ ,  $144^\circ\text{W}$ ) covering a distance of 4800nm.

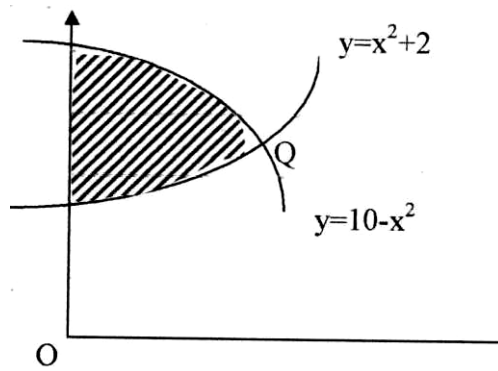
(a) Find  $R^0$

(1mk)

(b) If instead, the aircraft had flown along the meridian  $144^0W$  to point Y, find how much further it would have flown. (5mks)

(c) Two aircrafts takes off from X to Y at the same time. Given that both fly at the same speed and one flies on the direct route and the other takes the route described in (b) above, state the position of the second aircraft when the first is landing at Y. (2mks)

22. The diagram shown below represents the area between the curves  $y = x^2 + 2$  and  $y = 10 - x^2$  and y-axis.



Find:-

(a) The coordinates of Q (a point of intersection)

(1mk)

(b) The area of the shaded region, by use of mid-ordinate rule with 8 ordinates(6mks)

(c) Use integration method to calculate the same area as in (b) above.

(3mks)

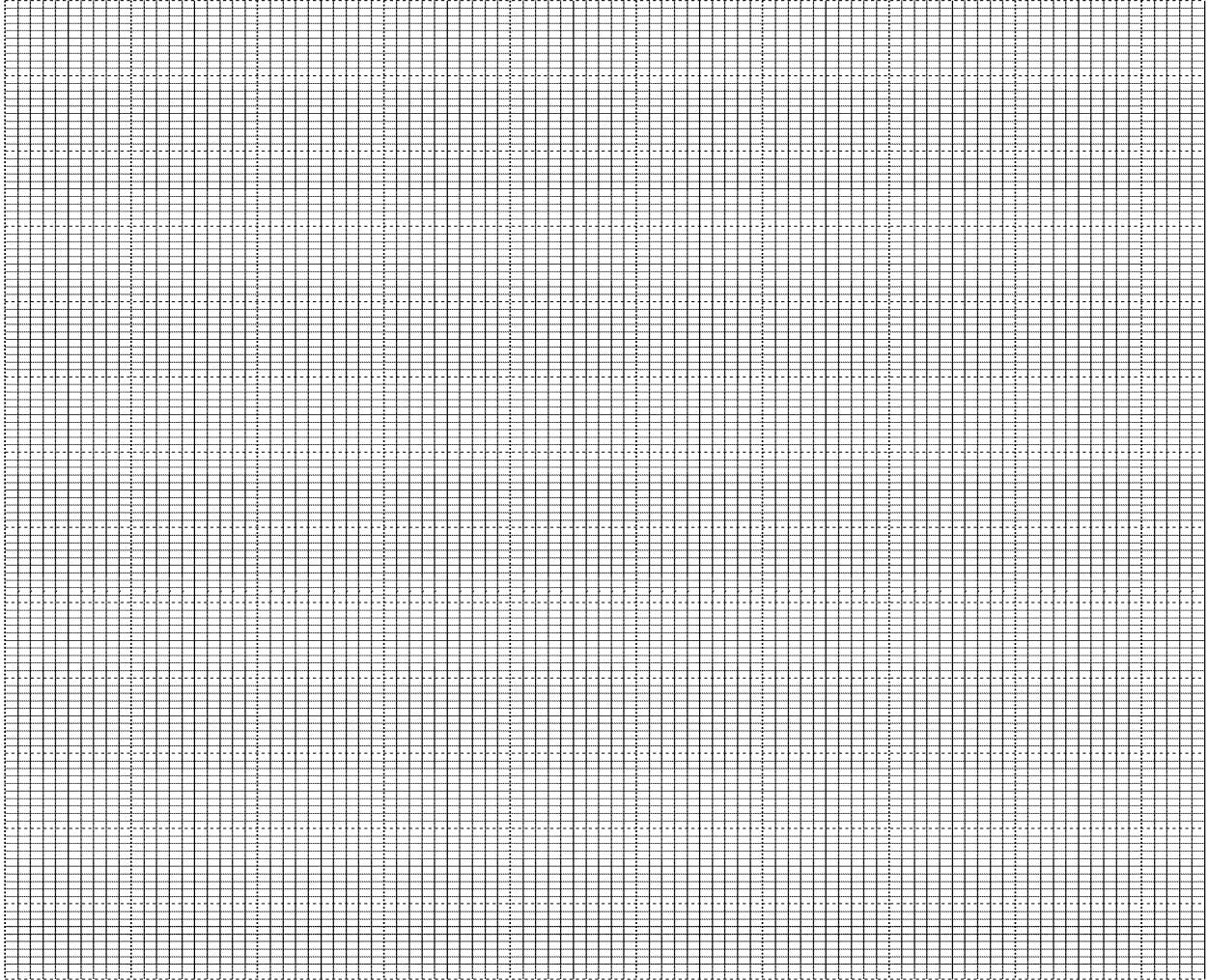
23. Two quantities of p and r are given below.

P	1.2	1.5	2.0	2.5	3.5	4.5
r	1.58	2.25	3.39	4.74	7.86	11.5

(a) State the linear equation connecting p and r.

(1mk)

(b) Using the scale 2cm to represent 0.1 units on both axes, draw a suitable straight line graph on the grid provided;



Hence estimate the value of k and n.

(8mks)

(c) Write an equation connecting p and n.

(1mk)

24. An aircraft leaves point A and flies on a bearing of  $020^{\circ}$  to a second point B, which is



600km from A. From B, the aircraft then flies on a bearing of  $320^{\circ}$  to a third point C which is 1000km from B. The aircraft then flies directly back to A from C at a speed of 200km/hr. By scale drawing, find:-

(a) Time taken to fly directly from C to A. (6mks)

(b) The bearing in which it would fly from C to A. (1mk)

(c) Locate point D on a bearing  $170^{\circ}$  from C and  $280^{\circ}$  from A. Calculate BD in kilometers. (2mks)

(d) What is the bearing of D from B? (1mk)

# **PREDICTION 2**

## **Kenya Certificate of Secondary Education**

101/1 ENGLISH

PAPER ONE

TIME: 2HRS

### **INSTRUCTIONS TO CANDIDATES**

1. Write your details in the spaces provided above.
2. Answer all the questions in this paper.
3. Answer the questions in English

### **EXAMINER'S USE ONLY**

<b>QUESTION</b>	<b>MARKS</b>	<b>CANDIDATE'S SCORE</b>
1	20	
2	10	
3	30	
<b>TOTAL</b>	<b>60</b>	



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## 2. CLOZE TEST (10MKS)

**Fill in the blank spaces with the most appropriate words.**

A new research title "Underage drinking in Kenya", has .....1.....that nearly one third of form four students aged below 18 years take alcohol .....2..... As our society ponders this sad .....3....., the urgent message to children who are taking alcohol .....4..... do not drink another sip. Advice to those children is to strongly say "no". .....5.....irresponsible behaviour, to alcoholism, there are many.....6.....effects of alcohol. It is wrong and illegal for children to drink alcohol.

This report also states that 46 percent of the children received .....7.....first pint from friends and .....8..... Do you offer alcohol to a child? As a parent or guardian, do you nurture .....9.....? How much time do you spend with them? Notably, .....10.....of guidance and supervision are stimuli to underage drinking.

## 3. ORAL SKILLS (30MKS)

**Read the poem below and answer the questions that follow**

Make me a grave where'er you will,  
In a lowly plain, or a lofty hill;  
Make it among earth's humblest graves,  
But not in a land where men are slaves.

I could not rest if around my grave  
I heard the steps of a trembling slave;  
His shadow above my silent tomb  
Would make it a place of fearful gloom

I could not rest if I heard the tread  
Of a coffin going to the shambles led,  
And the mother's shriek of wild despair  
Rise like a curse on the trembling air  
(by Frances Ellen Watkins Harper)

## Questions

- a) Describe the rhyme scheme of the poem above. (2mks)  
.....  
.....  
.....
- b) Apart from rhyme, mention two other ways they have achieved rhythm? (4mks)  
.....  
.....  
.....  
.....
- c) Mention two ways in which you would know that your audience is fully participating during the recitation of the poem above. (2mks)  
.....  
.....
- d) How would you say the last line of the poem? (2mks)  
.....  
.....  
.....
- e) Indicate whether the following items have a falling or a rising intonation. (4mks)
- i) Get out now! .....
  - ii) The man was accused of theft. ....
  - iii) How did you find the English exam? .....
  - iv) Could he have left? .....
- f) Underline the silent letters in the following words. (4mks)
- i) Corps
  - ii) Parliament
  - iii) Leopard
  - iv) Fracas
- g) Provide a homophone for each of the following words. (4mks)
- i) Bury .....
  - ii) Claws .....
  - iii) Guest .....
  - iv) Male .....

h) The underlining indicates the stressed word in the sentences below. Briefly explain what each sentence mean (3mks)

i) The lady in a red dress lost her purse

.....

ii) The lady in a red dress lost her purses

.....

iii) The lady in a red dress lost her purse.

.....

i) Identify the odd word out according to the pronunciation of the underlined sound.

(2mks)

i) Said                      Head                      Gate                      Led

.....

ii) Face                      Phrase                      Shepherd                      Phase

j) Below is a dialogue between Muthomi and James who are candidates. Read it and answer the questions that follow.

**Muthomi:** James, I'm worried about my performance in English. It's not encouraging.

**James:** Ah! I'm happy with mine in Biology. I got an A in the last exam.

**Muthomi:** I really don't know what to do about English, maybe...

**James:** I don't like History and P.E teacher. He thinks he is the only one who can a pick-up truck. My mum told me she would be buying one soon.

**Muthomi:** (Trying to bring him back to the topic) Tell me James, how do you revise English?

**James:** Oh! Is that Betty? She promised to bring me a movie. (Calling out) Betty! Betty!

(The runs after her)

a) Identify the shortcomings in the dialogue above (3mks)

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.....

# PREDICTION 2

## ENGLISH

### PAPER 2

NAME-----ADM-----

#### QUESTION 1

Read the passage below and then answer the questions that follow.

Happiness arises largely from the mental qualities of contentment, confidence, serenity and active good-will. It includes the pain of losing as well as the pleasure of finding. It thrives best in a crowded life. The men and women who are recorded in history and biography as the most happy were with always somewhat to do than they could possibly do. Every waking hour of their lives was occupied with ambitious projects, literature, love, politics, science, friendship, commerce, professions, trades, their religious faith, and a thousand other matters. The secret of happiness may be found by making each of these interests count to its utmost as part of the fabric of life.

We need to avoid the extremes of sluggish placidity and feverish activity. we are not going to be satisfied with felicity which resembles that of a stone, unfeeling and unmoving, but will look back from future ears with sorrow and regret if we run to and fro, giving it what Socrates called 'the itch'.

Happiness obviously includes two sorts of behavior: active and passive. We may say the active consists in searching and sharing, while the passive part is made up security and possession. Neither part is complete in itself, nor does neither yield full satisfaction if it is over-emphasized. Philosophers from the ancient Greeks to present day have been extolling a balanced life as the most happy life, and many unhappy people can, when they face the issue, trace their discontent to imbalance.

The recipe for happiness cannot be given in any single word, because its many virtues have to be combined in their proper quantities, at the proper times for proper purposes.

It is legitimate to seek happiness. We cannot help observing that while followers of some schools of thought are telling us to avoid seeking happiness; they intimate that if we do so we shall be happy.

The search requires a plan. We need to know what sort of happiness we seek, what the ingredients are, what our strongest wants are, and what we have to start with. We should train ourselves to keep the programme simple, and free from complications and side trips, to pay attention to little things to deflate quickly after being praised and to bounce back quickly after disappointment, to seize to create opportunities to put our special abilities to work, to seek excellence in everything we do, to remain modest and to review and revise periodically.



Most of us do not really have to seek far and wide. Happiness grows at our fireside, if we cultivate it.

- a) According to the writer, what is the source of happiness? (2mks)
- b) What two sorts of behavior does happiness include? (2mks)
- c) What does the writer mean when he talks about a balanced life? (2 mks)
- d) In a paragraph of about 30 words, summarize the things we must know as we search for happiness? (4mks)
- e) Explain the writers point in the last paragraph of the passage. (2mks)
- f) The recipe for happiness cannot be given in any single word.(1mk)  
(Rewrite the sentence beginning: No single word...)
- g) Identify and comment on the figures of speech used in the following: (2marks)
- (i) *It (Happiness) thrives best in a crowded life.*
- (ii) *... as part of the fabric life.*
- h) Describe the tone of this passage. (1mark)

i) Explain the meaning of the following words as used in the passage. (4mrks)

(i) Extolling-

(ii) Intimate-

(iii) Felicity-

(iv) Legitimate-

## **QUESTION 2**

**Read the extract below and answer the questions that follow. (25 marks)**

**Nora:** It's a shame to say that. I do really save all I can.

**Helmer:** (laughing) That's very true, - all you can. But you can't save anything!

**Nora:** (smiling quietly and happily) You haven't any idea how many expenses we skylarks and squirrels have, Torvald.

**Helmer:** You are an odd little soul. Very like your father. You always find some new way of wheedling money out of me, and as soon as you have got it, it seems to melt in your hands. You never know where it has gone. Still, one must take you as you are. It is in the blood: for indeed it is true that you can inherit these things, Nora.

**Nora:** Ah, I wish I had inherited many of papa's qualities.

**Helmer:** And I would not wish you to be anything but just what you are, my little skylark. But do you know, it strikes me that you are looking-rather—what shall I say- rather uneasy today?

**Nora:** do I?

**HELMER:** You do, really. Look straight at me.

**Nora :**(( looks at him) well?

**Helmer:** (wagging his finger at her) Hasn't Miss Sweet Tooth been breaking rules in town today?

**Nora:** No; what makes you think that?

**Helmer:** Hasn't she paid a visit to the confectioner's?

**Nora:** No, I assure you, Torvald-

**Helmer:** Not been nibbling sweets?

**Nora:** No, certainly not.

**Helmer:** Not even take a bite at a macaroon or two?

**Nora:** (going to the table on the right) I shouldn't think of going against your wishes.

**Helmer:** No, I am sure of that: besides, you gave me your word- (Going up to her) Keep your little Christmas secrets to yourself, my darling. They will be revealed tonight when the Christmas tree is lit, no doubt.

**Nora:** Did you remember to invite Doctor Rank?

**Helmer:** No. But there is no need; as a matter of course, he will come to dinner with us. However, I will ask him when he comes this morning. I have ordered some good wine. Nora, you can't think how I am looking forward to this evening.

**Nora:** So am I! And how the children will enjoy themselves, Torvald!

**Helmer:** It is splendid to feel that one has a perfectly a safe appointment, and a big enough income. It is Delightful to think of, isn't it?

**Nora:** It's wonderful!

1. Place this extract in its immediate context.( 4 marks)
2. Explain the dramatic irony in this extract ( 3marks)
3. Helmer says here" it is splendid to feel that one has a perfectly safe appointment". What is he referring to?



**QUESTION 3**

**Read the song below and answer questions that follow.**

**LISTEN DEAR BRIDE**

Oh my sister, listen

From this day, you won't go dancing,

From this day, you won't go to the dance,

From this day, you won't go dancing

You'll dance only on the path to the river.

My sister, will you listen?

From this day, you won't go chatting,

From this day, you won't sit to chat,

From this day, you won't sit chatting,

You'll only chat on the path to the farm.

Daughter of my mother, listen!

From this day, you won't enjoy teasing,

From this day, you won't enjoy to tease,

From this day, you won't enjoy teasing,

You'll only tease the baby on your lap.

Listen, my dear sister!

You'll only dance on the path to the river,

You'll only chat on the path to the farm,

You'll only tease the baby on your lap,

From this day, life will change.

Have you heard daughter of my mother?

You'll not go dancing, dance today.

You'll not go sit chatting, chat today.

You'll not enjoy teasing, tease today.

From this day, life will change.

1. With explanation, classify the above item. (2mks)

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2. Who do you think are the singers in this song? Give reasons (3mks)

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3. Identify two features which qualify this text as a song. (4mks)

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4. Briefly explain what the society expects of a married woman as brought out in the song. (2mks)

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.....

5. Giving illustrations, give two functions of this song. (2mks)

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.....

.....  
6. According to the song, how do you think the bride will behave when this song is sung? (3mks)

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.....  
.....

7. Explain the relationship between stanza 4 and the first three stanzas. (2mks)

.....  
.....  
.....

8. Explain the effect/impact of the phrase “daughter of my mother” instead of “my sister” (1mk)

.....  
.....  
.....

9. Add an appropriate question tag to the statement below. (1mk)

a) Listen, my sister

.....

b) You’ll only dance on the way to the river

.....

**QUESTION 4 GRAMMAR(15MKS)**

**A) Rewrite the following sentences as instructed. Do not change the meaning of the sentences (3mks)**

a) Marylyn Monroe was the most beautiful woman in Hollywood in the sixties( Begin:No.....)

b) I did not know that there was trouble ahead ( Begin; Little....)

c) All except Maina went for games. Rewrite using “save for”

B) **Fill in the blank spaces in the following sentences with the most appropriate preposition.** (3mks)

- a) Innoculation gives protection \_\_\_\_\_ infection.
- b) We agreed \_\_\_\_\_ the general procedure.
- c) It has been the same old story ever \_\_\_\_\_ he was a small boy.

C) **Use the correct form of the word in brackets to fill in the blanks.** (3mks)

- a) There was enough \_\_\_\_\_ (prove) that examination had leaked.
- b) The student gave a very good \_\_\_\_\_ (describe) of the party.
- c) The painting \_\_\_\_\_ (steal) from the museum.

D) **Explain the difference in meaning between these two sentences**

- a) The hawker was selling ten day- old chicks.

The hawker was selling ten- day old chicks. (2mks)

E) **For each of the following sentences, replace the underlined phrasal verb with a word that has the same meaning.** ( 4mks)

- a) I expect him to pull through within a week.

- b) I have been at the police station. Our house was broken into last night.

- c) Everybody knows how good you are. There is no need to show off.

- d) After a hard day's work, I sat on a cosy chair and dozed off.



## PREDICTION 2

101/3 ENGLISH

PAPER 3

TIME: 2½HRS

### **INSTRUCTIONS TO CANDIDATES**

1. Write your details in the spaces provided above.
2. Answer **three** questions only
3. Questions **one** and **two** are **compulsory**
4. In question **three** choose only **one** of the optional texts you have prepared on.
5. Where a candidate presents work on more than one optional text, only the first one to appear will be marked.
6. Each of your essays must **not** exceed **450** words.
7. Candidates should check to ascertain that no questions are missing.

### 1. IMAGINATIVE COMPOSITION (20MKS)

a) Write a composition ending with the following statement.

.....a final look at her made me realize that choices have consequences.

**OR**

b) Write a composition to illustrate the proverb, "once beaten twice shy".

### 2. COMPULSORY TEXT BLOSSOMS OF THE SAVANNAH H.R OLE KULET (20MKS)

Parenting should build an environment of trust and peace in a family. Write an essay that explores how this statement applies to the Ole Kaelo family in Blossoms of the Savannah

### 3. OPTIONAL SET BOOKS

**a) Drama: David Mulwa: The Inheritance**

Inheriting a top seat without merit only invites ridicule from subjects. Write an essay showing how satire has been used in The Inheritance by David Mulwa.

**b) Short stories: Moran (ED) memories we lost.**

Discuss the major issues highlighted by the writer in the story window seat by Benjamin Branoff.

**c) John Steinbeck. The Pearl**

The Pearl portrays humans as beings inherently greedy. Show the validity of this statement with reference to The Pearl.

## **PREDICTION 2**

**102/1**

**KISWAHILI**

**Karatasi 1**

**Muda: Saa 1¾**

**Andika insha MBILI. Insha ya KWANZA ni ya LAZIMA.**

**Chagua insha moja nyingine kutoka tatu zilizobaki.**

**Kila Insha isipungue maneno 400.**

**Kila Insha ina alama 20.**

**INSHA 102/1**

**1. Lazima :**

Wewe ni mwenyekiti wa jopo lililoteuliwa kuchunguza chanzo cha utovu wa usalama kijijini Sokoto. Andika ripoti maalum /rasmi kuhusu jambo hili.

**2.** Magonjwa mengi yanasababishwa na mitindo ya kisasa ya maisha.  
Jadili.

**3.** Tunga kisa kitakachodhihirisha maana ya methali: Mchagua nazi hupata koroma.

**4.** Andika insha itakayoanza kwa maneno haya:

Milipuko mikubwa ilisikika pu! Pu! Puu! Kisha niliwaona watu wakikimbia kuelekea pande zote...

# PREDICTION 2

Jina.....Nambari yako...../.....

Tarehe .....Sahihi yako.....

102/2

KISWAHILI

Karatasi ya 2

MUDA: SAA 2 ½

## KIDATO CHA NNE

### MAAGIZO

1. Andika **jina lako** na **namba yako** katika nafasi ulioachiwa hapo juu.
2. Weka **sahihi yako** na **tarehe** ya mtihani katika nafasi ulizoachiwa.
3. Jibu maswali yote.
4. Majibu yaandikwe katika nafasi zilizoachwa wazi katika kijitabu hiki cha maswali.

### Kwa matumizi ya mtihani pekee.

swali	upeo	alama
1	15	
2	15	
3	40	
4	10	
Jumla	80	

*Karatasi hii ina kurasa 11 zilizopigwa chapa. Watahiniwa ni lazima waangalie kama kurasa zote za karatasi hii zimepigwa chapa sawasawa na kuwa maswali yote yamo.*

## **1. UFAHAMU: (Alama 15)**

### **Soma kifungu kifuatacho kisha ujibu maswali yanayofuatia**

Mateso ya wanawakiwa ni suala la kijamii linalofaa kutazamwa kwa darubini kali. Hata hivyo wanaoathirika zaidi ni watoto ambao bado wako katika umri unaohitaji kulelewa na kupewa mahitaji ya msingi kama mavazi, malazi, elimu na mengine anuwai. Hali ya kuachwa na wazazi imekuwa ikizikumba jamii tangu enzi za mababu na kila itokeapo, wanajamii huipokea kwa mitazamo tofautitofauti, hivyo kuwafanya wanawakiwa kuathirika sana.

Baadhi ya jamii zina imani za kijadi pamwe na mila zilizochakaa zinazozifanya kuamini kuwa baadhi ya vifo hutokana na laana. Wengine huchukulia kuwa mwendazake ameondolewa na ulozi. Imani kama hizi huifanya jamii kuwatia watoto walioachwa katika mkumbo ule ule, hivyo kuwaangalia kwa macho yasiyo ya kawaida. Hili husababisha dhana gande. Hali hii husababisha kuwachukulia watoto kama wanaotoka katika kizazi kilicholaaniwa. Jamii basi hukosa kuwapa watoto hawa stahiki yao. Hata wanapojitahidi kuiwania nafasi yao, waliowazunguka huwavunja mioyo. Jitihada zao huishia kuwa si chochote kwa kuwa jamii inawatazama kama waliolaaniwa.

Punde baada ya mzazi mmoja au wote wawili waendapo wasikorudi, inatarajiwa kwamba aliyeachiwa mtoto, awe mzazi wake, mwanafamilia au jirani awajibike na kumtunza mwanamkiwa. Kunao kadha wa kadha wanaowajibika – ninawavulia kofia. Hata hivyo wengi hutelekeza jukumu hili walilopewa na Muumba. Si ajabu basi kuona kuwa idadi ya watoto wanaozurura mitaani inazidi kuongezeka kila uchao. Ukichunguza utakuta kuwa wengi wa watoto hawa ni waliopotelewa na wazazi wao. Inakera zaidi kugundua kuwa baadhi ya watoto hawa wana mzazi mmoja. Kwamba mke au mume wa mtu ameaga, au iwe kwamba mzazi mmoja alimzaa mtoto na kumwachia mwenzake mzigo wa ulezi, aliyeachiwa ana jukumu la kumpa mwanawe mahitaji ya msingi. Machoni pa Jalali, kila anayeupuuza wajibu huu ana hukumu yake siku ya kiama!

Ni haki ya kila mtoto kupata elimu. Katika katiba ya Kenya mathalan, elimu ya msingi, yaani kuanzia shule ya chekechea had kidato cha nne ni ya lazima. Tangu hapo hata hivyo, jamii zimekuwa zikiwanyima wanawakiwa wengi elimu. Kwamba kunao wachache wanaowaelimisha baadhi ya wanawakiwa, ni kweli. Hata hivyo, wengi hukosa hata wa kuwapeleka katika shule ya chekechea, hivyo kuishia kutojua hata kuandika majina

yao. Mfikirie mtu katika karne ya 21, asiyejua kusoma wala kuandika! Nani ajuaye, huenda huyo mwanamkiwa asiyepelekwa shuleni ndiye angalikuwa profesa, daktari, mwalimu, rubani au msomi mtajika na mtaalamu wa uwanja muhimu katika jamii!

Kila mtoto ana haki ya kulelewa hadi kufikia utu uzima kabla ya kupewa majukumu mazito. Katika katiba ya Kenya, utu uzima, ulio umri wa kuanza kufanya kazi huanzia miaka 18. Wanaohakikisha watoto hawa wametimiza utu uzima kabla ya kufanyishwa gange ngumu wanafaa pongezi. Hata hivyo wanawakiwa wamekuwa wakitumiwa na wengi kama punda wa huduma. Wanaaila wengine huwachukua wanawakiwa kwa machozi mengi wazazi wao waagapo nakuapa kuwahifadhi na kuwatunza wana wale wa ndugu zao, kumbe ni machozi ya simba kumlilia swara! Hata kabla ya mwili wa mzazi mhusika kuliwa na viwavi, mateso kwa mtoto yule huanza, akawa ndiye afanyaye kazi zote ngumu. Utakuta watoto wao wamekaa kama sultan bin jerehe huku mwanamkiwa yule akiwapikia, kuwafulia nguo, kudeki, karibu hata awaoshe miili! Kazi kama zile za shokoa huwa za sulubu na aghalabu husindikizwa kwa matusi yasiyoandikika.

Baadhi ya waja walionyimwa huruma huwahadaa wanawakiwa na kuwapeleka ng'ambo wakitumia vyambo, kuwa wakifika kule watapata kazi za kifahari. Maskini wale hushia kushikwa shokoa, wakawa watumwa katika nyumba za waajiri wao, bila namna ya kujinasua. Wengine hushia kutumiwa kama watumwa wa 'kimapenzi' katika madanguro, miili yao ikawa ya kuuziwa makahaba waroho wasiojali utu. Kujinasua kule huwa sawa na kujitahidi kuokoa ukuni uliokwishageuka jivu, maadamu wanawakiwa aghalabu hukosa watu wenye mioyo ya huruma ya kuwashughulikia. Wengi huitumia methali 'mwana wa ndugu kirugu mjukuu mwanangwa' kuwapuuzilia mbali wanawakiwa ambao hukimbiliwa tu wabinafsi hawa wanapofaidika wenyewe.

### **Maswali**

**a) Ipe taarifa hii anwani mwafaka. (alama 1)**

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**b) Eleza dhana ya mwanamkiwa kwa mujibu wa kifungu. (alama 2)**

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**c) Eleza imani za kijadi kuhusiana na wanawakiwa. (alama 2)**

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d) Jadili masaibu yanayowakumba wanawakiwa. **(alama 4)**

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e) Eleza haki mbili za kikatiba zilizokiukwa kuhusiana na wanawakiwa. **(alama 4)**

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f) Eleza maana ya msamiati ufuatao kulingana na kifungu. **(alama 2)**

i) Inakera

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ii) Majukumu

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## 2. UFUPISHO: (Alama 15)

### **Soma kifungu kifuatacho kisha ujibu maswali**

Runinga kama kifaa kingine chochote cha mawasiliano kina manufaa yake. Kwanza kabisa, ni nyenzo mwafaka ya kufundishia. Vipindi vinavyopeperushwa katika runinga huwa na mafunzo kemkemu kwa mtu wa kila rika. Halikadhalika, runinga huweza kuleta vipindi ambavyo huwafahamisha watu mambo yanayoendelea katika mazingira yao na duniani. Aidha, runinga ikitumika pamoja na michezo ya video huauni katika ukuzaji na ustawishaji wa stadi ya kujifundisha au kujielimisha. Michezo ya video, hasa ya kielimu, huwafanya watu kujenga umakini pamoja na kuchua misuli ya ubongo na kuwafanya watu kuwa macho wanapofanya kazi.

Fauka ya hayo, televisheni ni chemchemi bora ya kutumbuiza na kuchangamsha. Hakuna mtu asiyependa kuchangamshwa. Televisheni ni mojawapo ya vyombo mwafaka vya kutekeleza hayo kutokana na vipindi vyake. Uburudishaji huu huwa ni liwazo kutokana



na shinikizo na migogoro tunayokabiliana nayo kila siku. Uburudishaji huu hupatikana kwa urahisi majumbani mwetu.

Vivyo hivyo, runinga hutumika kama nyenzo ya kuendeleza utamaduni, kaida na amali za jamii. Vingi vya vipindi vya runinga huwa ni kioo ambacho huakisi mikakati na amali za jamii.

Kwa upande mwingine, hakuna kizuri kisichokuwa na dosari. Licha ya manufaa yake, televisheni imedhihirika kuwa na udhaifu wake. Kwanza, baadhi ya vipindi vya runinga na video hujumuisha ujumbe usio na maadili, kama vile matumizi ya nguvu za mabavu, ngono za kiholela, lugha isiyo ya adabu, ubaya wa kimavazi na maonevu ya rangi, dini, jinsia, kabila na utamaduni. Si ajabu kuwa baadhi ya vijana wetu wanaiga baadhi ya mambo haya. Vijana wetu siku hizi wameingilia ulevi wa pombe na afyuni, ngono za mapema kabla ya ndoa na mavazi yanaowaacha takribani uchi wa mnyama. Wengi wamekopa na kuyaiga haya kutoka katika runinga. Ukiwauliza wafanyacho, watakujibu kuwa ni ustaarabu kwani wameupata katika runinga.

Matumizi ya runinga na michezo ya video yasiyodhibitiwa huweza kuwa kikwazo cha mawasiliano bora miongoni mwa familia. Matumizi kama haya huwapa wanafamilia fursa ya kujitenga. Imedhihirika kuwa runinga haichangii kujenga uhusiano bora wa kijamii. Ukilinganisha na vyombo vingine vya burudani ambavyo hutoa nafasi ya watu kutangamana na kujenga uhusiano bora, televisheni haichangii haya. Badala yake, tajriba ya televisheni huwa ya kibinafsi. Hali hii inapotokea katika kiwango cha familia, televisheni inaweza kutenganisha wazazi na watoto wao.

Halikadhalika, runinga na video aghalabu hueneza maadili yasiyofaa. Mathalani, baadhi ya vipindi vya televisheni huendeleza hulka ya kuhadaa, ngono za kiholela, kuvunjika kwa ndoa, n.k. Hulka hizi zisizoendeleza maadili ya kijamii huchukuliwa kama zinazofaa na zinazofuatwa na waliostaarabika. Huu ni upotovu.

Isitoshe, baadhi ya matangazo huhimiza matumizi ya dawa za kulevya kama tembo na sigara. Vitu hivi vinapotangazwa, hupambwa kwa hila na udanganyifu mwingi ambao huwavutia vijana na watoto wengi. Si ajabu mtu anapouliza wanaotumia vileo hivi walivyoanza, watajibu kutokana na athari za matangazo katika runinga na vyombo vingine.

Utafiti umeonyesha kuwa vipindi vya runinga na video ni chanzo cha matumizi ya nguvu za mabavu miongoni mwa wanafunzi. Wazazi wengi huchukulia vibonzo katika televisheni kuwa vinalenga kuburudisha tu na havina ubaya wowote. Lakini ukweli ni kuwa vipindi vingi vya vibonzo hushirikisha matumizi ya hila na nguvu za mabavu. Haya huibusha hamu ya vijana na watoto huyaiga.





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**3. MATUMIZI YA LUGHA:**

**(alama 40)**

**a)** Taja aina mbili kuu za ala za kutamkia sauti

**(alama 2)**

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**b)** Taja mfano mmoja mmoja wa sauti zifuatazo

**(alama 2)**

Kimadende \_\_\_\_\_

Kipasuo kwamizo \_\_\_\_\_

**c)** Huku ukitoa mfano, eleza maana ya sentensi sahili

**(alama 2)**

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**d)** Ainisha mofimu katika neno lifuatalo

**(alama 3)**

Tulimpikia \_\_\_\_\_

**e)** Ainisha vitenzi katika sentensi: Kitabu anachotaka kusoma ki mezani

**(alama 3)**

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**f)** Tunga sentensi moja ukitumia kiunganishi kiteuzi

**(alama 2)**

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**g)** Nomino zifuatazo zimo katika ngeli gani?

**(alama 2)**

a) Uzi \_\_\_\_\_

b) Muda \_\_\_\_\_

**h)** Tumia 'o' rejeshi ya kati katika sentensi ifuatayo

**(alama 2)**

Watu ambao walifika jana ni wale ambao walitoka mbali

- i)** Onyesha shamirisho kipozi na ala katika sentensi ifuatayo **(alama 2)**  
Mwindaji haramu alimua ndovu kwa bunduki

- j)** Changanua sentensi ifuatayo ukitumia mistari au mishale **(alama 3)**  
Kilipikwa jana jioni

- k)** Andika sentensi ifuatayo katika hali yakinishi **(alama 2)**  
Msingesoma kwa bidii, msingepita

- l)** Tunga sentensi moja kudhihirisha dhamira/jukumu hili **(alama 2)**  
Rai/ombi

- m)** Ainisha vishazi katika sentensi ifuatayo **(alama 2)**  
Mtoto ambaye alianguka jana ana maumivu mengi

- n)** Onyesha matumizi yoyote mawili ya kiwakifishi: koma/kituo **(alama 2)**

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**o) Tumia neno 'Nairobi' kama (alama 2)**  
**a) Nomino**

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**b) Kielezi**

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**p) Tunga sentensi moja kutofautisha maana ya kuku na gugu (alama 2)**

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**q) Onyesha matumizi ya kiambishi -ji- katika sentensi (alama 2)**  
Mwongeleaji stadi anajishaua sana.

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**r) Andika katika usemi wa taarifa (alama 2)**  
“Wageni wangu watafika saa ngapi? Mama aliuliza

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**s) Unda nomino kutokana na kitenzi (alama 1)**  
Safari

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**4. ISIMUJAMII:**

**(alama 10)**

Nipe chai, andazi mbili na egg moja.....

a) Taja sajili inayorejelewa na maneno haya

**(alama 2)**

b) Fafanua sifa nne zinazohusishwa na sajili hiyo

**(alama 8)**





## PREDICTION 2

Jina \_\_\_\_\_  
Nambari \_\_\_\_\_  
Sahihi ya mtahiniwa \_\_\_\_\_  
Tarehe \_\_\_\_\_

### KISWAHILI

#### KARATASI YA 3, FASIHI 1.

MUDA: 2 ½

#### MAAGIZO

- Jibu maswali manne pekee.
- Swali la kwanza ni lazima.
- Maswali hayo mengine matatu yachaguliwaw kutoka sehemu nne zilizobaki
- Usijibu maswali mawili kutoka sehemu moja.

#### SEHEMU A: Riwaya

##### 1. LAZIMA

Assumpta K. Matei: Chozi la heri

“Hili lilimtia ..... uchungu, akajiona kama aliyedhalilishwa na mwanamke.”

- Yaweke maneno haya katika muktadha wake (alama 4)
- Taja suala linalodokezwa katika dondoo hili (alama 1)
- Kwa kutumia hoja kumi na tano, eleza namna suala ulilolitaja hapo juu 1 (b) linalijitokeza (ala. 15)

#### SEHEMU B: Tamthilia

Kigogo (Pauline Kea)

Jibu swali la pili au la tatu

- “Kubali pendekezo letu la kufungwa kwa soko..... huoni hii ni fursa nzuri ya kulipiza kisasi?”
  - Fafanua muktadha wa dondoo hili (alama 4)
  - Kufungwa kwa soko ni ukatili. Mbali na ukatili huu, toa mifano mingine ya ukatili kwenye tamthilia. (alama 9)
  - Msemaji wa maneno haya ni mshauri mbaya. Thibitisha kutoka kwenye dondoo na kwingineko tamthiliani. (alama 7)
- Fafanua mbinu kumi anazotumia Majoka katika kuuendeleza uongozi wake (alama 10)
  - Eleza namna mbinu ya ishara ilivyotumiwa katika tamthilia ya Kigogo (alama 10)

**SEHEMU C: Hadithi Fupi**

**Tumbo Lisiloshiba na Hadithi Nyingine (Alifa Chokocho na Dumu Kayanda)**

**Jibu swali la 4 au la 5**

4. “..... Ningeondoka ..... mapema niende niibe au niue ili niwe mtu wa maana.”
- (a) Eleza muktadha wa maneno haya (alama 4)
- (b) Onyesha vile Kinaya kinavyojitokeza katika dondoo hili (alama 2)
- (c) “Kinaya kimetumika kwingine katika hadithi husika. Thibitisha kwa kutumia hoja tisa (alama 9)
- (d) Eleza umuhimu wa msemaji katika hadithi hii (alama 5)
5. (a) Eleza namna maudhui ya ndoa yalivyosawiriwa katika hadithi ya Masharti ya Kisasa (alama 13)

Kwa kurejelea hadithi ya Shibe inatumaliza, eleza namna maudhui ya ufisadi yanavyojitokeza

(alama 7)

**SEHEMU D: Fasihi Simulizi**

**6. Soma utungo ufuatao kisha ujibu maswali**

Heri ujue mapema

Nasaba yetu haina woga

Woga haumei kwetu, humea kwa kina mamako.

Tulichinja jogoo na fahali ili uwe mwanaume.

Ah! Kisu cha ngariba ni kikali ajabu.

Iwapo utatikisa kichwacho.

Uhamie kwa wasiotahiri,

Ama tukwite njeku.

Mpwangu kumbuka hili,

Wanaume wa mlango wetu

Si waoga wa kisu

Wao hukatwa mchana hadi usiku

Wala hawalalamiki.

Siku nilipokatwa

Nilisimama tisti

Nikacheka ngariba kwa tashtiti

Halikunitoka chozi.

Iwapo utapepesa kope

Wasichana wa kwetu na wa mbali

Wote watakucheka  
Ubaki ukinuna.

Sembe umepokea  
Na supu ya makongoro ukabugia  
Sema unachotaka  
Usije kunitia aibu

Maswali;

- (a) Taja na uthibitisha shughuli zozote za kiuchumi za jamii ya wimbo huu (alama 4)  
(b) Ni nani mwimbaji wa wimbo huu na anawambia nani? (alama 2)  
(c) Huu ni wimbo wa aina gani? Thibitisha (alama 2)  
(d) Mwimbaji wa wimbo huu ana taasubi ya kiume. Thibitisha kauli hii. (alama 2)  
(e) Eleza wajibu wa nyimbo katika jamii (alama 6)  
(f) Ijapokuwa nyimbo ni nzuri, zina ubaya wake. Thibitisha kauli hii (alama 4)

**SEHEMU E: Ushairi (alama 20)**  
**Jibu swali la 7 au la 8**

**7. Soma shairi lifuatalo kisha ujibu maswali**

Kama dau baharini, duniya inavyoyumba,  
Limeshamiri tufani, kila mmoja lakumba,  
Viumbe tu hali gani!

Duniya yatishika, utahisi kama kwamba,  
Vilima vyaporomoka, na kuvurugika myamba,  
Viumbe tu hali gani!

Tufani hilo la kusi, languruma na *kutamba*,  
Linapuliza kwa kasi, hapana kisichoyumba,  
Viumbe tu hali gani!

Mujiwe ni kubwa sana, mfanowe kama nyumba,  
Yazuka na kugongana, wala hatuna la *kwamba*,  
Viumbe tu hali gani!

Mibuyu hata mivule, kama usufi na pamba,  
Inarusha vilevile, *seuze hiyi migomba*  
Viumbe tu hali gani!

Ni kipi kilotuliya, tuwazeni na kudumba,  
Mandovu kiangaliya, yagongana na masimba,  
Fisi wako hali gani!

Hata papa baharini, tufani limewakumba,  
Walioko mikondoni, kila mmoja *asamba*,  
Dagaa wa hali gani!

Mashehe wa mdaduwa, kwa ubani na uvumba,  
Tufani hilo kwa kuwa, kusoze kwake kutamba,  
Itokee afueni!

**(Shairi la ‘Tufani’ la Haji Gora Haji, katika *Tamthilia ya Maisha*, uk 62)**

**Maswali:**

- (a) Taja na ueleze mikondo ya shairi hili (alama 4)
- (b) Eleza dhamira ya shairi hili (alama 2)
- (c) Taja tamathali za usemi zilizotumiwa katika shairi hili. (alama 2)
- (d) Eleza muundo wa shairi hili (alama 4)
- (e) Eleza ujumbe unaojitokeza katika ubeti wa tano. (alama 3)
- (f) Onyesha matumizi ya idhini ya kishairi . (alama 3)
- (g) Eleza maana ya maneno yafuatayo kwa mjibu wa shairi hili (alama 2)
- (i) Mdaduwa :
- (ii) Kutamba :

**8. Soma shairi lifuatalo kisha ujibu maswali**

Daima alfajiri na mapema  
Hunipitia na jembe na kotama  
Katika njia iendayo Kondeni  
Kama walivyofanya babuze zamani;  
Nimuonapo huwa anatabasamu  
Kama mtu aliye na hamu  
Kushika mpini na kutokwa jasho  
Ili kujikimu kupata malisho.

Anapotembea anasikiliza  
Videge vya anga vinavyotumbuiza  
Utadhani huwa vimemngojea  
Kwa usiku kucha kuja kumwimbia  
Pia pepo baridi kumpepea  
Rihi ya maua zikimtetea

Nao umande kumbusu miguuni;

Na miti yote hujipinda migogo  
Kumpapasa, kumtoa matongo;  
Na yeye kundelea kwa furaha  
Kuliko yeyote ninayemjua  
Akichekelea ha ha ha ha ha ha .....

Na mimi kubaki kujiuliza  
Kuna siri gani inayomliwaza?  
Au ni kujua au kutojua?  
Furaha ya mtu ni furaha gani?  
Katika dunia inayomhini?  
Ukali wa jua wamnyima zao  
Soko la dunia lamkaba koo;  
Dini za kudhani zamsonga roho  
Ayalimia matumbo ya waroho.  
Kuna jambo gani linalomridhisha?  
Kama si kujua ni kutojua  
Lait angalijua, laity angalijua!

**Maswali:**

- a) Eleza hali ya mzungumziwa katika shairi hili. (alama 2)
- b) Huku ukitoa mifano, onyesha aina mbili za uhuru wa kishairi uliotumiwa katika shairi hili (ala. 4)
- c) Fafanua aina tatu za taswira ukirejelea ubeti wa pili (alama 3)
- d) Maswali ya balagha katika shairi hili yanasisitiza maudhui yapi? (alama 2)
- e) Kwa kutoa mifano, bainisha vipengele yitatu vya Kimtindo katika shairi hili (alama 3)
- f) Eleza toni ya shairi hili (alama 2)
- g) Bainisha nafsineni katika shairi hili (alama 1)
- h) Eleza muundo wa shairi hili (alama 3)

# PREDICTION 2

NAME ..... INDEX NO .....

SCHOOL..... SIGNATURE .....

DATE .....

**231/1  
BIOLOGY  
PAPER 1  
(THEORY)  
2 HOURS**

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

## INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided.
- All workings **MUST** be clearly shown where necessary.

## FOR EXAMINERS USE ONLY.

Question	Maximum Score	Candidates Score
1 – 28	80	

This paper consists of 7 Printed pages.

Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing

1. Name the reagent used for testing presence of (3 marks)

(a) Starch

.....

(b) Reducing sugars

.....

(c) Vitamin c

TURN OVER

- .....
2. State the processes which occur in each of the following organelles. (2 marks)
- (a) Chloroplast  
.....
- (b) Mitochondrion  
.....
- (c) Ribosomes  
.....
3. A student observed a specimen through a light microscope. He used the objective lens marked X40. If he indicated the magnification of the image as x 400, what was the eye - piece magnification?  
(Show your working). (3 marks)
- .....  
.....  
.....  
.....  
.....
4. State the function of the following in mammalian trachea. (3 marks)
- (a) Rings of cartilage  
.....
- (b) Mucus  
.....
- (c) Cilia  
.....
5. (a) What do you understand by the term biological control? (1 mark)  
.....  
.....
- (b) Explain why all the energy produced by producers does not flow to the tertiary consumers. (2marks)  
.....  
.....  
.....
6. Name any three forces that maintain the transpiration stream (3 marks)  
.....  
.....  
.....
7. Give the form in which the following gases are transported in blood. (3 marks)

(a) Oxygen

.....

(b) Carbon (IV) oxide

.....

(c) Carbon (II) oxide

.....

8. (a) Name the main group of organisms which comprise the Kingdom Monera. ( 1mark)

.....

(b) State any three ways in which the organisms named in 8 (a) above affect human lives. (3marks)

.....

.....

.....

.....

(d) State the main characteristics of Monera which distinguish it from all other kingdoms. (1 mark)

.....

.....

9. State ways in which the xylem tissue is adapted to carry out its function. ( 3marks)

.....

.....

.....

.....

.....

10. Why is it necessary for an athlete to breathe heavily after running? ( 2 marks)

.....

.....

.....

.....

11. State ways in which the following diseases can be prevented

(a) Typhoid and amoebic dysentery (2 marks)

.....

.....

(b) Malaria (2 marks)



.....  
.....

12. What are the three distinguishing features of phylum Arthropoda? (3marks)

.....  
.....  
.....  
.....

13. (a) Name the main product of the dark stage of photosynthesis. ( 1mark)

.....

(b) What is the role of chlorophyll during photosynthesis (2mark)

.....  
.....  
.....

14. Name three mechanisms that prevent self-pollination in flowers that have both male and female parts. (3 marks)

.....  
.....  
.....  
.....

15. State three applications of anaerobic respiration. (3 marks)

.....  
.....  
.....  
.....

16. What is the significance of highly folded inner membrane of a mitochondrion? (2 marks)

.....  
.....  
.....

17. Why is it necessary for blood from the gut to pass through the liver before joining general circulation? (2 marks)

.....  
.....  
.....

18. A person's urine tested positive for reducing sugars.

(a) Name the type of sugar present in the urine. ( 1mark)

.....

(b) Name the gland and the hormone which failed to control the above condition. ( 2marks)

Gland

.....

Hormone

.....

(c) Which disease was the person suffering from? ( 1mark)

.....

19. State two roles played by the process of reproduction. ( 2marks)

.....

.....

.....

20. What is the habitat of the following plants? ( 3marks)

(i) Xerophytes

.....

(ii) Hydrophytes

.....

(iii) Halophytes

.....

21. (a) State ways in which molars are adapted to their functions. ( 2marks)

.....

.....

.....

(b) Name any two dental diseases. (2 marks)

.....

.....

.....

22. How is the sperm cell adapted to carry out its function? (3 marks)

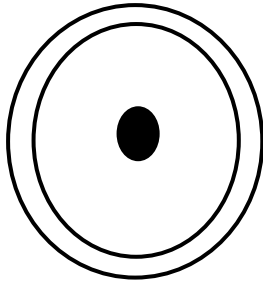
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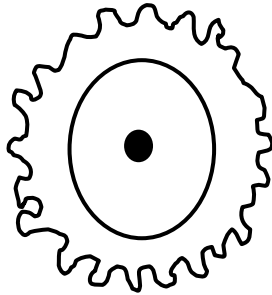
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23. The following are diagrams of two pollen grains.



**K**



**L**

(a) State one observable difference between K and L. (1 mark)

.....  
 .....

(b) State the agent of pollination for each of them. (2 marks)

**K**

.....

**L**

.....

24. How do sunken stomata reduce transpiration? (2 marks)

.....  
 .....

25. Give the classes to which the following animals belong. (3 marks)

(a) Human being

.....

(b) House fly

.....

(c) Spider

.....

26. (a) State one event that occurs in prophase of meiosis I which does not occur in prophase of mitosis. (1 mark)

.....  
 .....

(b) What are the results of the above phenomena? (2 marks)

.....  
.....  
.....

27. Explain why growing grass die a few days when salt is sprinkled on it. **(3marks)**

.....  
.....  
.....  
.....  
.....

## PREDICTION 2

NAME ..... INDEX NO .....  
SCHOOL ..... SIGNATURE .....  
DATE .....

231/2  
BIOLOGY  
PAPER 2  
(THEORY)  
2 HOURS

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

### 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
<b>A</b>	<b>1</b>	<b>8</b>	
	<b>2</b>	<b>8</b>	
	<b>3</b>	<b>8</b>	
	<b>4</b>	<b>8</b>	
	<b>5</b>	<b>8</b>	
<b>B</b>	<b>6</b>	<b>20</b>	
	<b>7</b>	<b>20</b>	
	<b>8</b>	<b>20</b>	
<b>Total score</b>		<b>80</b>	

*This paper consists of 10 Printed pages.*

*Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing*

1. (a) What is meant by the following terms?

(i) Protandry

( 1mark)

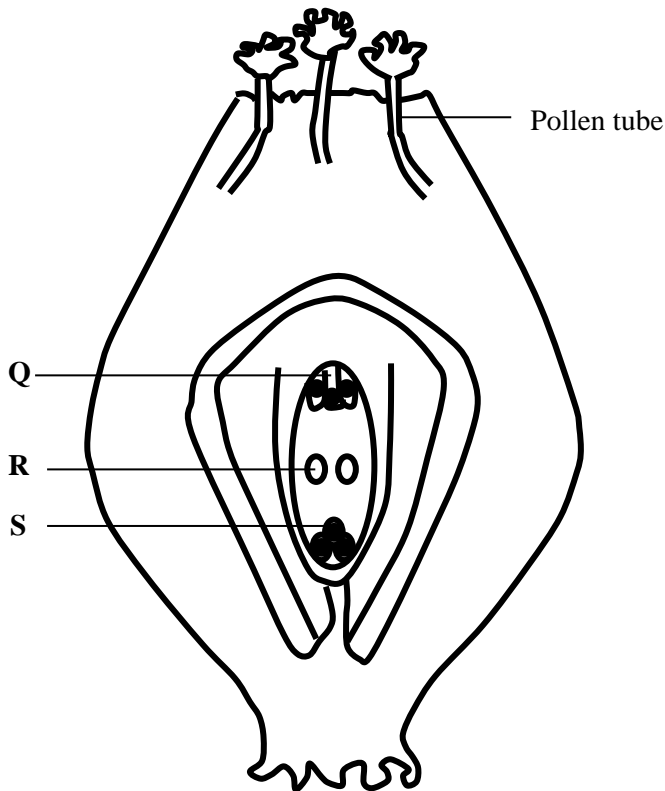
.....  
 .....

(ii) Self sterility

( 1mark)

.....  
 .....

(b) The diagram below shows a stage during fertilization in a plant.



(i) Name the parts labelled Q,R and S

(3 marks)

Q

.....

R

.....

S

.....

(ii) State two functions of the pollen tube

(2 marks)

.....  
 .....

(c) On the diagram label the microphyle.

(1mark)

2. Explain what happens to excess amino acids in the liver of humans. **(3marks)**

.....

.....

.....

.....

.....

(b) Which portions of the human nephron are only found in the cortex? **(3 marks)**

.....

.....

.....

.....

(c) (i) What would happen if a person produced less antidiuretic hormone? **(1 mark)**

.....

.....

(ii) What term is given to the condition described in C (i) above? **(1mark)**

.....

.....

3. (a) (i) What is meant by the term biological control? **(1mark)**

.....

.....

(ii) Give an example of biological control. **(1mark)**

.....

.....

(b) (i) What is eutrophication? **(3marks)**

.....

.....

.....

.....

.....

.....

(ii) What are the effects of eutrophication? **(3 marks)**

.....

.....

.....

.....

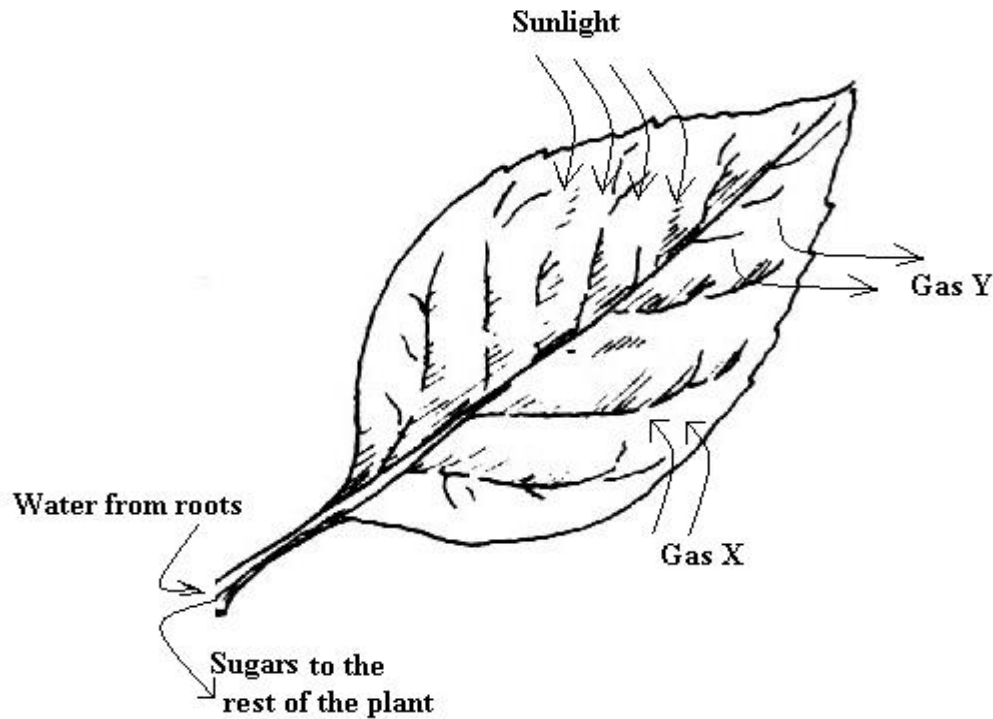
.....

(c) Name a substance that is responsible for acid rain.

(1 mark)

.....  
 .....

4. Leaves are the organs of photosynthesis. The following diagram shows what happens in a plant leaf during photosynthesis.



(a) Give two ways in which leaves are adapted to absorb light.

(2 marks)

.....  
 .....

(b) Name the gases labelled X and Y.

(2 marks)

X

.....

Y

.....

(c) Name the tissue which transport:

(i) Water in to the leaf.

(1 mark)

.....

(ii) Sugars out of the leaf.

(1 mark)

.....



---

(d) Explain why it is an advantage for the plant to store carbohydrates as starch rather than as sugars.

(2marks)

.....

.....

.....

5. Some millet seeds were soaked in water for two days. They were then broken into small pieces and placed on the surface of agar containing starch. After two days it was found that the agar no longer contained starch.

(a) Suggest how the test for starch in the agar was carried out.

(1 mark)

.....

.....

(b) Explain why there was no starch in the agar after two days.

(2marks)

.....

.....

.....

(c) Why was it necessary to soak the seeds?

(1mark)

.....

.....

(d) Why were the millet seeds broken into small pieces?

(1mark)

.....

.....

(e) State the observation that would be made if the seeds had been soaked in boiling water? (1mark)

.....

.....

(f) Suggest a control experiment that would have been suitable.

(2marks)

.....

.....

.....

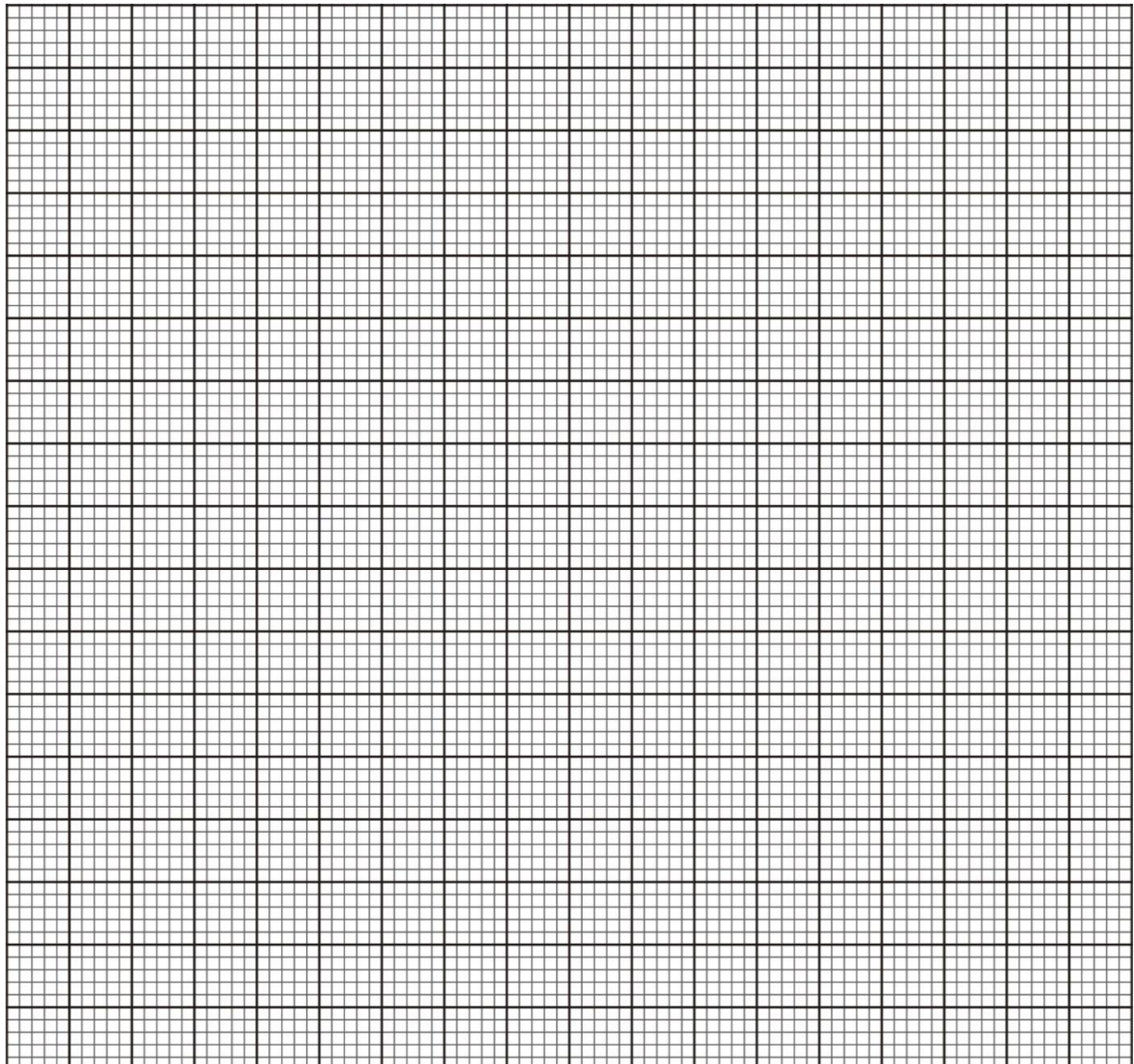
**SECTION B:**

**Answer question 6 (compulsory) and either question 7 or 8 in the spaces provided after question 8**

6. A research was carried to determine the trend of growth of some boys and girls. Their average mass in kilograms was taken separately for a period of 20 years and tabulated as shown in the table below.

Age	Average mass of boys (kg)	Average mass of girls (kg)
0	2.5	2.5
2	11.5	11.5
4	15.0	16.0
6	18.5	19.3
8	22.1	27.1
10	25.1	27.1
12	27.5	30.5
14	37.0	35.5
16	44.0	44.0
18	46.9	52.0
20	48.5	55

- (a) On the same axis draw a graph of the average mass of the girls and boys against age. (7marks)



(b) From the graph , determine the;-

(i) Mass of boys at the age of 11 years.

(1 mark)

.....  
.....  
.....

(ii) Growth rate of girls between ages 13 and 15.

( 3 marks)

.....  
.....  
.....  
.....  
.....

(c) Account for the change in the mass of girls during the age stated in (ii) above.

(2 marks)

.....  
.....  
.....  
.....

(d) Explain the trend observed in the curves for both boys and girls.

( 2 marks)

.....  
.....  
.....  
.....

(e) Why do girls above 10 years require in take of food that is richer in iron than boys of the same age?

(2 marks)

.....  
.....  
.....

(f) Part from using average mass to estimate growth in human beings, name two other parameters that can be used.

(2 marks)

.....  
.....

7. Describe how the various parts of the human digestive system are adapted to their functions. (20 marks)

8. (a) State the causes of air pollution.

(5 marks)

(b) State how air pollutants affect organisms hence state how air pollution should be controlled.

(15 marks)







## PREDICTION 2

231/3

**BIOLOGY**

**PAPER 3**

**(PRACTICAL)**

**TIME: 1¼ HRS**

### **CONFIDENTIAL INSTRUCTIONS**

These instructions are to enable the Head of Institution and the teacher in charge of Biology to make adequate preparations for 231/3 Biology Practical.

**No one else** should have access to this information either directly or indirectly.

#### **Each candidate requires the following**

- 20mls of solution L
- 4 test tubes in a test tube rack.
- Benedict's solution
- Iodine solution
- 1% copper sulphate
- Sodium hydroxide (10%)
- DCPIP
- Source of heat/water bath
- Test tube holder
- Visking tubing 8 cm long
- Thread/string 2 pieces 10cm long each.
- 50 mls beaker
- Distilled water
- 10mls measuring cylinder

**NB** Solution L contains glucose and ascorbic acid dissolved in water

# PREDICTION 2

NAME ..... INDEX NO .....

SCHOOL ..... SIGNATURE .....

DATE .....

231/3  
BIOLOGY  
PAPER 3  
(PRACTICAL)  
1<sup>3</sup>/<sub>4</sub> HOURS

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

## INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided in the question paper.
- You are **NOT** allowed to start working with the apparatus for the first 15 minutes of the 1<sup>3</sup>/<sub>4</sub> hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.
- All workings **MUST** be clearly shown where necessary.
- Mathematical tables and silent electronic calculators may be used.

**For Examiners use only.**

Question	Maximum Score	Candidates Score
1	12	
2	14	
3	14	
<b>TOTAL SCORE</b>	<b>40</b>	

*This paper consists of 5 Printed pages.*

*Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing*

1. (a) You are provided with a solution L. Using the reagents provided; determine the food compounds in L. Fill in the table below.

FOOD COMPOUND	PROCEDURE	OBSERVATION	CONCLUSION

TURN OVER




(b) Place 10mls of solution L in a visking tubing. Tie both ends and place it in 50mls of distilled water contained in a beaker. Leave the set up for 20 minutes and make observations.

(i) Observations. (1mark)

.....  
 .....

(ii) Account for the observation in b (i) above. (2marks)

.....  
 .....  
 .....

(iii) Give the equivalent of a visking in the bodies of living organisms. (1mark)

.....  
 .....

2. Study the photomicrograph of the longitudinal section of a maize fruit below and answer the questions that follow.



(a) (i) Name the parts labelled A, B, C and D.

**(4marks)**

A

.....

B

.....

C

.....

D

.....

(ii) Give the role played by A and D.

**(2 mark)**

A

.....

.....

D

.....

.....

(b) (i) Name the type of germination exhibited by maize grain.

**( 1 mark)**

.....

.....

(ii) Place the organisms from where the photomicrograph was obtained into its

Kingdom

Division

Class

(3marks)

(iii) State three characteristics of members of the class identified in b (ii) above

(3marks)

.....

.....

.....

.....

(c) Give one reason why the maize grain is classified as a fruit.

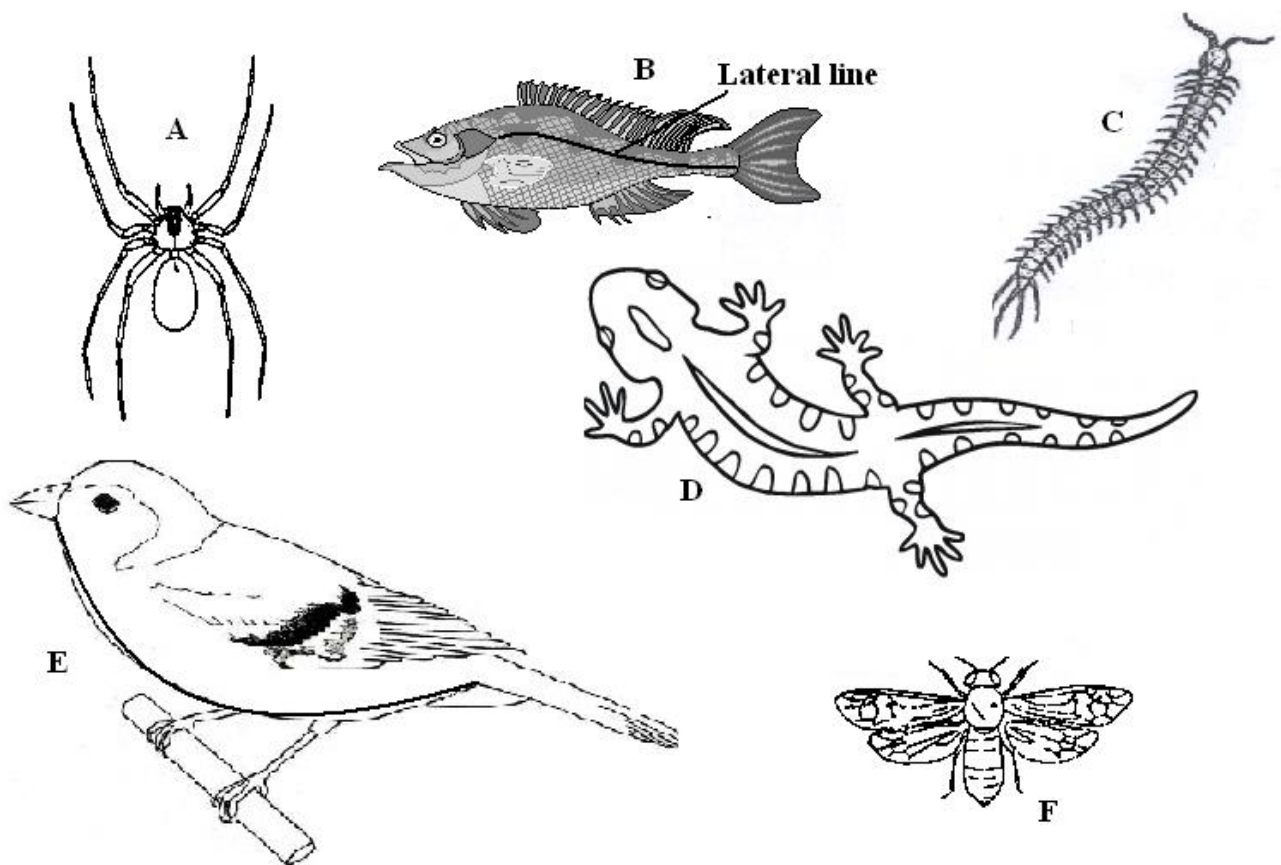
(1mark)

.....

.....

.....

3. Study the organisms drawn below and answer the questions that follow.



(a) Use the dichotomous key below to identify the class the organisms belong to.

(12 marks)

1. (a) Phylum Chordata ..... go to 2
- (b) Phylum arthropoda ..... go to 3
2. (a) Has scales on the body ..... go to 4
- (b) Has no scales on the body ..... Mammalia

3. (a) Has cephalothorax ..... Arachnida  
 (b) Has no cephalothorax ..... go to 5
4. (a) Has fins ..... Pisces  
 (b) Has no fins ..... go to 7
5. (a) Has three pairs of legs ..... Insecta  
 (b) Has more than three pairs of legs ..... go to 6
6. (a) Two pairs of legs per segment ..... Diplopoda  
 (b) One pairs of legs per segment ..... Chilopoda
7. (a) Has feathers ..... Aves  
 (b) Has no feathers ..... go to 8
8. (a) Has a tail ..... Reptilia  
 (b) Has no tail ..... Amphibia

Specimen	Step followed	Identity
A		
B		
C		
D		
E		
F		

- (b) If the actual length from the tip of the mouth to the tip of the tail of the specimen B is 100mm, calculate the magnification. (2marks)

.....

.....

.....

.....

## PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... SIGNATURE .....

233/1

**CHEMISTRY**

**(THEORY)**

**PAPER 1**

**TIME: 2 HOURS.**

*Kenya Certificate of Secondary Education*

### INSTRUCTIONS TO CANDIDATES

- a) Write your **NAME** and **INDEX NUMBER** in the space provided above
- b) Sign and write the date of examination in the spaces provided above
- c) Answer **ALL** the questions in the spaces provided
- d) **ALL** working must be clearly shown where necessary.
- e) Mathematical tables and silent electronic calculators may be used.

### FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1 –31	80	
Total score	80	

*This paper consists of 9 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

1. An element K has atomic number 20 while element M has atomic number 8.

a) Write the electronic configuration for K and M

K

.....

**1mark**

M

.....

**1mark**

b) Write the symbol of the most stable ion of K and M

K

..... **1mark**

M

..... **1mark**

2. Molten Lead (II) bromide is electrolyzed using carbon electrodes. Write the half equations of the reactions that occur at the anode and the cathode.

a) Anode

..... **1mark**

b) Cathode

..... **1mark**

3. Explain why the conductivity of metals decreases with increase in temperature.

**2marks**

.....  
 .....  
 .....

4. Three metal oxides XO, YO, and ZO are heated with powdered metal Y. Hot powdered Y will remove oxygen from XO but not from ZO. Arrange the metals in order of reactivity, starting with the most reactive.

**1mark**

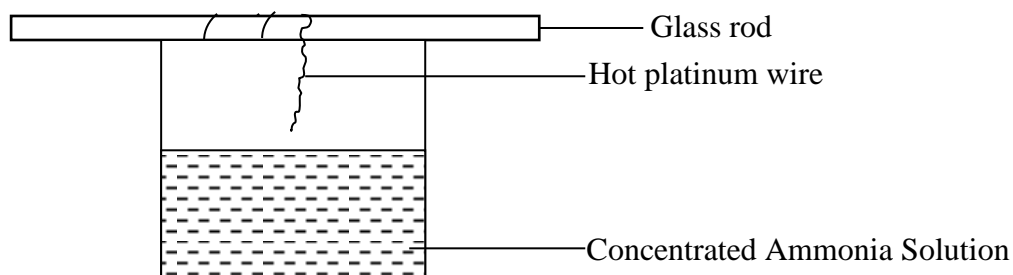
.....  
 .....

5. Some sodium chloride was found to be contaminated with copper (II) oxide. Describe how a sample of sodium chloride can be separated from the mixture.

**2marks**

.....  
 .....  
 .....

6. Hot platinum wire was lowered into a flask containing concentrated ammonia solution as shown below.

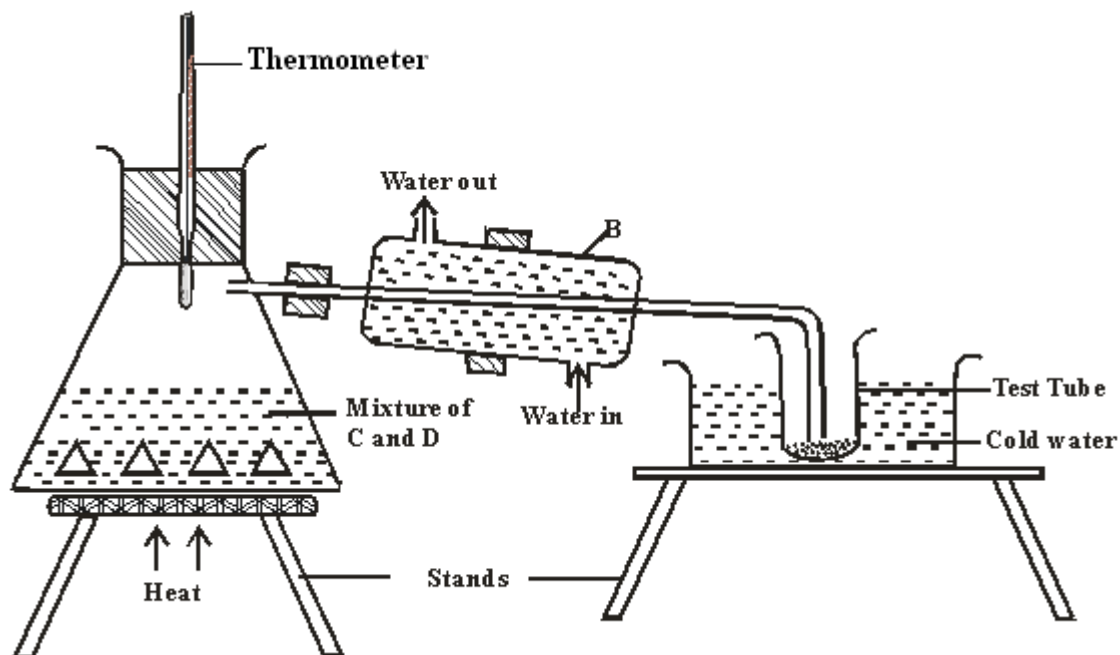


State and explain the observations made.

**3marks**

.....  
 .....  
 .....  
 .....

7. The set up below represents the apparatus that may be used to separate a mixture of two miscible liquids C and D whose boiling points are  $80^{\circ}\text{C}$  and  $110^{\circ}\text{C}$ .



- a) Name B

1mark

- b) What is the purpose of the thermometer

1mark

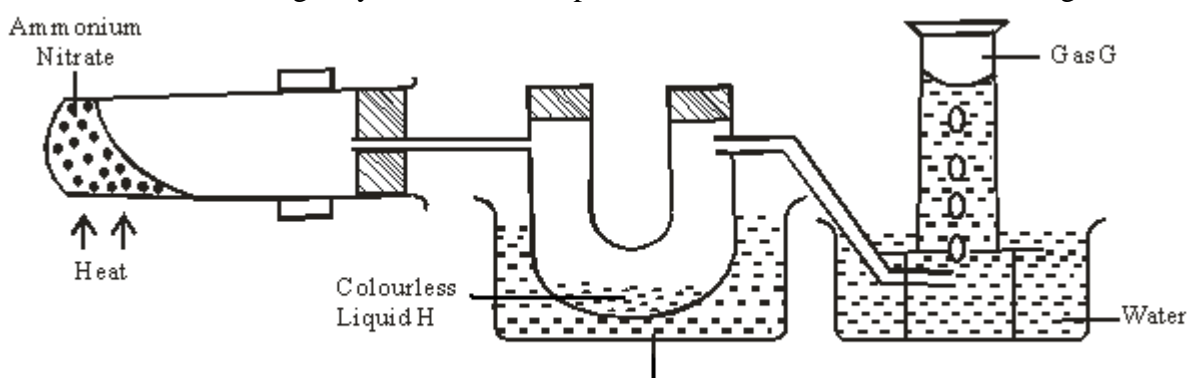
- c) Which liquid was collected in the test tube?

1mark

8. Draw a dot (.) and cross (x) diagram to show bonding in carbon (II) oxide.

2marks

9. Ammonium nitrate was gently heated and the products collected as shown in the diagram.



a) Identify:

i. Colourless liquid H

..... **1mark**

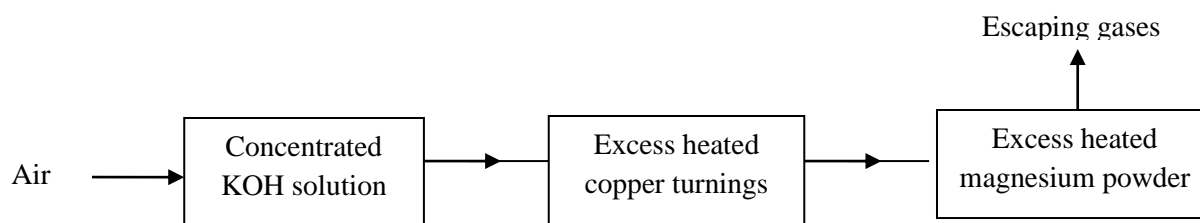
ii. Gas G

..... **1mark**

b) Describe one physical and one chemical test that can be used to identify gas G. **2marks**

.....  
 .....  
 .....  
 .....

10. Air was passed through several reagents as shown in the flow chart below.



a) What is the purpose of concentrated potassium hydroxide solution? **1mark**

.....  
 .....

b) Write an equation for the reaction which takes place in the chamber with magnesium powder. **1mark**

.....  
 .....

c) Name one gas which escapes from the chamber containing magnesium powder.

.....

Give a reason for your answer **2marks**

.....  
 .....

11. Name the following substances.

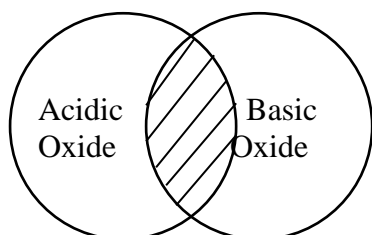
a)  $\text{CH}_2\text{CHCH}_2\text{CH}_3$  **1mark**

.....  
 .....

b)  $\text{CH}_3\text{CHCHCH}_2\text{CH}_3$  **1mark**



12. The diagram below shows the acidic and basic oxides fit into the general family of oxides.



a) State the name given to the type of oxide that would be placed in the shaded area. **1mark**

b) Give the name of any oxide that would be placed in the shaded area. **1mark**

13. Study the information in the table below and answer the questions that follow. The letters do not represent the actual symbols of the elements.

Substance	Solubility in water	Electrical conductivity	
		Solid	Molten
A	Insoluble	Good	Good
B	Soluble	Poor	Good
C	Insoluble	Poor	Poor

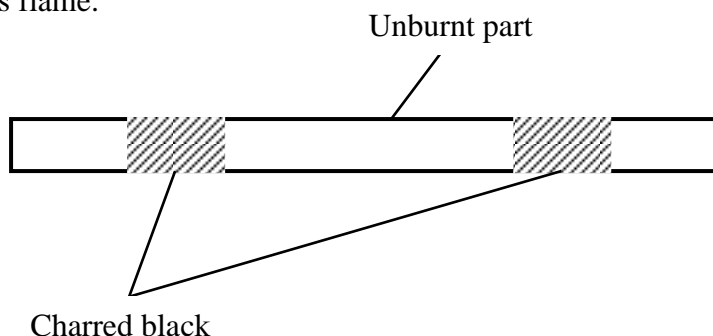
i) Which of the substances is highly likely to be sodium chloride? Explain **2marks**

ii) What type of bond exists in substance A? **1mark**

iii) State a possible structure in substance C? **1mark**

14. Laboratory results showed the composition of a compound to be 58.81% barium, 13.72%, sulphur and 27.47% Oxygen. Calculate the empirical formula of the compound. Ba=137, S = 32, O = 16. **2marks**

15. The diagram below shows a wooden splint that was placed horizontally across the middle part of a non-luminous flame.



- a) Explain the observation made

**2marks**

.....  
.....  
.....

- b) Explain why non-luminous flame is preferred for heating than the luminous flame.

**2marks**

.....  
.....  
.....

16.  $200\text{cm}^3$  of oxygen gas took 60 seconds to diffuse through a porous plug. Determine the time taken by  $300\text{cm}^3$  of sulphur (IV) oxide to diffuse through the same plug under the same conditions.  
(O=16, S = 32)

**3marks**

17. Explain why?

- i) Both methane and diamond are covalently bonded. Methane is a gas but diamond is a solid with very high melting point.

**2marks**

.....  
.....  
.....

ii) Ammonia is dissolved in water using an inverted funnel.

**1mark**

.....  
.....

18. Explain giving reasons why?

a) Sulphuric acid is not used with marble in the preparation of carbon (IV) oxide

**2marks**

.....  
.....  
.....

b) Water cannot be used to distinguish oil fire.

**1mark**

.....  
.....

19. A gas occupies  $4\text{dm}^3$  at  $-23^\circ\text{C}$  and 152 mmHg. At what pressure will its volume be halved, if the temperature then is  $227^\circ\text{C}$ ?

**2marks**

.....  
.....  
.....  
.....

20. a) Sodium, Magnesium and Aluminium are elements in the periodic table. Explain why aluminium has a higher melting and boiling point than sodium and magnesium.

**2marks**

.....  
.....  
.....

b) The ionization energy of an atom is strongly influenced by three atomic parameters. State two of these parameters.

**2marks**

.....  
.....  
.....

21.  $15\text{cm}^3$  of a solution containing  $2.88\text{g}/\text{dm}^3$  of an alkali  $\text{XOH}$  completely reacts with  $20\text{cm}^3$  of  $0.045\text{M}$  sulphuric acid. Calculate the molarity and relative atomic mass of X present in the alkali.

**3marks**

22. Describe how a solid sample of calcium sulphate can be prepared using the following reagents; dilute nitric (v) acid, dilute sulphuric (vi) acid and solid calcium carbonate

**4marks**

.....  
.....  
.....  
.....

23. Crude oil is the main source of organic compounds such as hydrocarbons. The hydrocarbons in the crude oil have to be separated.

a) Name two important hydrocarbons obtained from crude oil. **2marks**

b) Give the uses of the two hydrocarbons named in (a) above. **2marks**

24. A hydrocarbon Q was found to decolourise potassium manganate (vii) solution. When two moles of Q were burnt completely six moles of carbon (iv) oxide and six moles of water were formed.

a) Write the structural formula of Q. **1mark**

b) Name the homologous series to which Q belongs **1mark**

25. Dilute sulphuric acid was added to a compound X, of magnesium. The solid reacted with the acid to form a colourless solution, Y and a colourless gas Z which formed a white precipitate when bubbled through lime water.

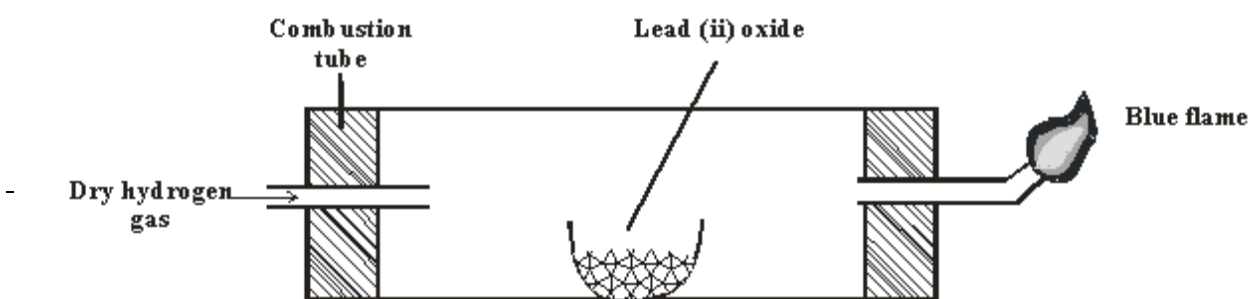
Name:-

(i) Compound X **1mark**

(ii) Solution Y **1mark**

(iii) Colourless gas Z **1mark**

26. When dry hydrogen gas passed over heated Lead (II) oxide in combustion tube, a grey solid was formed.



- a) Identify the grey solid. **1mark**  
.....
- b) Write the equation of the reaction taking place in the combustion tube. **1mark**  
.....  
.....
- c) Write the equation involving the blue flame. **2marks**  
.....  
.....
27. What do (C F C' S) mean? **1mark**  
.....  
.....  
.....
- 28.
- a) What is meant by the term allotropy? **1mark**  
.....  
.....
- b) Explain in terms of structure and bonding why graphite is soft with greasy feeling. **2marks**  
.....  
.....  
.....  
.....

# PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... SIGNATURE .....

233/2

**CHEMISTRY**

**PAPER 2**

**(THEORY)**

**TIME: 2 HOURS.**

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Sign and write the date of exam in the spaces provided above.
- Answer **ALL** the questions in the spaces provided.
- Mathematical tables and silent electronic calculators may be used.
- All working **MUST** be clearly shown where necessary.

## FOR EXAMINER'S USE ONLY

Questions	Maximum score	Candidates score
1	13	
2	11	
3	13	
4	10	
5	10	
6	12	
7	11	
<b>Total score</b>	<b>80</b>	

*This paper consists of 10 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

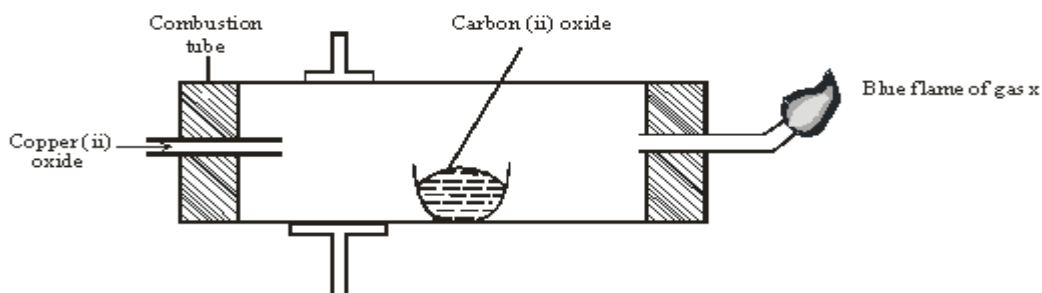
1. The grid below shows part of the periodic table. Study it and answer the questions that follow. The letters do not represent the true symbols of the elements.

					A		
I	B		C		D		E
F	G						H

- a) Which element forms an ion of charge - 2? Explain your answer **2marks**
- .....
- .....
- .....
- b) What is the nature of the oxide formed by element C? **1mark**
- .....
- c) How does the reactivity of H compare with that of E? Explain. **2marks**
- .....
- .....
- .....
- d) Write the chemical equation for the reaction between B and chlorine? **1mark**
- .....
- .....
- e) Explain how the atomic radii of the following compare; **2marks**
- i) F and G
- .....
- .....
- ii) B and G
- .....
- .....
- f) The oxides of B and D are separately dissolved in water. State the effect of each product on litmus paper. **2marks**
- .....
- .....
- .....

- g)  $20\text{cm}^3$  of a solution of a hydroxide of I completely neutralizes  $17.5\text{cm}^3$  of  $0.5\text{M}$  sulphuric (VI) acid. Calculate the concentration in moles/litre of solution of the hydroxide of I **3marks**

2. The diagram below shows an experiment set-up to investigate a property of carbon (ii) oxide. Study it and answer the questions that follow.



- a) Name one condition that is missing in the set up that must be present if the experiment to proceed. **1mark**  
 .....  
 .....
- b) If the experiment was carried out properly. What observation would be made in the combustion tube? **1mark**  
 .....  
 .....
- c) Give an equation for the reaction that occurs in the combustion tube. **1 ½ mark**  
 .....  
 .....
- d) Give an equation for the reaction that takes place as gas x burns. **1 ½ marks**  
 .....  
 .....
- e) Why is it necessary to burn gas x? **1mk**  
 .....  
 .....
- f) Name the reducing and oxidizing agent. **2marks**  
 (i) Reducing agent  
 .....  
 (ii) Oxidising agent  
 .....



g) Identify any other substance that would have the same effect on copper (ii) oxide as carbon (ii) oxide.

**1mark**

.....  
 .....

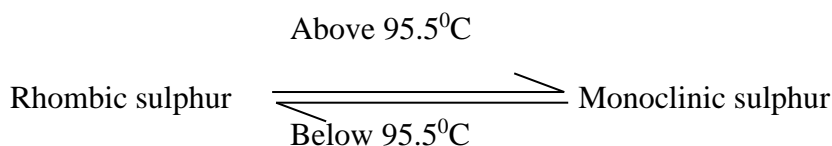
h) What would happen if copper (ii) oxide was replaced with sodium oxide? Explain **2mark**

.....  
 .....

3. a) Sulphur occurs naturally in two different forms called allotropes;  
 (i) What are allotropes? **1mark**

.....

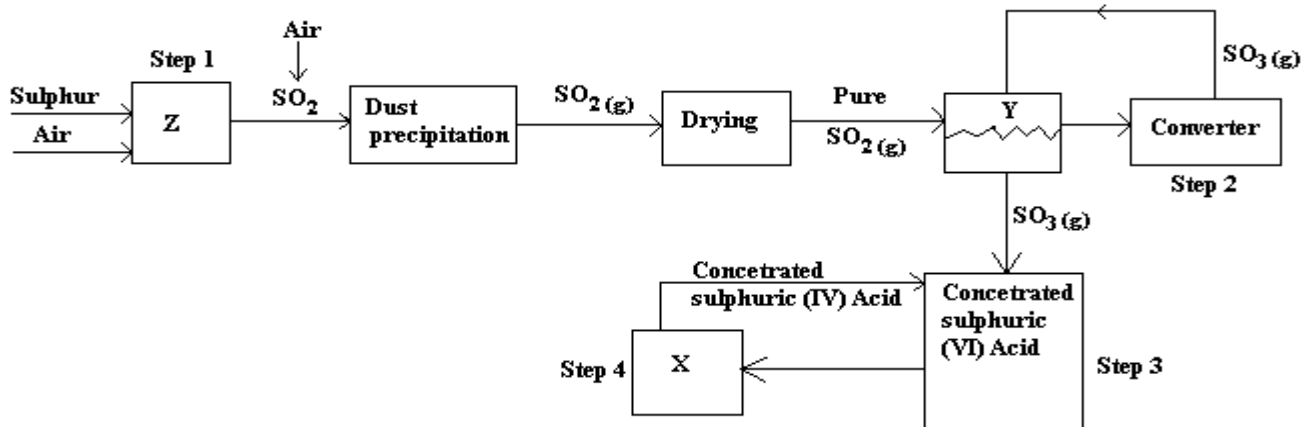
(ii) The two allotropes of sulphur are stable at different temperatures, as shown in the equation below.



Give a name to the temperature  $95.5^{\circ}\text{C}$  **1mark**

.....

b) Below is a flow chart diagram for the contact process for the manufacture of sulphuric (VI) acid.



(i) Give the name of chambers labeled X **1 1/2 mark**

.....

Y

.....

Z

.....

(ii) State the three conditions in the converter. **1 1/2 mark**

.....  
 .....

(iii) Explain why gases are passed through ;

**2marks**

I – The dust precipitator and drying power

.....

.....

II- The chamber labeled Y

.....

.....

(iv) Write the balanced equations for the reactions in;

**3marks**

Step 2:

.....

Step 3:

.....

Step 4:

.....

c) Calculate the volume of sulphur (VI) oxide gas in litres that would be required to produce 178kg of Oleum in step 3. (Molar gas volume at s.t.p.=22.4l, H=1, O=16, S=32)

**3marks**

.....

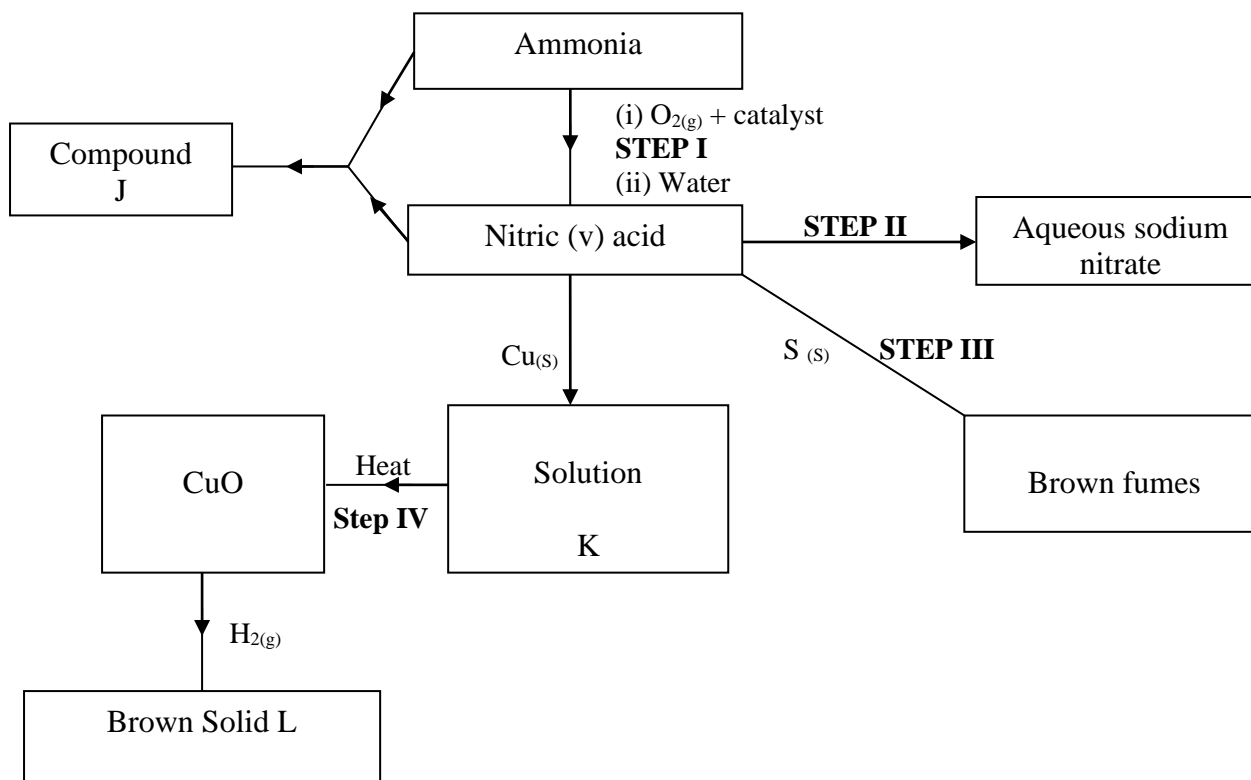
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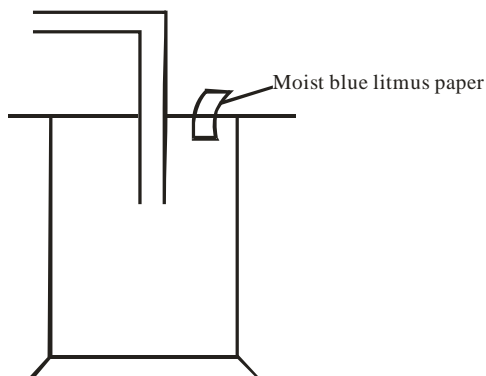
4. a) The scheme below shows various reactions starting with ammonia. Study it and answer the questions that follow.



- (i) List the raw materials used in the manufacturer of ammonia gas. **1mark**  
.....
- (ii) What catalyst is used in step I? **1mark**  
.....
- (iii) Write an equation for the reaction that occurs between ammonia and oxygen gas in the presence of a catalyst. **1mark**  
.....
- (iv) Identify the process in step II? **1mark**  
.....
- (v) Using an appropriate equation, explain how the reaction in step III occurs **(1 mark)**  
.....
- (vi) What should be added to solution K to form solid L? **(1 mark)**  
.....
- (vi)
- (a) I. Write the formula of compound J.  
.....
- II. Calculate the mass of compound J that would contain 14g of nitrogen. (N=14, O=16, H= 1) **(2marks)**

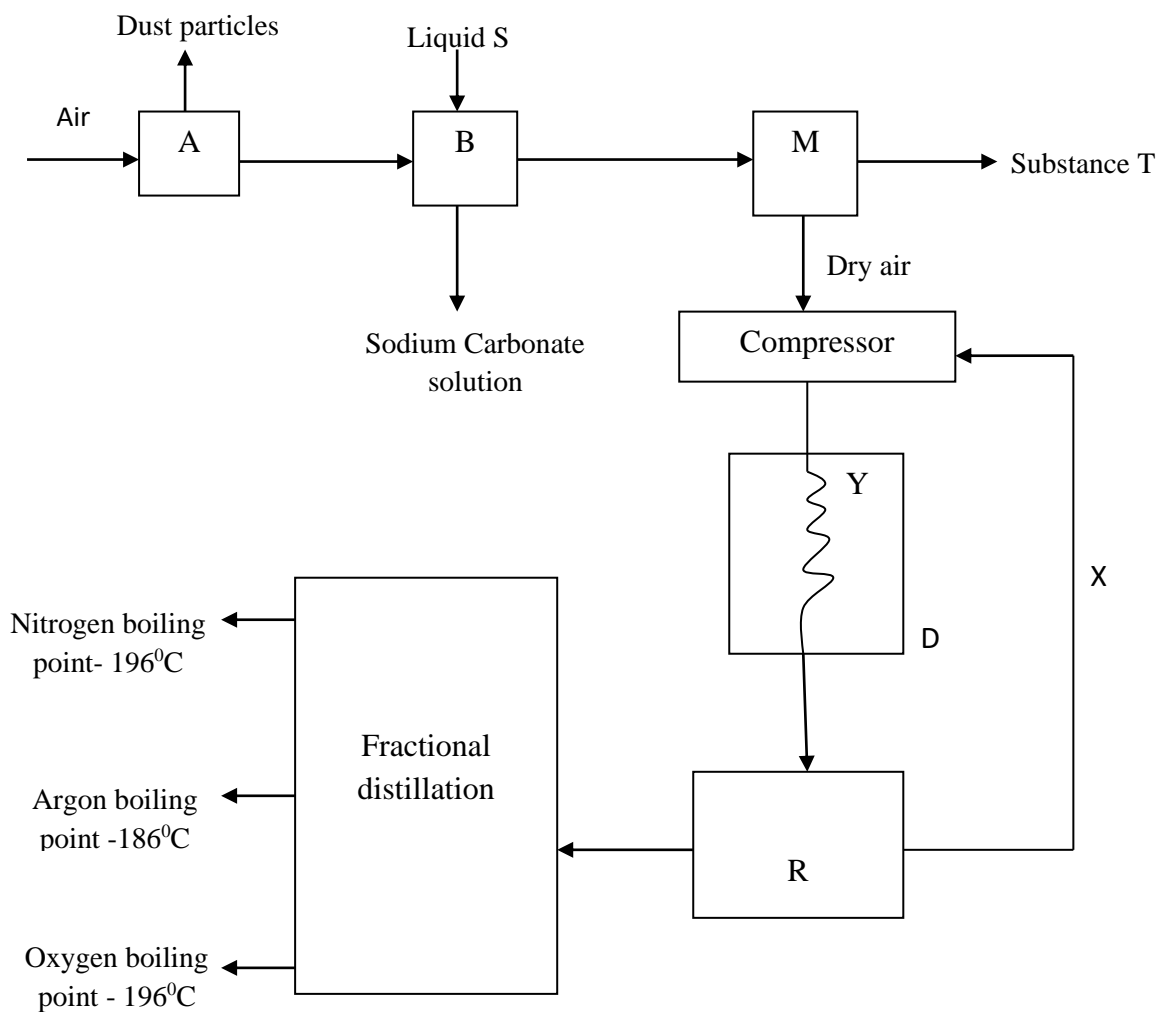
- b) Explain the advantage of using ammonium phosphate fertilizer over the other nitrogenous fertilizers. **(1mark)**  
.....  
.....

5. Dry chlorine was collected using the set up below.



- a) Name a suitable drying agent for chlorine gas? **1mark**  
.....  
.....
- b) State one property of chlorine gas which facilitates this method of collection. **1mark**  
.....  
.....
- c) State the observations on the moist blue litmus paper. **2marks**  
.....  
.....  
.....
- d) Chlorine gas was bubbled through distilled water. With aid of an equation show the formation of chlorine water. **1mark**  
.....  
.....  
.....
- e) Write the formula of the compounds formed when chlorine gas reacts with warm dry phosphorous. **2marks**  
.....  
.....  
.....
- f) Chlorine gas is mixed with moist hydrogen sulphide gas, state and explain the observations **2marks**  
.....  
.....  
.....
- g) Give one use of chlorine gas. **1mark**  
.....  
.....

6. Fractional distillation of air is used in the industrial manufacture of oxygen. The diagram below shows the process.



a) What processes are taking place in chamber A,B,M and D

2marks

A

.....

B

.....

M

.....

D

.....

b) Name;

(i) Liquid S

.....

(ii) Substance T

.....

c) Explain why part Y in chamber D is curved?

**1mark**

.....

.....

d) Give two industrial uses of oxygen gas?

**2marks**

.....

.....

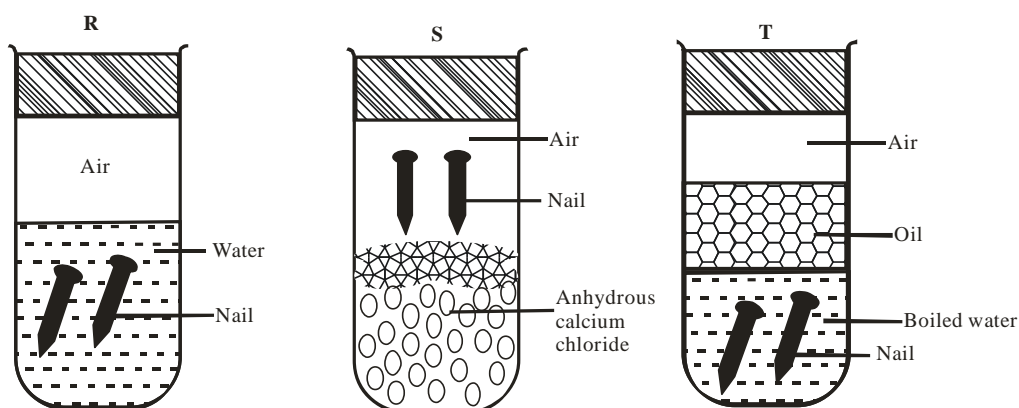
e) In the laboratory preparation of oxygen, manganese (iv) oxide and hydrogen peroxide are used. Write an equation to show how oxygen gas is formed.

**1mark**

.....

.....

f) An investigation was carried out using the set-up below. Study it and answer the questions that follow.



(i) State and explain what will happen in the three test-tubes R, S and T after seven days.

**3marks**

.....

.....

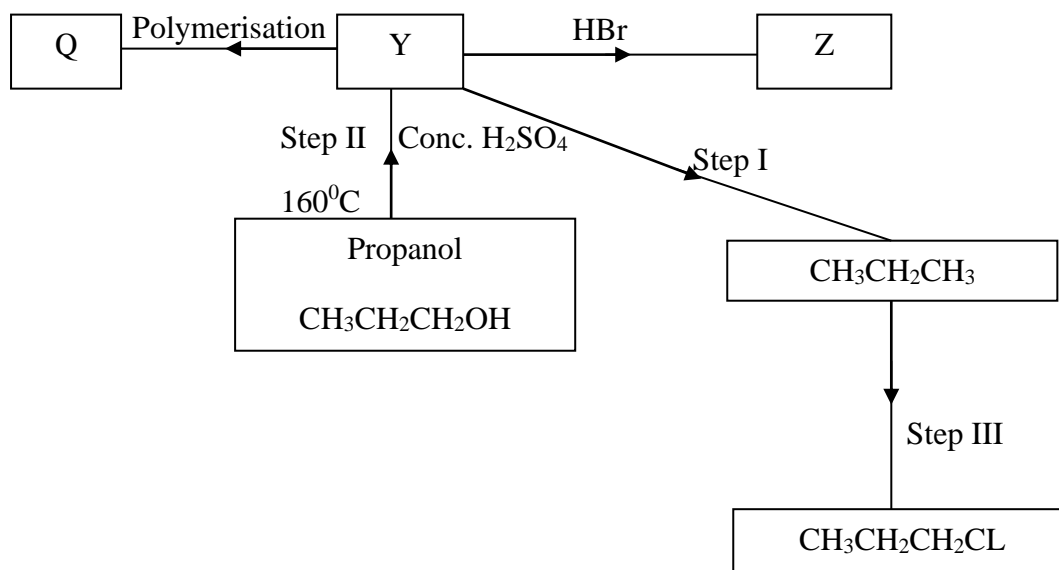
.....

(ii) Give one reason why some metals are electroplated.

**1mark**

.....

7. Below is a scheme of some reactions of propanol. Study it and answer the questions that follow.



- (a) State the reagents and conditions required to effect step I **3marks**  
.....  
.....  
.....  
.....
- (b) Draw the structural formulae and name product Z. **1mark**  
.....  
.....  
.....
- (c) Name product Q **1mark**  
.....
- (d) Explain how product Y can be distinguished from the product formed after step I has taken place. **2marks**  
.....  
.....  
.....
- (e) What name is given to the process in Step II and step III **2marks**  
Step II  
.....  
.....  
Step III  
.....  
.....
- (f) (i) Define the term hydrocarbon **1mark**  
.....  
.....
- (ii) Draw the structure of 1, 2 – dibromopropane **1mark**

## PREDICTION 2

233/3  
CHEMISTRY  
(PRACTICAL)  
PAPER 3

---

### CONFIDENTIAL

#### Per Student

1. Solution A (100ml)
2. Solution B (100ml)
3. Phenolphthalein indicator
4. 3 conical flasks
5. Funnel
6. Burette
7. Pipette
8. Clamp
9. Stand
10. CBI (g) –  $\text{NaHCO}_3(\text{s})$
11. Clean spatula
12. Test- tubes (5)
13. Litmus papers ( 2 blue and 2 red)
14. Distilled water
15. Solid Q – 1g  $(\text{NH}_4)_2 \text{SO}_4 \cdot \text{FeSO}_4 \cdot 6\text{H}_2\text{O}$  and NaCl (ration 1:1)
16. 1 boiling tube

#### **Access to;**

17. 2M ammonia solution
  18. 2M Sodium hydroxide solution
  19. Source of heat
  20. Silver nitrate solution (0.05M)
  21. Dilute nitric acid (0.1M)
  22. Dilute hydrochloric acid (0.1M)
  23. Dilute Barium nitrate solution (0.1M)
  24. Conc. Nitric acid in dropper bottles
  25. White tile
  26. Test tube holder
- Solution A is prepared by dissolving 6.3g of  $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$  in  $400\text{cm}^3$  of water and topped up to one litre of solution.
  - Solution B is prepared by dissolving 4g of Sodium hydroxide in  $400\text{cm}^3$  of water and topped up to one litre of solution.



## PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... SIGNATURE .....

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

*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	8	
3	15	
<b>Total score</b>	40	

*This paper consists of 6 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

1. Solution A is prepared by dissolving 6.3g of the organic acid  $\text{H}_2\text{C}_2\text{O}_4 \cdot n\text{H}_2\text{O}$  in water to make a litre of the solution.  
Solution B: 0.1M NaOH solution  
Phenolphthalein indicator  
Clamp and stand  
Burette and pipette.

Turn over

You are required to determine the value of  $n$  in the organic acid  $\text{H}_2\text{C}_2\text{O}_4 \cdot n\text{H}_2\text{O}$

**Procedure.**

Fill the burette with solution A and adjust the volume to zero mark.

Add 2 to 3 drops of phenolphthalein indicator and titrate solution A against solution B until the colour just permanently changes. Record your results in the table below. Repeat the procedure two more times to obtain concordant results.

a)

<b>Titration</b>	<b>1</b>	<b>2</b>	<b>3</b>
Final burette reading ( $\text{cm}^3$ )			
Initial burette reading ( $\text{cm}^3$ )			
Volume of solution A used ( $\text{cm}^3$ )			

**4marks**

**1mark**

b) Calculate the average volume of solution A used.

**2marks**

c) Calculate the moles of sodium hydroxide in the volume of solution B used.

**2marks**

d) Given that solution B - Sodium hydroxide and solution A organic acid react in the ratio of 2:1, calculate the number of moles of the organic acid –solution A used?

e) Calculate the moles of organic acid solution A used per litre of solution

**2marks**

f) Calculate the relative formula masses of the organic acid solution A

**3marks**

g) Calculate the value of n in  $\text{H}_2\text{C}_2\text{O}_4 \cdot n\text{H}_2\text{O}$  (H=1, C=12, O=16)

**3marks**

2. You are provided with CBI. Carry out the test below. Write your observation and inferences in the spaces provided.

a) Using a clean spatula, heat about one third of the solid CBI in a non- luminous Bunsen burner flame.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

- b) Put a half spatula endful of CBI in a test tube. Heat gently and then strongly. Test for any gas produced using litmus papers.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

- c) Put 2cm<sup>3</sup> of dilute hydrochloric acid into a test tube. Add ¼ endful of CBI into the test tube. Test for any gas procedure.

Observation	Inferences
<b>2marks</b>	<b>2marks</b>

3. You are provided with solid Q, carry out the test below. Record your observations and inferences in the table. Identify any gas (es) evolved.

Place all the solid Q provided into boiling tube and add distilled water until the tube is ¼ full. Divide it into five portions.

- a) To the 1<sup>st</sup> portion add ammonia solution drop wise until excess.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

- b) (i) To the 2<sup>nd</sup> portion add sodium hydroxide solution dropwise until in excess. Keep the resulting mixture for the next test.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

- ii) Warm the preserved mixture from b (i) above

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

- c) i) To the 3<sup>rd</sup> portion add silver nitrate solution. Preserve the mixture for the next test.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

ii) To the preserved mixture in c (i) above add diluted nitric acid.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

d) To the 4<sup>th</sup> portion add dilute Barium nitrate solution followed by dilute nitric acid.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

e) To the 5<sup>th</sup> portion add 2-3 drops of conc. Nitric acid.

Warm the mixture and allow to cool. Add sodium hydroxide solution dropwise until in excess.

Observation	Inferences
<b>1mark</b>	<b>1mark</b>

## PREDICTION 2

NAME: .....CLASS:.....ADM NO:.....

SIGNATURE:.....INDEX NO:.....

DATE.....

232/1  
Physics  
Paper 1

**Kenya Certificate of Secondary Education (KCSE)  
Physics Paper 1**

**Instructions to candidates**

- This paper consists of two sections *A* and *B*.
- Answer **all** the questions in the two sections in the spaces provided after each question
- All working **must** be clearly shown.
- Electronic calculators and Mathematical tables may be used.
- All numerical answers **should be expressed** in the **decimal** notations.

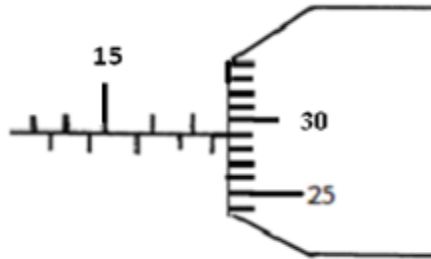
**For Examiner use only**

SECTION	QUESTION	MAX MARKS	CANDIDATE'S SCORE
A	1 – 11	25	
B	12	08	
	13	07	
	14	10	
	15	06	
	16	09	
	17	07	
	18	08	
<b>TOTAL</b>		<b>80</b>	

*This paper consists of 14 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.*

**Section A (25Marks)**

1. The diagram below shows a micrometer screw gauge. What is the reading in SI units? (2 marks)



2. Apart from friction, name another factor that reduces efficiency in machines. (1 mark)
3. Diffusion in gases is faster than in liquids; state two reasons why this is so. (2 marks)
4. A tube of radius 9 mm has a constriction of diameter 10mm. Water flows in the tube at  $3\text{ms}^{-1}$ . Determine the velocity of water in the constriction. (3 marks)



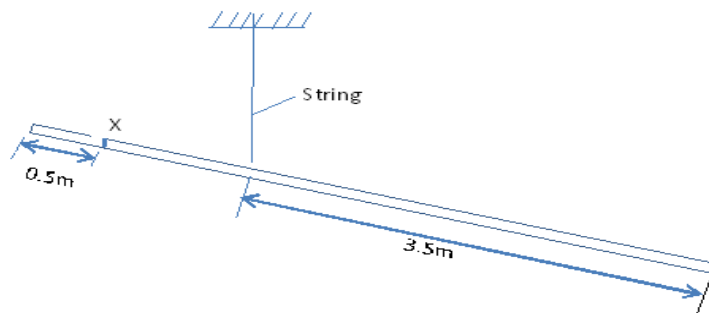
5. (a) A student obtained ice at  $0^{\circ}\text{C}$  from a refrigerator and placed it in a beaker on a bench. After 4 minutes, the temperature rose to  $4^{\circ}\text{C}$ . State the changes that would be observed in the water in terms of;

(i) density (1 mark)

(ii) mass (1 mark)

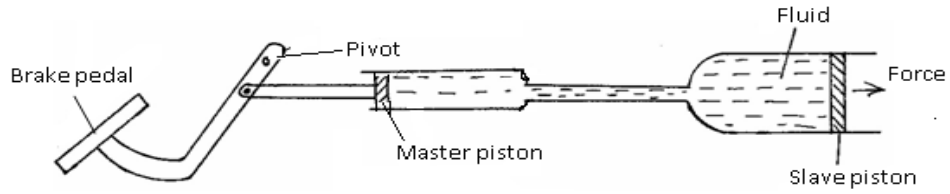
(ii) volume (1 mark)

6. The diagram below shows a uniform 5m long metal rod of mass 800g. It is suspended by a string tied at a point 3.5m from one end. Determine the load which should be hung at point X to keep the plank horizontal. (3 marks)



7. Explain why ice skaters use sharp-edged shoes to slide on ice (2 marks)

8. The diagram below shows a braking system.



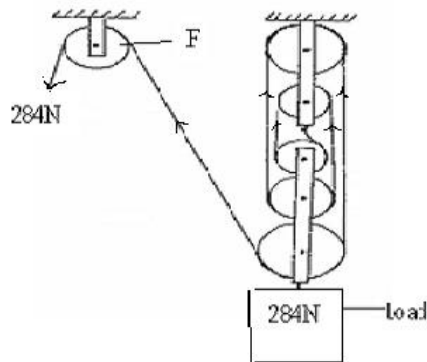
Why is the master piston, made smaller than the slave piston?

(1 mark)

9. A faulty thermometer reads  $2^{\circ}\text{C}$  when dipped in ice at  $0^{\circ}\text{C}$  and  $95^{\circ}\text{C}$  when dipped in steam at  $100^{\circ}\text{C}$ . What would this thermometer read if placed in water at room temperature at  $18^{\circ}\text{C}$ ?

(3 marks)

10. The figure **below** shows a machine being used to raise a load. Use the information given in the figure to answer questions **below**.



- (a) Determine the efficiency of the machine. (3 marks)

11. Using Kinetic theory of matter, explain why solids expand when heated (2 marks)

**Section B (55 Marks)**

12. A bullet of mass 24g travelling in a horizontal path with a velocity of  $450\text{ms}^{-1}$  strikes a wooden block of wood of mass 976g resting on a rough horizontal surface. After impact, the bullet and the block move together for a distance of 7.5m before coming rest.

- (a) Name the type of collision which takes place above (1 mark)

- (b) What's the velocity of the two bodies when they start sliding (2marks)

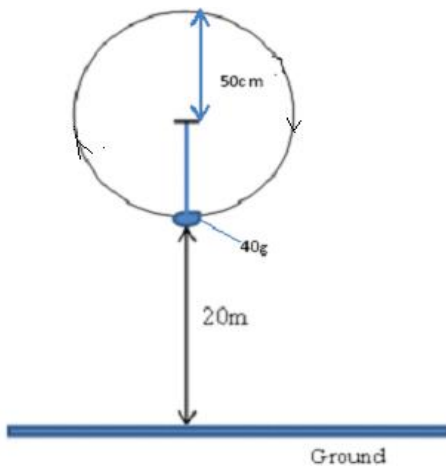
- (c) Calculate the force which brings the two bodies to rest (3 marks)

(d) Determine the coefficient of friction between the block and the surface during this motion.

(2 marks)

13 (a) Give reason why a body moving in a circular path with constant speed is said to be accelerating. (1mk)

(b) A stone of mass 40g is tied to the end of a string 50cm long such that it is 20m above the ground at its lowest level as shown in the diagram below. It is whirled in a vertical circle at 2rev/s.



(i) If the string breaks at its lowest level as shown, what is the velocity with which it travels?

(2 mark)

Calculate the maximum tension in the string.

(3mks)

(ii) Calculate the maximum tension in the string.

(2 mks)

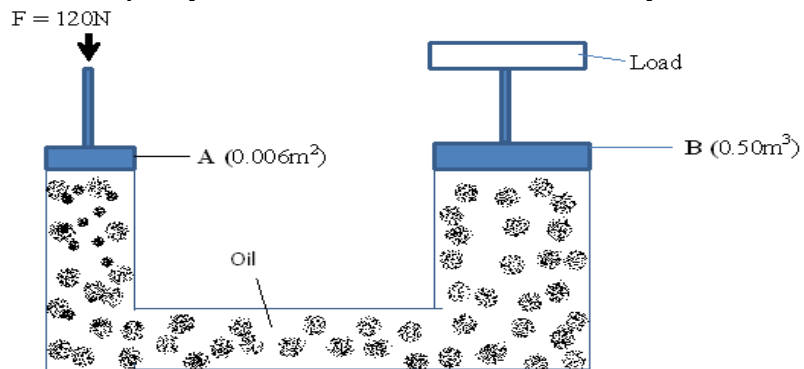
(d) Determine the maximum horizontal distance it travels from the breaking point

(2 marks)

14 (a) Give reason why ink is most likely to ooze out of a pen when one is up in an airplane.

(1mark)

(b) The figure below is a simple hydraulic machine used to raise heavy loads.



Calculate;

(i) The pressure exerted on the oil by the force applied at A (2marks)

(ii) The load raised at B (2marks)

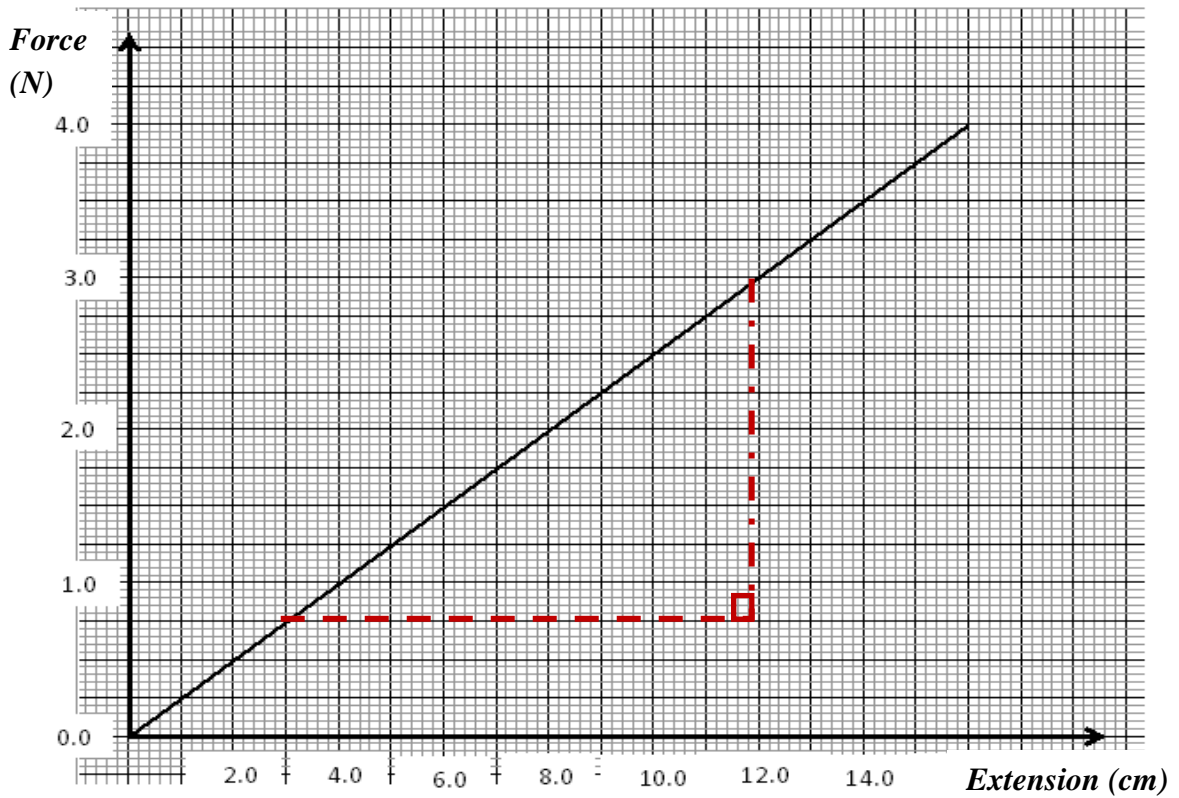
(iii) Give two properties which make the oil suitable for use in this machine (2marks)

(c) The height of a mountain is 1360m. The barometer reading at the base of the mountain is 74cmHg. Given that the densities of mercury and air are  $13,600\text{Kg m}^{-3}$  and  $1.25\text{Kg m}^{-3}$  respectively, determine the barometer reading at the top of the mountain. (3 marks)

15 (a) State Hooke's Law

(1mark)

(b) The diagram below shows a graph of force against extension for a certain spring.



(i) What is the spring constant of the spring? (2 marks)

(ii) What force would cause two such springs placed side by side to stretch by 10cm (3 marks)

16. (a) What is meant by specific latent heat of fusion of a substance? (1mk)

(b) In an experiment to determine the specific latent heat of vaporization of water, steam at  $100^{\circ}\text{C}$  was passed into water contained in a well-lagged copper calorimeter. The following measurements were made:

- Mass of calorimeter = 60g
- mass of water + calorimeter = 145g
- Final mass of calorimeter + water + condensed steam = 156g
- Final temperature of the mixture =  $48^{\circ}\text{C}$

[Specific heat capacity of water =  $4200\text{JKg}^{-1}\text{k}^{-1}$  and specific heat capacity of copper =  $390\text{JKg}^{-1}\text{k}^{-1}$ ]

Determine the;

(i) mass of condensed steam. (1mk)

(ii) The heat gained by the water and calorimeter if the initial temperature of the calorimeter and water is  $20^{\circ}\text{C}$ . (3mks)

(iii) Given that  $L_v$  is the specific latent heat of vaporization of steam, write an expression for the heat given out by steam. (1mark)

(iv) Determine the value of  $L_v$  above (2mks)



(v) State the assumption made in the above experiment (1 mark)

17. A cork of volume  $100\text{cm}^3$  is floating on water. If the density of the cork is  $0.25\text{ gcm}^{-3}$  and that of water is  $1\text{ gcm}^{-3}$ ;

(a) Calculate the mass of the cork (2 marks)

(b) Hence, find the upthrust force on the cork (2 marks)

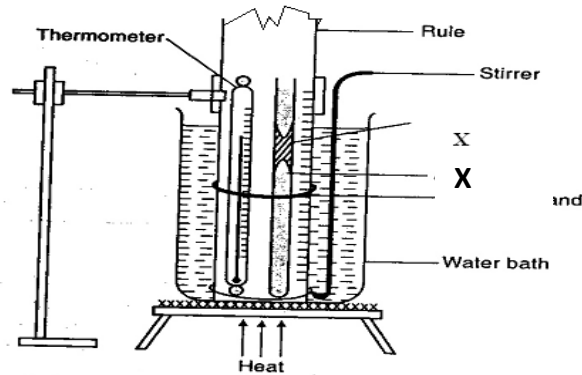
(c) What minimum force is required to immerse the cork completely (2 marks)

(d) What is the effect on the upthrust force in a liquid when the temperature of the liquid is reduced? (1mark)

18. (a) State Pressure Law

(1mark)

(b) The following diagram shows a set up of apparatus used to verify Charles Law.



(i) Give the name of part labelled X

(1 mark)

(ii) What is the function of the part named in (i) above?

(1 mark)

(iii) Briefly explain how the set up above is used to verify Charles Law

(3 marks)

(c) A certain mass of hydrogen gas occupies a volume of  $1.6\text{m}^3$  at a pressure of  $1.5 \times 10^5\text{Pa}$  and a temperature of  $12^\circ\text{C}$ . Determine the volume when the temperature is  $0^\circ\text{C}$  at a pressure of  $1.0 \times 10^5\text{Pa}$ .  
(2 marks)

# PREDICTION 2

NAME \_\_\_\_\_ INDEX NO \_\_\_\_\_

CANDIDATE'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

**232/2**  
**PHYSICS**  
**THEORY**  
**PAPER 2**  
**2 HOURS**

## INSTRUCTIONS

Write your name and admission number in the space provided

Sign and write the date of the examination in the space provided above

This paper consists of two sections A and B.

Answer all the questions in the spaces provided.

All working must be clearly shown.

Mathematical tables and electronic calculators may be used.

For examiner's use only

SECTION	QUESTION	TOTAL MARKS	CANDIDATE'S SCORE
A	1-13	25	
B	14	11	
	15	13	
	16	11	
	17	10	
	18	10	
		GRAND TOTAL	80 MARKS

TOTAL CANDIDATE'S SCORE

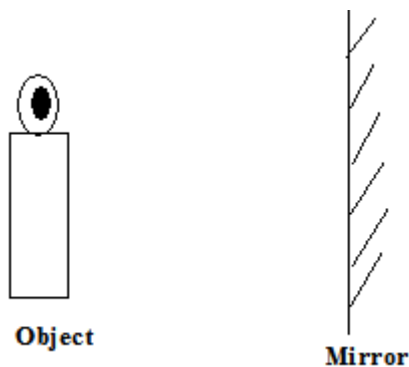
Section A  + section B  =

**This paper consists of 9 printed pages**

## SECTION A (25 Marks)

Answer all the questions in this section in the spaces provided.

1. Locate the position of the image of the object placed in front of a plane mirror shown below. (2 mks)



2. Show the magnetic field pattern of the current carrying conductors shown below. (2 mks)



3. State two factors that determine the strength of an electromagnet. (2 mks)

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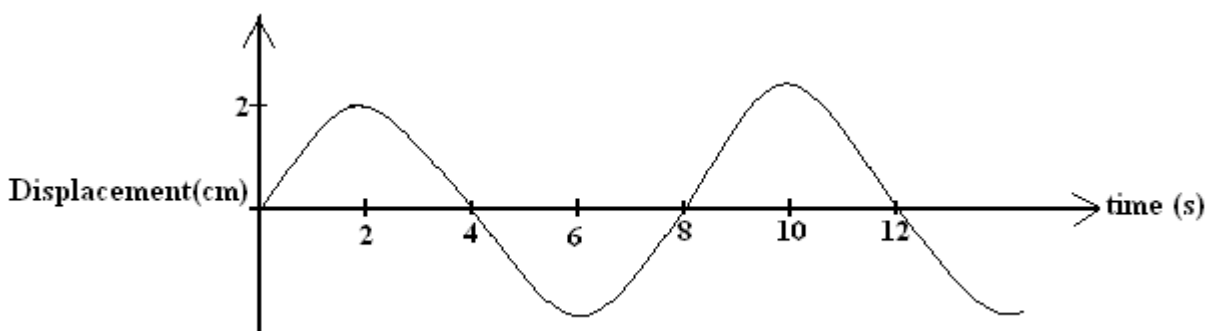
4. State two advantages of using a convex mirror as a driving mirror. (2 mks)

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5. State two factors that affects the resistivity of an electrical conductor. (2 mks)

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6. The figure below shows a wave in progress.



Determine the

a) Amplitude

(1 mark)

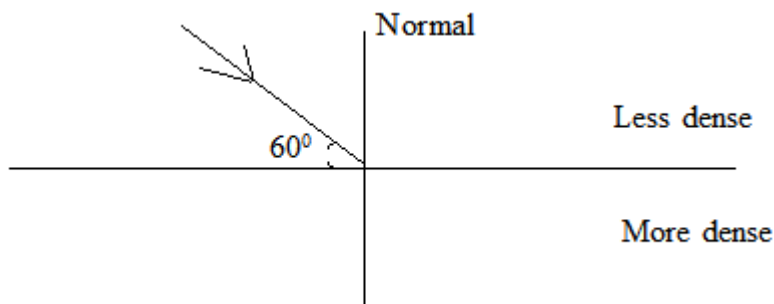
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b) Frequency

(2 marks)

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 .....

7. The figure below shows light travelling from less dense to more dense medium.



a) Show the direction of the refracted ray.

(1 mark)

b) If the refractive index of the more dense medium is 1.4, calculate the angle of refraction. (3 marks)

.....  
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8. A current ,I, flowing through a wire of resistance ,R, is increased by seven times. Determine the factor by which the rate of heat production was increased. (3 marks)

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9. The wavelength of a radio wave is 1km. Determine its frequency if the speed in  $3 \times 10^8 \text{ms}^{-1}$  (2 marks)

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10. State two uses of gold leaf electroscope.

(2 marks)

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.....

11. Give a reason why soft iron is used as a core of the coil of an electric bell.

(1 mark)

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.....  
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12. State two differences between pinhole camera and the human eye.

(2 marks)

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13. State two types of waves.

(2 marks)

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**SECTION B (55 MARKS)**

**Answer all the questions in this section in the spaces provided.**

14. a) Define the following terms.

i) Capacitor

(1 mark)

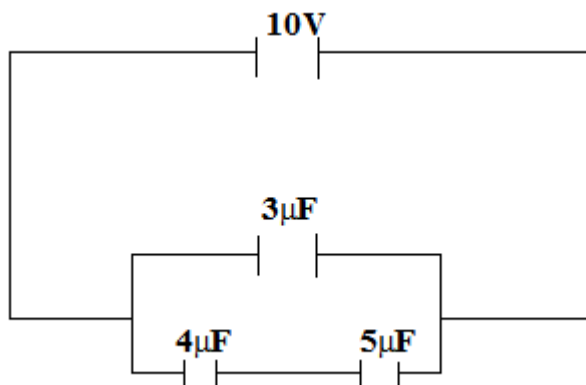
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ii) Capacitance

(1 mark)

.....  
.....

b) Three capacitors are connected to a 10v battery.



Calculate

i) the effective capacitance (3 marks)

.....

.....

.....

.....

ii) the total charge (3 marks)

.....

.....

.....

.....

c) State three factors that determine the capacitance of a capacitor. (3 marks)

i) .....

ii) .....

iii) .....

15. a) Define a resistor.

(1 mark)

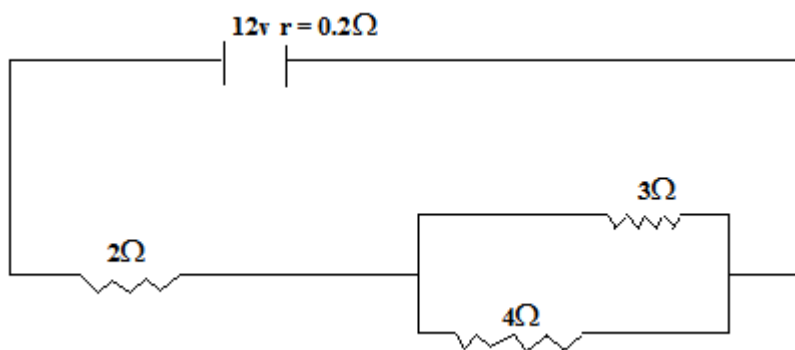
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b) The figure below shows three resistors connected to 12v supply of internal resistance of  $0.2\Omega$ .



Calculate

i) the effective resistance.

(3 marks)

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.....

.....

ii) the total current in the circuit.

(2 marks)

.....

.....

iii) the current through the  $4\Omega$  resistance.

(3 marks)

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.....

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c) If the current flows for 2 minutes calculate the total energy dissipated.

(2 marks)

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d) State two applications of resistors in real life situation.

(2 marks)

(i) .....

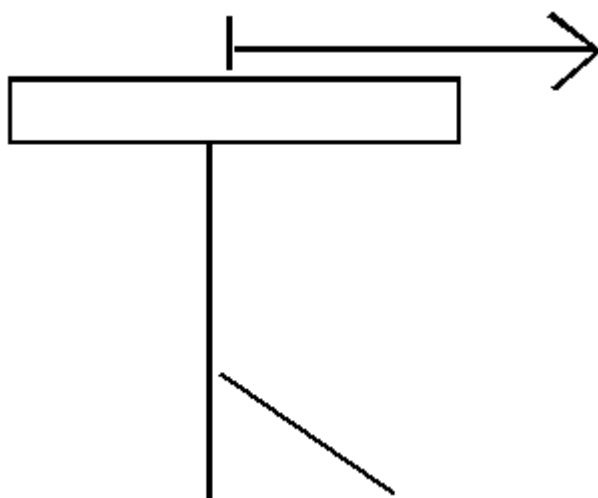
(ii).....

16. a) Explain briefly how a material acquires a positive charge.

(3 marks)

.....  
.....

b) A steel pin is placed on the cap of a highly charge electroscope.



State and explain the observation that will be made on the gold leaf.

(2 marks)

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.....

c) State a reason why a candle flame is blown away when a highly charged metal is brought close to it.

(2 marks)

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.....  
.....

d) Explain briefly why it is not advisable to take shelter on a tree when it is raining.

(2 marks)

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e) State two dangers of electrostatic charges.

(2 marks)

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17. a) State two methods of magnetisation.

(2 marks)

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b) Why is repulsion the surest way of identifying a magnet.

(2 marks)

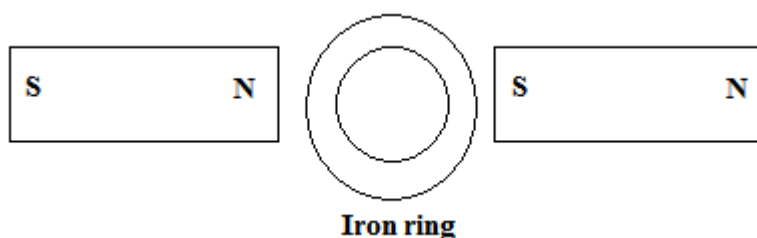
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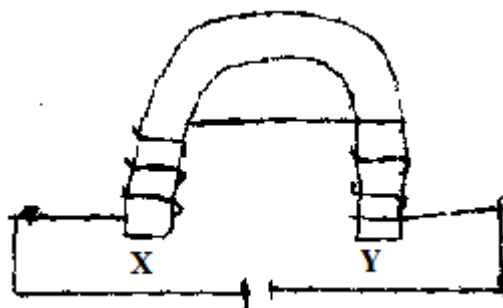
c) Complete the diagram below to show the magnetic field patterns.

(2 marks)



d) i) The figure below in a U-shaped iron core. Indicate the polarity at X and Y.

(2 marks)



ii) State two applications of such an electromagnet.

(2 marks)

.....

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18. a) A pin is placed at the bottom of a beaker containing a transparent liquid. When viewed from the top the pin appears nearer the surface than it actually is. Explain the observation.

(2 marks)

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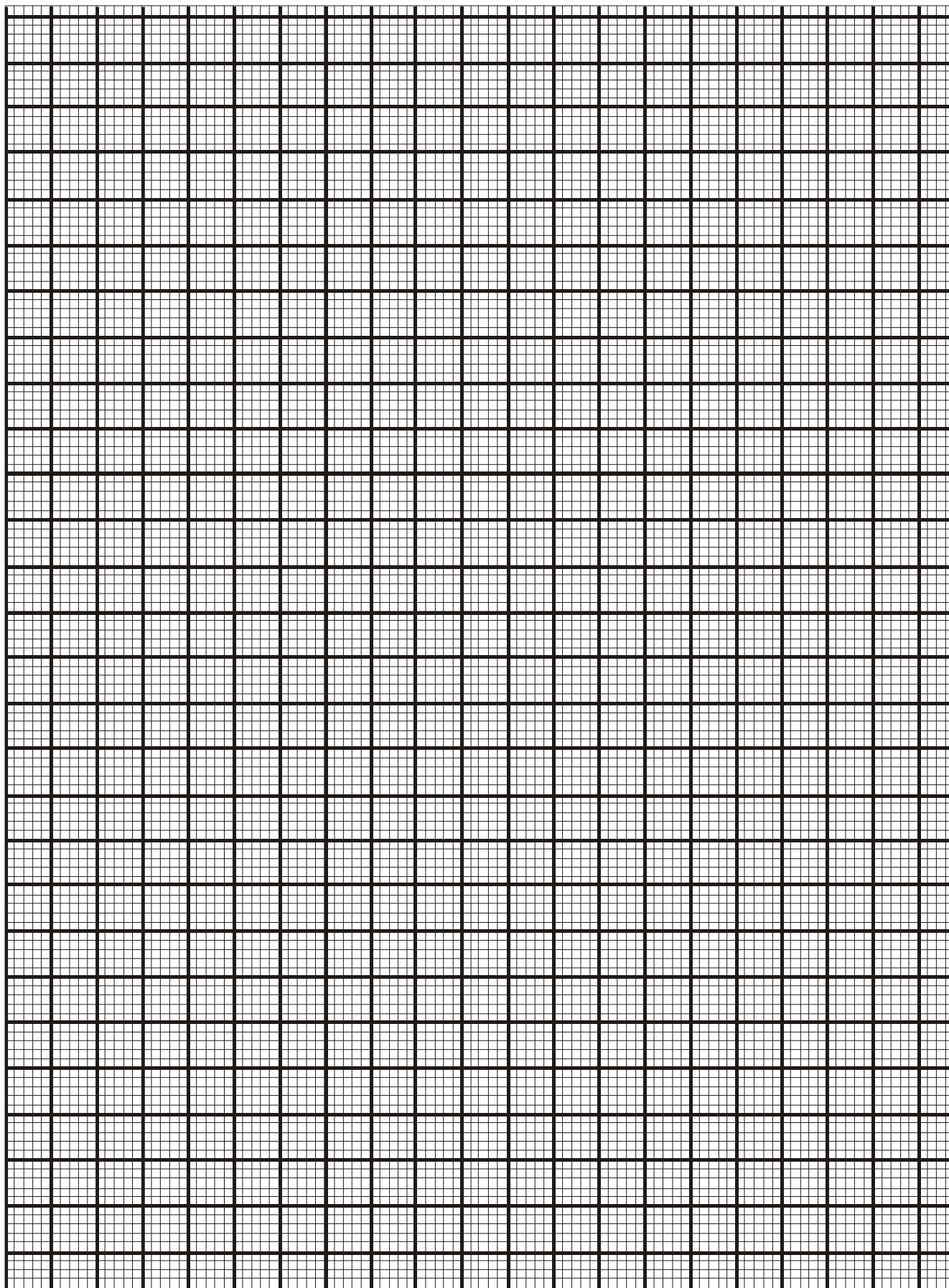
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b) The table below shows the results obtained from such an experiment.

Apparent depth (cm)	2.21	3.68	5.15	6.62	8.09
Real depth cm	3.0	5.0	7.0	9.0	11.0

i) Plot a graph of real depth against apparent depth. (5 marks)



# PREDICTION 2

## 232/3 – PHYSICS PAPER 3

### CONFIDENTIAL

#### QUESTION 1

1. Two dry cells (Size D, each 1.5V)
2. Nichrome Wire (SWG 28 – 100cm long mounted on a mm scale).
3. An ammeter.
4. Cell holder.
5. 6 connecting wires with crocodile clips.
6. Switch.
7. A Voltmeter
8. A Jockey (Crocodile clip)

#### QUESTION 2

1. A metre rule.
2. One Stop watch.
3. One complete stand.
4. One spring, (spring constant  $0.1\text{N/cm}$ ) Range  $0.07 - 0.12\text{Ncm}^{-1}$
5. 2 pieces of wood.
6. Beam balance or electronic balance (to be shared).
7. One 100g mass labeled M.

# PREDICTION 2

NAME: ..... INDEX NO: .....

SIGNATURE: ..... DATE : .....

CANDIDATE'S SIGNATURE: .....

**232 / 3**  
**PHYSICS**  
**PAPER 3**  
**(PRACTICAL)**  
**TIME: 2 ½ hours**

***Kenya Certificate of Secondary Education (KCSE)***  
**INSTRUCTIONS TO CANDIDATES**

- (a) Write your **Name, Index Number** and **School** in the spaces provided above.
- (b) **Sign** and write the **date** of Examination in the spaces provided above.
- (c) Answer **all** questions in the spaces provided.
- (d) You are supposed to spend the first **15 minutes** of the 2½ hours allowed for this paper reading the whole paper carefully before commencing your work.
- (e) Marks are given for a clear record of observations actually made, their suitability, accuracy and the use made of them.
- (f) Non-programmable silent electronic calculators and KNEC Mathematical tables may be used in calculations.

**FOR EXAMINER'S USE ONLY**

**QUESTION 1**

Part A								Part B				Sub-total
Question	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	Question	e	f	g	
Max score	½	½	½	½	½	½	3	Max score	6	5	3	20
Candidate's score								Candidate's score				

**QUESTION 2**

Question	c	d(i)	d(ii)	e(i)	e(ii)	f	g	Sub-total
Max score	7	5	3	1	1	2	1	20
Candidate's score								

<b>TOTAL SCORE</b>
<b>40</b>

## 1. PART A

You are provided with the following:-

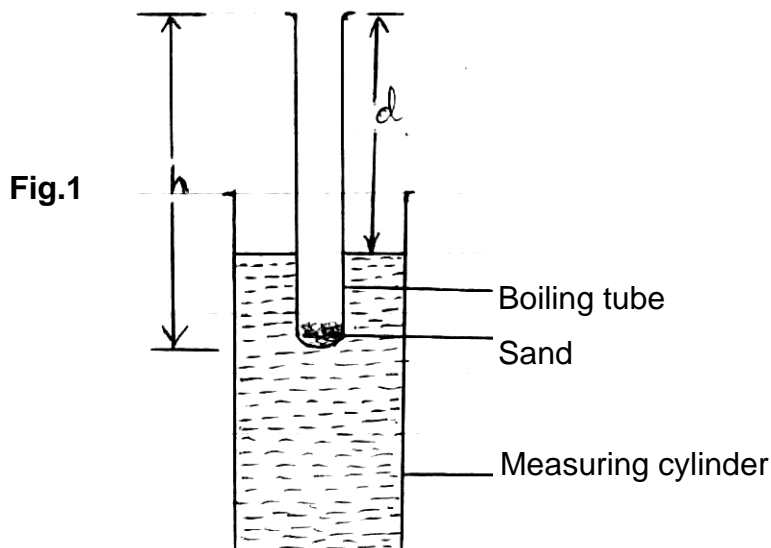
- A boiling tube.
- Some dry sand.
- A liquid in a measuring cylinder labelled L.
- Half metre rule.
- A vernier calipers (to be shared)
- A weighing machine (one per form)
- Tissue paper.
- A measuring cylinder.

**Proceed as follows:**

- (i) Measure the length of the boiling tube.

$h =$  \_\_\_\_\_ cm (½mk)

- (ii) Put a little amount of sand in the boiling tube and place it in the measuring cylinder which is almost filled with liquid L. Add sand, little by little until the tube floats upright as shown in fig. 1



Measure the length,  $d$ , of the boiling tube which is above the liquid.

$d =$  \_\_\_\_\_ cm (½mk)

- (iii) Determine the length,  $t$ , of the boiling tube which is immersed in the liquid.

$t =$  \_\_\_\_\_ cm (½mk)

- (iv) Remove the boiling tube from the measuring cylinder, wipe it dry (on the outside) and measure its mass,  $m$ , including the sand inside.

$m = \underline{\hspace{4cm}}$  g (½mk)

(v) Measure the external diameter,  $D$ , of the boiling tube.

$D = \underline{\hspace{4cm}}$  cm (½mk)

(vi) Determine the external radius,  $R$

$R = \underline{\hspace{4cm}}$  cm (½mk)

(vii) Using the formula  $m = 12\rho\pi R^2$ , determine  $\rho$  for the liquid.

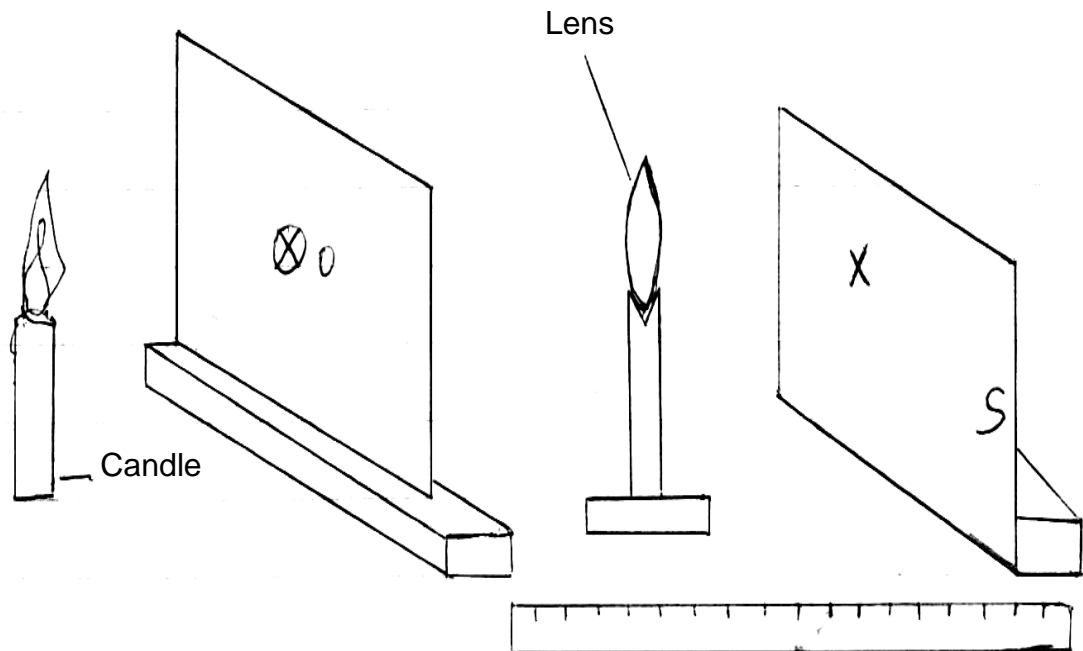
$\rho \underline{\hspace{4cm}}$  cm (3mks)

### **PART B**

You are provided with the following:-

- A white screen with cross wires labelled O.
- A lens and a lens holder.
- A white screen labelled S.
- A metre rule.
- A candle.

(a) Set up the apparatus as shown in fig. 2.



(b) Position the lens so that the object distance  $u = 20\text{cm}$ .

(c) Adjust the screen S so that a sharp image of the cross wire is formed on the

screen S. Measure the image distance  $v$ . Record the value  $u$  and the corresponding value of  $v$  in table 1.

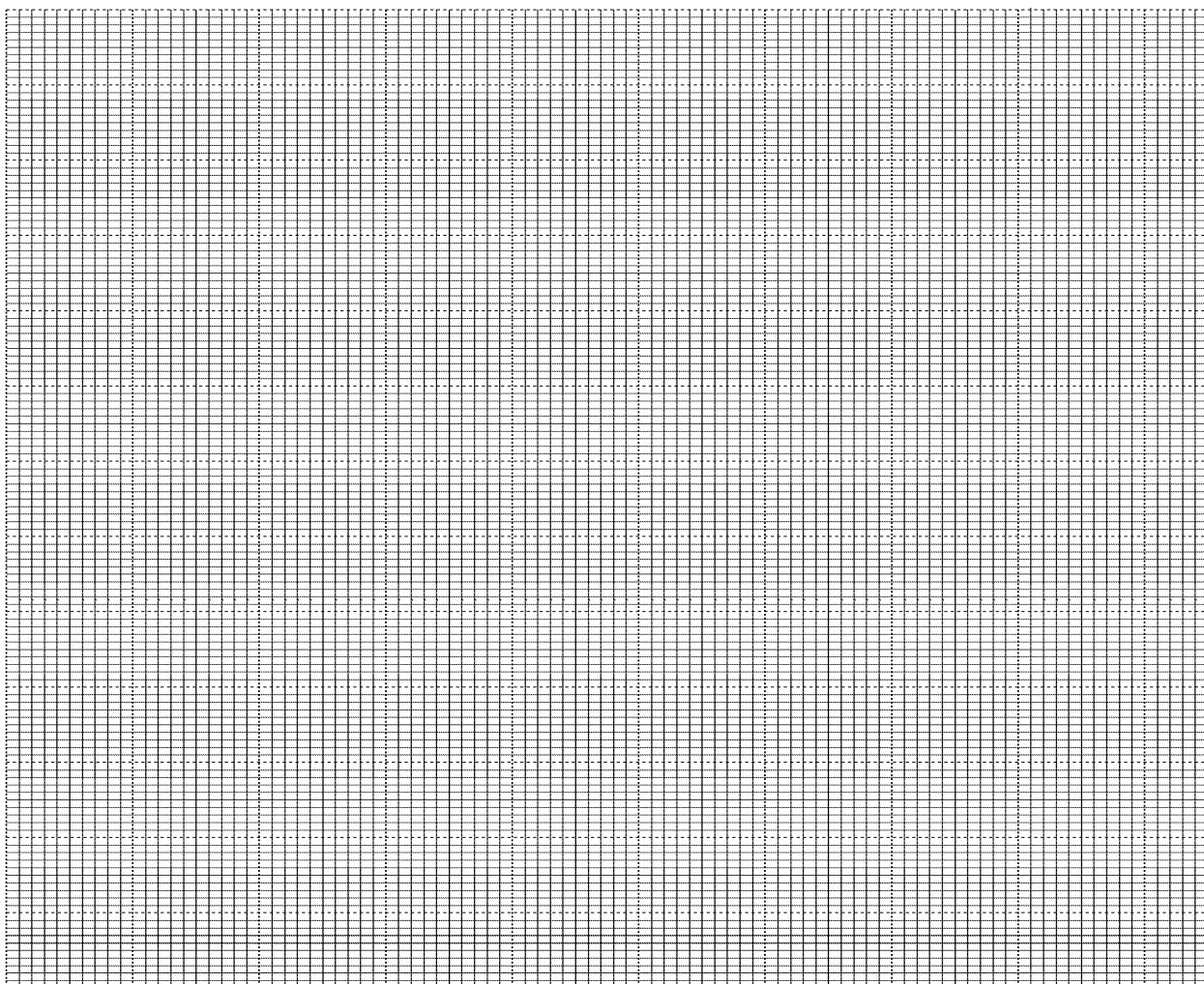
(d) Repeat (b) and (c) above for other values of  $u$  in table 1.

(e) Complete table 1.

$u$ (cm)	20	25	30	35	40	45
$v$ (cm)						
$u + v$ (cm)						
$uv$ (cm <sup>2</sup> )						

(f) On the grid provided, plot a graph of  $uv$  against  $(u+v)$

(5mks)



(g) Determine the slope of the graph and state its significance.

(3mks)

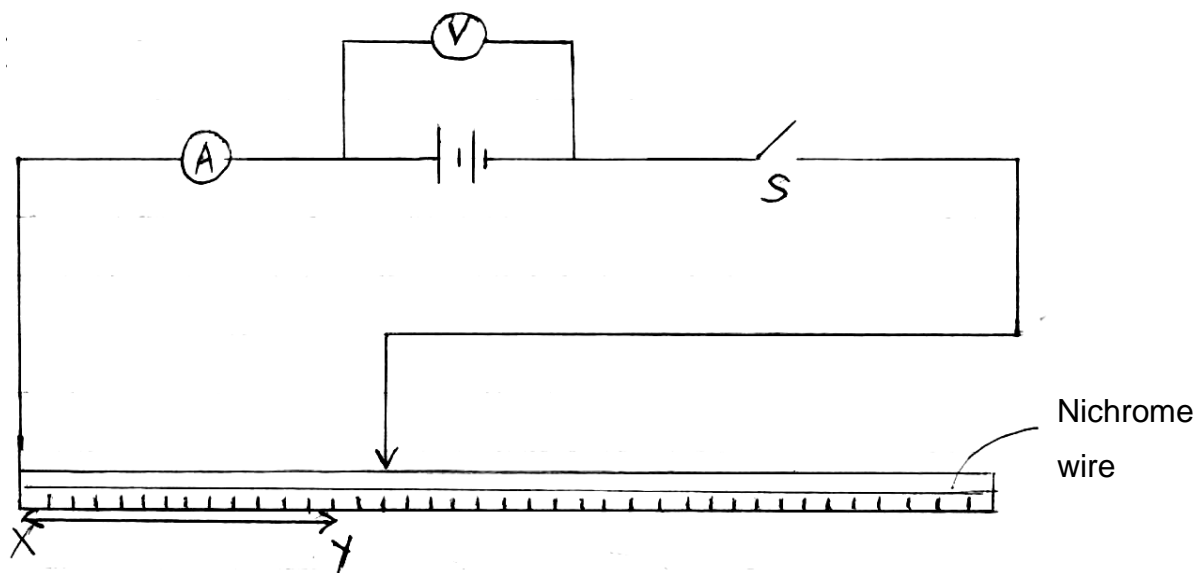


2. You are provided with the following apparatus:-

- A voltmeter
- An ammeter
- A switch
- 6 connecting wires (one with a crocodile clip)
- 2 new dry cells.
- A cell holder.
- A nichrome wire mounted on a millimetre scale.

**Procedure**

(a) Connect the apparatus as shown in fig. 3

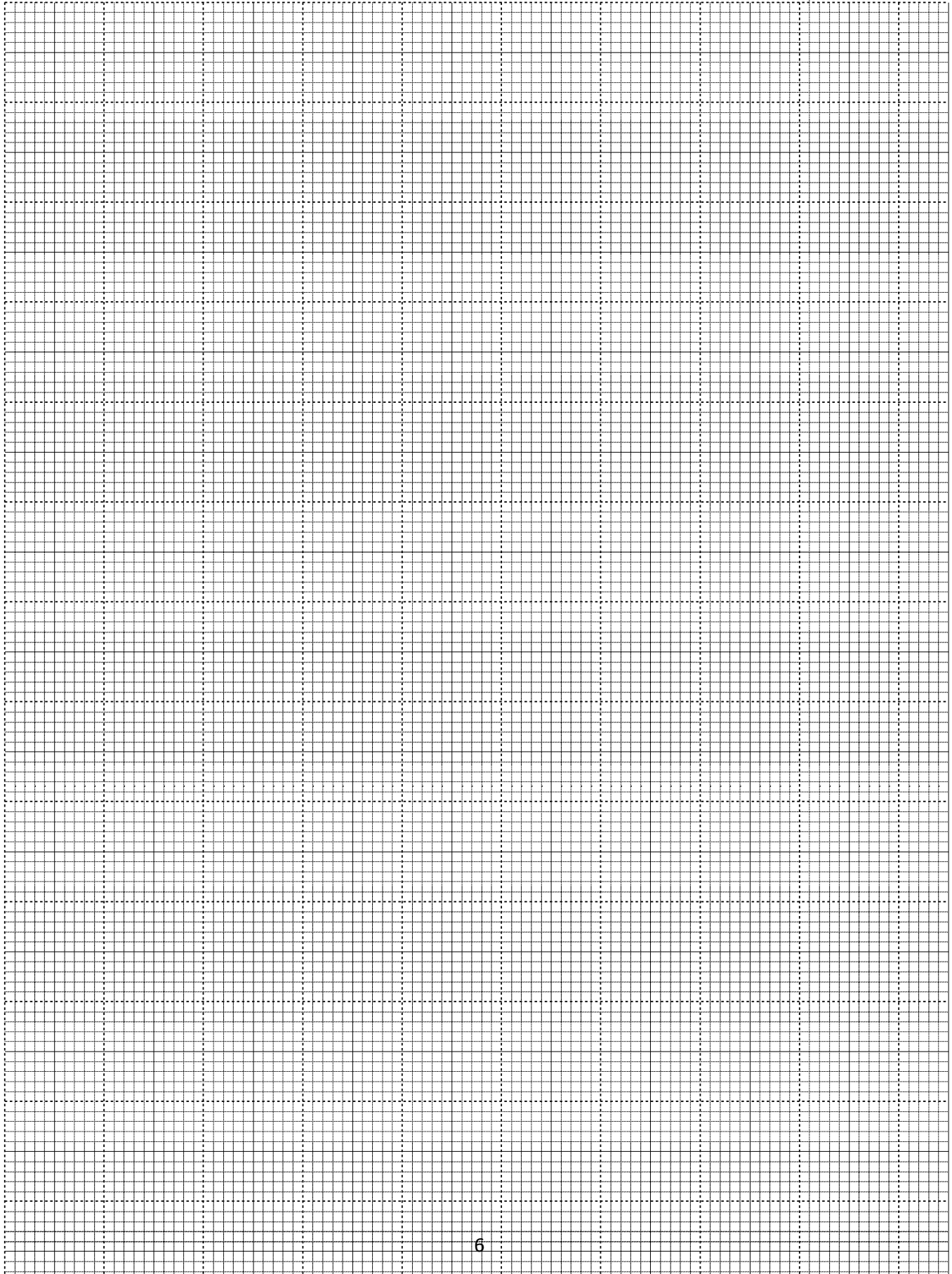


(b) With the crocodile clip at y, 80cm from x, close the switch and record the voltmeter reading and the corresponding ammeter reading in table 2.

(c) Repeat the procedure in part (b) for other lengths of xy as shown in table 2. complete the table.

Length (xy) cm	80	70	60	50	40	30	20
Voltmeter reading (V)							
Ammeter reading (A)							

(d) (i) On the grid provided, plot a graph of p.d(V) against current I (A). (5mks)



(ii) Determine the slope of your graph. (3mks)

(e) Given that  $V = K_1I + K_2$  where  $K_1$  and  $K_2$  are constants, determine:

(i) The value of  $K_1$ . (1mk)

(ii) The value of  $K_2$ . (1mk)

(f) What quantity do constants  $K_1$  and  $K_2$  represent? (2mks)

(g) State the reason why the switch should be open when no readings are being taken. (1mk)

# PREDICTION 2

312/1

GEOGRAPHY

PAPER 1

Kenya Certificate of Secondary Education

## INSTRUCTIONS TO STUDENTS

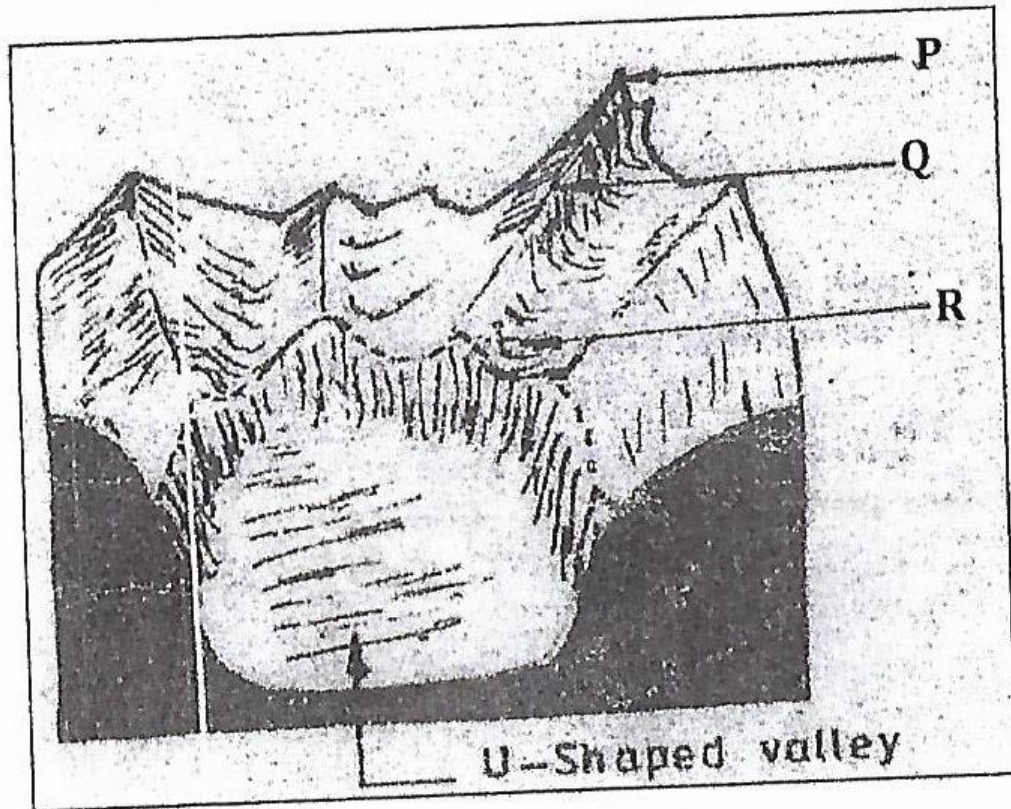
- This paper has two sections **A** and **B**
- Answer **ALL** the questions in section **A**.
- In section **B** answer questions **6** and any other **two** questions.

**SECTION A (25MARKS)**

**Answer all the questions in this section**

1. (a) What is the relationship between Geography and Chemistry? **(2marks)**  
  
(b) Give three reasons why the interior of the Earth is hot. **(3marks)**
  
2. (a) Distinguish between Vulcanicity and Volcanicity. **(2marks)**  
  
(b) Give two characteristics of basic lava domes. **(2marks).**
  
3. (a) What is desertification? **(2marks)**  
  
(b) State three negative effects of desertification. **(3marks)**

4. The diagram below shows an upland area.



- (a) Name the feature P, Q and R. (3 marks)
- (b) How is a u-shaped valley formed? (3 marks)
5. (a) State three ways in which lakes are formed. (3 marks)
- (b) Give two characteristics of lakes formed due to faulting. (2 marks)

## **SECTION B**

**Answer question 6 and any other TWO questions from this section**

**6.** Study the map of Busia (1:50,000) sheet 101/1 provided and answer the following questions.

(a) (i) Give the latitudinal and longitudinal position of South East corner of the map  
**(2marks)**

(ii) Give two methods that have been used to represent relief. **(2marks)**

(b)(i) What is the length in Kilometres of the All-weather loose surface road (C526) from the road junction at Odiado to the road junction at Bumula. **(2marks)**

(ii) What is the bearing of the road junction at Matayo from the air photo Principal  
**(2 marks)**

(iii) Give three social services that are provided at Funyula. **(3 marks)**

(c) Describe the drainage of the area covered by the map. **(6marks)**

(d)(i) Apart from trading, name two other economic activities in Busia area. **(2marks)**

(ii) Citing evidence from the map, explain three factors that favour trading in the area covered by the map. **(6marks)**

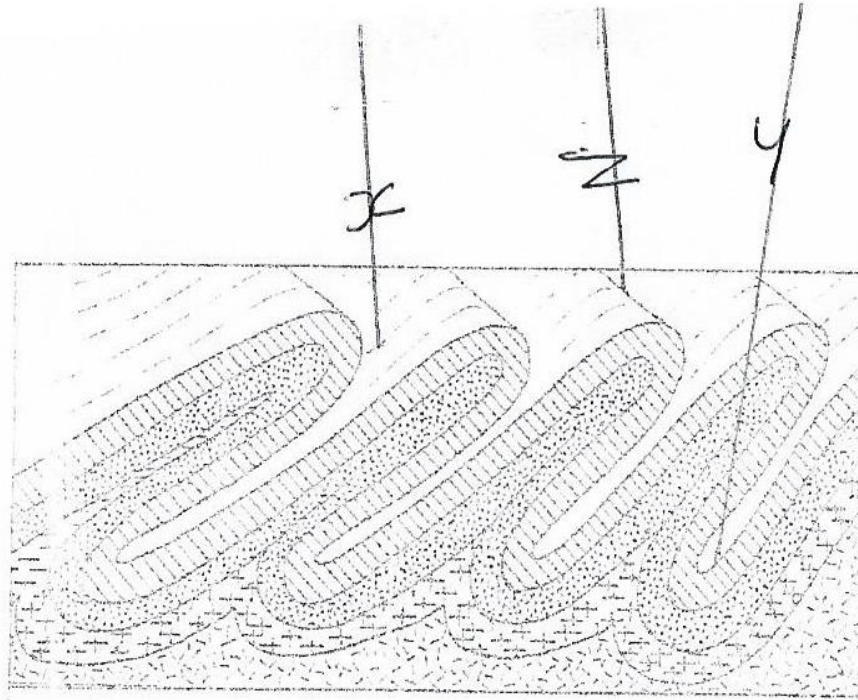
**7.** (a)(i) What is folding? **(2marks)**

(ii) Name one country where the following fold mountains are found.

• Andes **(1mark)**

• Atlas **(1mark)**

(b) The diagram below shows a types of fold.



Name the features marked **x**, **y** and **z**

**( 3marks)**

(c) With the aid of a labelled diagram, describe how an overthrust fold is formed.

**(6 marks)**

(d) Explain four effects of fold mountains on climate

**(8marks)**

(e) Form four students in your school are planning to study land forms through field work.

Give four reasons why it is important to study the folded landforms through fieldwork.

**(4 marks)**



8. (a) Define the term vegetation

(2marks)

(b) Explain how the following factors influences the distribution of vegetation

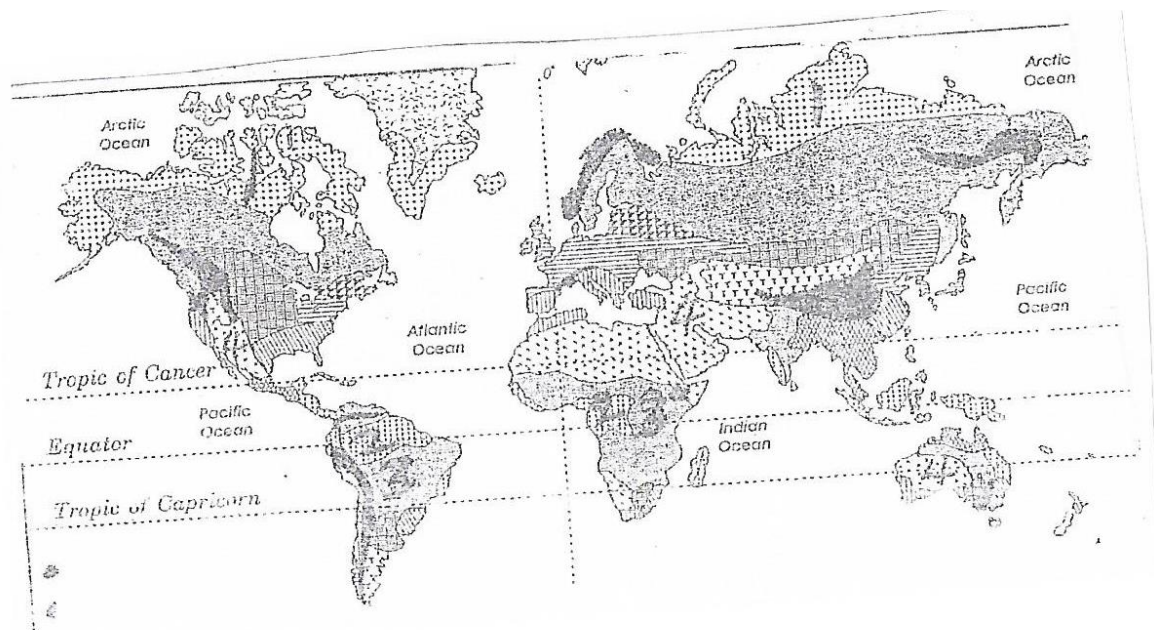
(i) Aspect

(2marks)

(ii) Relief

(3marks)

(c)The map below shows world vegetation zone



(i) Name vegetation type marked 1,2, 3, and 4

(4marks)

(d) Explain four ways in which trees in coniferous forests are adapted to the climatic condition

(8marks)

(e)A form four Geography class is planning to carry out a field study in Kakamega forest.

(i) State how they would use the following tools during the study.

- A tape recorder **(1mark)**
  
- A sketch map **(1mark)**
  
- A camera **(1mark)**
  
- (ii) Give three methods they would use to collect the data during the study. **(3 marks)**
  
- 9. (a) (i) Differentiate between river catchment and watershed. **(2marks)**
- (ii) Describe three processes by which a river transports its load. **(6marks)**
- (b) Explain three factors that lead to rejuvenation of a river. **(6marks)**
- (c) Describe each of the following drainage patterns.
- (i) Centripetal drainage pattern **(2marks)**
- (ii) Superimposed drainage pattern **(3marks)**
- (e) You are to carry out a field study of a river within the vicinity of your school.
- (i) State two reasons why you need a working schedule. **(2 marks)**
- (ii) State two characteristics of a river you are likely to observe in its lower course. **(2 marks)**
- (iii) State two follow up activities you are likely to carry out after the study. (2marks)**
  
- 10. (a) (i) Name two components of soils. **(2 marks)**
- (ii) State three characteristics of desert soils. **(3 marks)**
- (iii) List two factors that contribute to soil leaching. **(2 marks)**
- (b) Describe how lateralization occurs. **(6 marks)**
- (c) Explain how the following processes occurs.
- (i) Splash erosion **(2 marks)**
- (ii) Gulley erosion **(2 marks)**
  
- (d) (i) What is soil conservation? **(2 marks)**

(ii) Explain in three ways of maintaining soil fertility.

**(6 marks)**

## **PREDICTION 2**

### **GEOGRAPHY PAPER II**

- 1a) What is a game sanctuary (1mks)
- b) Name two game sanctuaries in Kenya (2mks)
- 2a) List three documents that provide information on population data (3mks)
- b) What information is delivered from a population pyramid (3mks)
- 3a) State three reasons why the use of plastics is being discouraged in Kenya (3mks)
- b) State two reasons for urban-rural migration (2mks)
- 4a) Define the term energy (2mks)
- b) Outline three factors that favor the location of a hydro-electric power station (3mks)
- 5a) Name three types of settlement patterns (3mks)
- b) Outline three physical factors that influence the location of a settlement (3mks)

### **SECTION B**

The data below shows cattle population in major countries of the World by percentage of the World total.

Country	%
---------	---

India	20
U.S.A	15
Denmark	12
Brazil	10
China	10
Argentina	9
Australia	8
France	6
Ethiopia	5
Other	5

A (i) Draw a divided rectangle 10cm long to represent the cattle population in various countries given in the data above (9mks)

ii) State two advantages of using divided rectangles to represent geographical data (2mks)

b) (i) What is nomadic pastoralism (2mks)

(ii) Describe the characteristics of nomadic pastoralism in Kenya (4mks)

(iii) Explain three problems experienced in small scale tea farming in Kenya (6mks)

c) Name two main tea growing areas found to the west of the Rift valley in Kenya (2mks)

7a) Differentiate transport and communication (2mks)

ii) State three reasons why road network is more widespread than railway network in East Africa (3mks)

b) Outline three benefits derived from the construction of Nairobi-Thika super highway. (3mks)

ii) Draw a sketch map of the great lakes and St Lawrence Seaway, on it mark and name the following (5mks)

- Lakes Michigan and Ontario
- Ports Duluth and Chicago

c) Explain how the following factors hinder transport and communication in Africa (4mks)

d) Explain four benefits of transport in the economic development of Africa. (8marks)

8a (i) Name two countries found in the North West Pacific fishing ground (2mks)

iii) Explain four physical factors that favor fishing in the above ground (8mks)

b) Describe the following methods of fishing

i) Drifting (4mks)

ii) Purse seine (4mks)

c) Compare fishing in Kenya and Japan under the following sub-headings

i) Fishing ground (2mks)

ii) Climate (2mks)

d) State 3 significance of fishing to the economy of Kenya (3mks)

9ai) What is domestic tourism (2mks)

ii) State four reasons why the government is encouraging domestic tourism (4mks)

bi) Apart from establishing national parks and game reserves, outline four ways in which wildlife is being conserved in Kenya (4mks)

ii) State three reasons why national parks and game reserves benefits the local Maasai community (3mks)

iii) Explain three ways in which the Maasai Mara game reserves benefits the local Maasai community (6mks)

c) Explain three ways in which the feature of tourism can be improved in Kenya (6mks)

10Ai) What is industrialization (2mks)

ii) State three reasons why some industries consider regular supply of water as the main reason for their location (3mks)

b) Outline four similarities between jua kali industry in Kenya and Cottage industry in India. (4mks)

c) Explain three factors that have influenced the location of Iron and steel industry in the Ruhr region of Germany in the 19<sup>th</sup> century (6mks)

d) You intend to carry out a field study of a heavy manufacturing industry.

i) State three effects of the industry on the environment you are likely to observe (3mks)

ii) Design a working programme (schedule) you would use during the day of study (4mks)

iii) State three reasons why it is important to prepare a working programme (schedule) for the study (3mks).



# PREDICTION 2

311/1  
HISTORY AND GOVERNMENT  
PAPER 1  
2 ½ HOURS

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

## 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 answer sheets provided.
- 

*This paper consists of 2 Printed pages.*

*Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing.*

## SECTION A (25 MARKS)

Answer *all* the questions in this section in the answer booklet provided.

1. State the main source of information in history and government on Kenyan communities. (1 Mark)
2. What was the main reason for the dispersal of the coastal Bantus from Shungwaya? (1 Mark)
3. Identify two customs acquired by the Bantu from their interaction with the Cushites. (2 Marks)
4. State the main archeological evidence to proof that there was contact between the Kenyan coast and the Chinese in the early 16<sup>th</sup> century. (1 Mark)
5. State two recommendations of the Devonshire whitepaper of 1923. (2 Marks)
6. Give two reasons why the Akamba participated in the long distance trade. (2 Marks)
7. Name two leaders who led the Agyriama during their resistance against British occupation of Kenya. (2 Marks)
8. Identify two rights of the marginalized groups as contained in the Kenyan constitution. (2 Marks)
9. List two conditions a person in Kenya must fulfil to vie for presidential elections (2 Marks)
10. Name two missionary societies that merged to form the alliance of missionary societies in British East Africa. (2 Marks)
11. State two reasons why the Africans were not allowed to grow cash crops during the colonial period. (2 Marks)
12. Give two sources of Kenya law (2 Marks)
13. Name the engineer who supervised the construction of the Kenya – Uganda railway. (1 Mark)

14. Identify two factors that led to the emergence of independent churches and schools in Kenya during the colonial period. (2 Marks)
15. Why is the right to life the most important right in the Kenyan constitution? (1 Mark)

### **SECTION B (45 MARKS)**

Answer *any three* questions from the is section in the answer booklet provided

16. a. State three duties of the morans among the Maasai during the pre-colonial period. (3 Marks)
- b. Explain the social political systems of the Ameru during the pre-colonial period. (12 Marks)
17. a. Enumerate five factors that led to the decline of the Indian Ocean trade. (5 Marks)
- b. Explain the positive impact of the Portuguese rule along the East African coast. (10 Marks)
18. a. Outline five roles played by women in the struggle for independence in Kenya. (5 Marks)
- b. Explain five contributions of Wangari Maathai in nation building. (10 Marks)
19. a. Give three reasons why Africans refused to give their labour to white settlers. (3 Marks)
- b. Explain the effects of colonial land policies on the people of Kenya. (12 Marks)

### **SECTION C (30 MARKS)**

Answer *any two* questions from this section in the answer booklet provided

20. a. State five values of good citizenship. (5 Marks)
- b. Explain five reasons that can lead to Kenyan citizenship being revoked. (10 Marks)
21. a. Identify three features of the independence constitution of Kenya in 1962. (3 Marks)
- b. Explain six constitutional changes in Kenya between 1975 and 2011. (12 Marks)
22. a. List three sources of county revenue. (3 Marks)
- b. Discuss six reasons why devolved government in Kenya is very important. (12 Marks)

# PREDICTION 2

311/2

HISTORY AND GOVERNMENT

PAPER 2

2 ½ Hours

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

## 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 answer sheets provided

*This paper consists of 2 Printed pages.*

*Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing*

### SECTION A (25 MARKS)

Answer **all** the questions in this section in the answer booklet provided

1. State two disadvantages of using electronic sources of information in history and government. (2 Marks)
2. Why was the Homo habilis referred to as “Able man”? (1 Mark)
3. State two early agricultural practices used in Britain before 1850. (2 Marks)
4. Name one African country that thwarted European invasion and occupation in the 19<sup>th</sup> century (1Mark)
5. State two causes of the Chimuregawar. (2 Marks)
6. Identify two disadvantages of electricity as a source of energy (2 Marks)
7. List two negative effects of urbanization in Cairo (2 Marks)
8. What was the main reason for the use of direct rule in Zimbabwe? (1 Mark)
9. State two ways in which the steam engine contributed to industrial revolution in Britain. (2 Marks)
10. Enumerate two economic factors for the growth of the MweneMutapa kingdom. (2 Mark)
11. Identify the main challenge facing industrialization in third world countries (1 Mark)
12. Outline two methods used by the international community to hasten majority rule in South Africa. (1 Mark)
13. Why in the camel referred as the ship of the desert. (1 Mark)
14. What was the role of the Tuareqs during the Trans-Saharan trade (1Mark)
15. State two results of the Berlin conference of November 1884 to Feb 1885. (2 Mark)
16. Identify the contribution of Andreas Vesalius in the field of medicine (1 Mark)

### SECTION B (45 MARKS)

Answer **any three** questions from this section in the answer booklet provided.

17. a. Identify three types of trade. (3 Marks)  
b. Describe the organization of the Trans Sahara trade (12 Marks)
18. a. Give three ways through which trade contributed to the rise of the Asante kingdom in the 18<sup>th</sup> century (3 Marks)  
b. Describe the social organization of the Asante (12 Marks)
19. a. Identify five causes of food shortage in third world countries. (5 Marks)  
b. Explain the factors that led to Agrarian revolution in the USA. (10Marks)

20. a. State three characteristics of industrial revolution in Europe. (3 Marks)  
b. Explain six factors hindering industrialization in third world countries. (12Marks)

**SECTION C (30 MARKS)**

Answer *any two* questions from this section in the answer booklet provided.

21. a. Enumerate the terms of the Lochner - Lewanika treaty of 1890 (3 Marks)  
b. Explain the results of Lewanika's collaboration with the British. (12Marks)
22. a. State three characteristics of indirect rule (3 Marks)  
b. Discuss six reasons why indirect rule failed in Southern Nigeria (12Marks)
23. a. What were the factors for the growth of nationalism in Ghana? (5 Marks)  
b. Explain the role of Kwame Nkrumah in the struggle of Ghana's independence in 1957. (10 Marks)

# PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... SIGNATURE .....

313/1

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2 ½ HOURS

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO CANDIDATES

Answer **any five** of the given questions.

All answers **must be** written in the Answer Booklet provided.

All questions carry equal marks.

*This paper consists of 2 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

- 
- 1. a) Give reasons why C.R.E as a subject is incorporated into the curriculum in Kenyanschools today. (8 Marks)**
- b) Explain the meaning of the expression, ‘the Bible is the Word of God’. (5 Marks)**
- c) On what occasions do Christians use the Bible? (7Marks)**
- 2. a) Briefly explain the significance of the events that took place on the night of the Passover. (6 Marks)**
- b) What qualities did Moses show during his call? (9 Marks)**
- c) What lessons do Christians learn from the call of Moses? (5 Marks)**
- 3. a) Give reasons why the Israelites asked Samuel to appoint a king for them. (7Marks)**
- b) Show reasons why Elijah was un-compromising in his attitude to Baal worship. (8 Marks)**
- c) Why should Christians fight against the spread of devil worship in the society? (5 Marks)**
- 4. a) What were the characteristics of true prophets in the Old Testament? (7 Marks)**
- b) Give reasons why Amos proclaimed God’s judgment on Israel and Judah? (6 Marks)**
- c) What lessons do Christians learn from Amos’ teachings on judgment? (7Marks)**
- 5. a) What responses to God’s call did Jeremiah exhibit in Jeremiah 4:4 – 19? (5 Marks)**
- b) Explain Jeremiah’s teaching on the new covenant. (6 Marks)**
- c) How should a Christian respond when offered a job in a hardship area? (9 Marks)**
- 6. a) Give the roles of ancestors in Traditional African Society. (9 Marks)**
- b) On what occasion were sacrifices offered in Traditional African Society? (6 Marks)**
- c) What aspects of traditional religion have been integrated into the Christian faith? (5 Marks)**

# PREDICTION 2

NAME ..... DATE .....

ADMN NO. .... SIGNATURE .....

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2 ½ HOURS

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO CANDIDATES

Answer **any five** of the given questions.

All answers **must be** written in the Answer Booklet provided.

All questions carry equal marks.

*This paper consists of 2 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

Turn over

- 
1. a) Give the characteristics of the suffering servant of Yahweh according to prophet Isaiah (Isaiah 53). (8 Marks)
- b) In what ways did Jesus fulfill prophecies given to King David by Prophet Nathan? (5 Marks)
- c) What is the relevance of God's promises to David to Christians today? (5 Marks)
2. a) Mention ways in which John the Baptist prepared the way for the Messiah. (10 Mark)
- b) State reasons why Jesus was rejected in Nazareth. (4 Marks)
- c) In what ways are church leaders put to test today? (6 Marks)
3. a) Give examples from the life and Ministry of Jesus which show that He promoted social equality. (8 Marks)
- b) Explain how the disciples reacted to the use of parables in Jesus' teachings. (6 Marks)
- c) What activities does the church engage in to demonstrate love for others? (6 Marks)
4. a) Relate the message of Peter on the Day of Pentecost. (10 Marks)
- b) In what ways did the coming of the Holy Spirit transform the life of Peter on the Day of Pentecost? (5 Marks)
- c) What activities of the church in Kenya show that the Holy Spirit is working among them? (5 Marks)
5. a) From the teachings of Jesus, what role would the Holy Spirit play? (8 Marks)
- b) Describe the fruits of the Holy Spirit according to Galatians 5: 22 – 26. (6 Marks)
- c) In what ways do Christians demonstrate the fruit of generosity? (6 Marks)
6. a) Explain how the unity of believers is expressed in the symbol of the body of Christ. (6 Marks)
- b) State teachings of Peter concerning the people of God. (1<sup>st</sup> Peter 2:9 - 10) (6 Marks)
- c) How do churches discipline those who cause disunity in the church today? (6 Marks)



# PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... CANDIDATE'S SIGNATURE .....

565/1  
BUSINESS STUDIES  
PAPER 1  
TIME: 2 HOURS

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO CANDIDATES

Answer all the questions in spaces provided.

## FOR EXAMINERS USE ONLY

QUESTIONS	1	2	3	4	5	6	7	8	9
MARKS									

10	11	12	13	14	15	16	17	18

19	20	21	22	23	24	25

TOTAL MARKS

--

*This paper consists of 6 printed pages.  
Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

1. State four factors that you would consider before extending credit facilities to a customer. (4 Marks)

- (i) .....
- (ii) .....
- (iii).....
- (iv).....

2. Give four characteristics of human wants. (4 Marks)

- (i) .....
- (ii).....
- (iii).....
- (iv).....

3. The following information relates to businesses W, X, Y and Z. (4 Marks)

<b>BUSINESS</b>	<b>ASSETS</b>	<b>LIABILITIES</b>	<b>CAPITAL</b>
W	350,000	b	150,000
X	a	160,000	240,000
Y	800,000	450,000	d
Z	700,000	c	280,000

Determine the figures represented by a, b, c and d. (4 Marks)

- (i) .....
- (ii) .....
- (iii).....
- (iv).....

4. State any four principles that govern the operations of co-operative societies in Kenya. (4 Marks)

- (i).....;
- (ii).....
- (iii).....
- (iv).....

5. Highlight four limitations posed by the use of national income statistics as a way of comparing the living standards of people for different countries. (4 Marks)

- (i).....
- (ii).....
- (iii).....
- (iv).....

6. State four merits associated with internal borrowing. (4 Marks)

- (i).....
- (ii).....
- (iii).....

- (iv).....
7. What four measures would you advise the government of Kenya to apply so as to curb the inflationary tendencies the country is currently experiencing? **(4 Marks)**
- (i).....
- (ii).....
- (iii).....
- (iv).....
8. State four factors that may influence the price elasticity of demand of a commodity. **(4 Marks)**
- (i).....
- (ii).....
- (iii).....
- (iv).....
9. State four possible factors that may contribute to a case of an abnormal demand curve. **(4 Marks)**
- (i).....
- (ii).....
- (iii).....
- (iv).....
10. The data below relates to Kimeu's business as at 31<sup>st</sup> Dec 2010. **(4 Mark)**
- |   | Shs     |
|---|---------|
| Capital as at 1 <sup>st</sup> Jan 2010                    | 100,000 |
| Additional investment in the year                         | 40,000  |
| Profit realized in the year                               | 25,000  |
| Drawings made in the year                                 | 45,000  |
| Determine Kimeu's capital as at 31 <sup>st</sup> Dec 2010 |         |

11. State four features of labour as a factor of production **(4 Marks)**
- (i).....
- (ii).....
- (iii).....
- (iv).....

**12.** The table below shows descriptions relating to some documents used in home trade. Name the document fitting the description. **(4 Marks)**

DESCRIPTION	DOCUMENT
(i) Used to correct an undercharge error	
(ii) Seeking information on items stocked and their prices	
(iii) Inform the buyer that the goods ordered have been dispatched	
(iv) Requests payment for goods before they are sent to the customer	

**13.** Outline four reasons why governments participate in business. **(4 Marks)**

- (i).....
- (ii).....
- (iii).....
- (iv).....

**14.** State four features of an oligopolistic type of Market. **(4 Marks)**

- (i).....
- (ii).....
- (iii).....
- (iv).....

**15.** The following information relates to Blue star traders in the year 2009.

Jan 1 started business by depositing Shs. 150, 000 in the business' bank account

Jan 2 bought stock worth shs. 10,000 by cash.

Enter these transactions in the relevant ledger accounts.

**16.** State four possible errors that may not be detected by a trial balance.

- .....
- .....
- .....
- .....

17. Under what four circumstances would a producer opt to sell his goods directly to his customers?

(4 Marks)

- (i).....
- (ii).....
- (iii).....
- (iv).....

18. The balances below were extracted from the books of Kazu traders as at 30<sup>th</sup> June 2010.

ITEM	KSHS
Furniture	20,000
Debtors	30,000
Creditors	42,000
Cash in hand	25,000
Cash at bank	60,000
Delivery van	280,000
Capital	348,000
Bank van	120,000
Net loss	45,000

Prepare Kazu's balance sheet as at 30<sup>th</sup> June 2010.

19. State four gaps in the market that may provide an opportunity to an entrepreneur.

(4 Marks)

- (i).....
- (ii).....
- (iii).....
- (iv).....

**20.** State four reasons why an insured may not be compensated despite an insured risk occurring. (4 Marks)

- (i).....  
 (ii).....  
 (iii).....  
 (iv).....

**21.** Under what four circumstances would an office manager think of replacing an existing machine with a modern one? (4 Marks)

- (i).....  
 (ii).....  
 (iii).....  
 (iv).....

**22.** State four ways through which a consumer may be exploited. (4 Marks)

- (i).....  
 (ii).....  
 (iii).....  
 (iv).....

**23.** Give four differences between an ordinary share and a preference share.

ORDINARY SHARE	PREFERENCE SHARE
(i) .....	(i) .....
(ii).....	(ii).....
(iii).....	(iii).....
(iv).....	(iv).....

**24.** Kim insured his motor vehicle value at shs.1,000,000 for shs. 800,000. The motor vehicle was involved in an accident and declared a write off. Calculate the amount Kim should get from the insurer.

(4 Marks )

**25.** State four ways through which the price of a commodity may be determined. (4 Marks)

- (i).....  
 (ii).....  
 (iii).....  
 (iv).....

# PREDICTION 2

NAME .....DATE .....

INDEX NO. .... CANDIDATE'S SIGNATURE .....

565/2

**BUSINESS STUDIES**

**PAPER 2**

**TIME: 2 ½ HOURS**

*Kenya Certificate of Secondary Education*

## **INSTRUCTIONS TO THE CANDIDATES**

Answer any **FIVE** questions

All questions carry equal marks

All working must be shown

*This paper consists of 2 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

1. a) Explain five causes of unemployment in Kenya. (10 Marks)  
b) Explain five circumstances that would influence a producer to use wholesalers in distributing his produce. (10 Marks)
2. a) Explain five ways in which the insurance industry contributes to the development of Kenya's economy. (10 Marks)  
b) Explain five demerits of government involvement in the running of public corporations. (10 Marks)
3. a) Explain five factors that may be considered in determining the appropriate channel for distributing goods. (10 Marks)  
b) Explain five reasons why business organizations may merge with one another. (10 Marks)
4. a) Explain five benefits that a country would get by encouraging investors to locate industries in rural areas. (10 Marks)  
b) On 1<sup>st</sup> May 2010 Musa Traders had sh. 15, 000 cash in hand and Sh. 160, 450 at bank. During the month, the following transactions took place.  
May 2 Bought goods for Sh. 5, 400 and paid by cheque.  
May 8 Received sh. 7, 200 cash from a debtor  
May 15 Paid a creditor Sh. 18, 300 by cheque  
May 16 Paid salaries sh 4, 200 in cash  
May 18 Sold goods for sh. 9, 200 and was paid by cheque

---

May 20	Withdrew sh. 30, 000 from bank for office use	
May 25	Received sh.8, 000 cash from a debtor	
May 28	Paid general expenses sh. 4, 000 cash.	
May 29	Deposited sh.10, 000 cash in bank	
May 30	Paid for electricity sh. 2, 500 by cheque	
	Record the above transactions in a two column cash book and balance it off.	(10 Marks)

5. a) Explain five ways which traders can apply to attract more customers. (10 Marks)
- b) Explain five factors that could affect the quantity of cabbages supplied in a Market. (10 Marks)
6. a) Explain five factors to consider when choosing an appropriate means of transport. (10 Marks)
- b) The following balances were extracted from the ledger accounts of Bidii traders for the yearended 31<sup>st</sup> December 2010.

Capital	940, 000
Bank	100, 000
Accrued expenses	20, 000
Debtors	60, 000
Creditors	60, 000
Stock	100, 000
10 Years Bank loan	200, 000
3 year ICDC loan	100, 000
Vehicle	300, 000
Plant and machinery	200, 000
Land	500, 000
Drawings	40, 000
Cash	20, 000

Using these balances prepare Bidii traders trial balance for that year dully balanced.(10 Marks)



## PREDICTION 2

NAME: ..... INDEX NO: .....

SCHOOL..... DATE: .....

CANDIDATE'S SIGNATURE: .....

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

**AGRICULTURE**

**PAPER 1**

**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 **THREE** sections A, B and C.
- (d) Answer **ALL** questions in Section A and B.
- (e) Answer any **TWO** questions in section C.
- (f) Answers should be written in the spaces provided.
- (g) This paper consists of 8 printed pages.
- (h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.
- (i) Candidates should answer the questions in English.

### **FOR EXAMINER'S USE ONLY**

<b>SECTION</b>	<b>QUESTIONS</b>	<b>MAX. SCORE</b>	<b>CANDIDATE SCORE</b>
A	1 – 15	30	
B	16 – 20	20	
C		20	
		20	
<b>Total Score</b>		<b>90</b>	

**SECTION A (30 MARKS)**  
**Answer ALL Questions in the Spaces Provided**

1. Differentiate between olericulture and pomoculture. (2mks)

.....  
.....

2. Give **four** reasons why a well drained soil is suitable for crop production. (2mks)

.....  
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.....  
.....

3. State **four** reasons for deep ploughing during land preparation. (2mks)

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.....  
.....

4. Name **four** types of water pumps which can be used on the farm. (2mks)

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.....  
.....  
.....

5. State **four** characteristics that make a crop suitable for green manuring. (2mks)

.....  
.....  
.....  
.....

6. List any **four** pieces of information which should be shown on Health record. (2mks)

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7. Give **four** reasons for seed selection in crop production. (2mks)

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8. List **five** management practices carried out on a kale nursery two weeks after its establishment. (2½mks)

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9. Differentiate between roguing and thinning. (2mks)

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.....

10. Name **three** diseases that attack cabbage. (1½mks)

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.....

11. State **four** ecological requirements of tomatoes. (2mks)

.....  
.....  
.....  
.....

12. List **four** factors that will lower demand of a commodity. (2mks)

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13. State **four** routine practices of care and management of trees. (2mks)

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.....

14. State **four** ways by which a farmer can make efficient use of a pasture crop. (2mks)

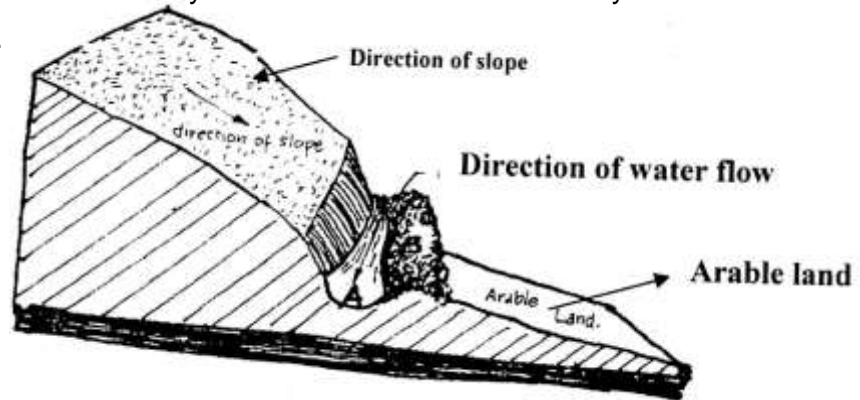
.....  
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15. List **four** pieces of information found on a title deed. (2mks)

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**SECTION B (20 MARKS)**  
**Answer all questions in the spaces provided in this section**

16. The illustration below shows a newly constructed cut-off drain. Study it and answer the questions that follow.



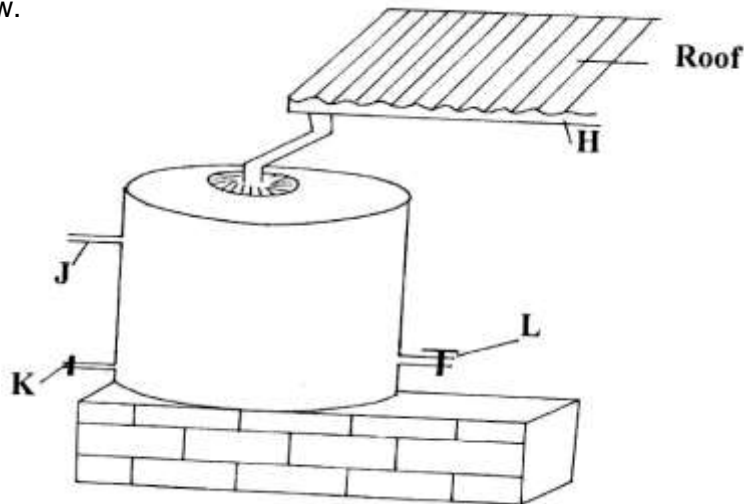
(a) (i) How can part of the structure labeled B be stabilized after it has been constructed? (1mk)

.....  
(ii) Identify the part of the cut-off drain labeled A. (1mk)

(b) Describe the procedure of constructing a cut-off drain. (2mks)

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.....

17. The diagram below shows a house water storage tank. Study it and answer the questions that follow.



(a) Identify the parts of the tank labeled:

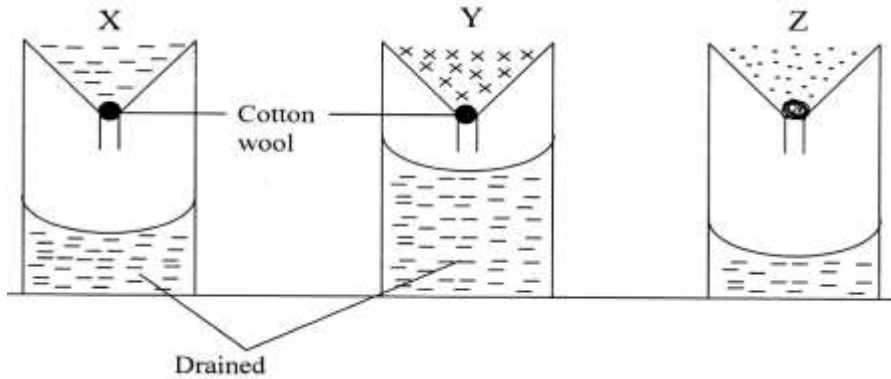
H:..... (1mk)

K:..... (1mk)

(b) Give the function of the part labeled J. (1mk)

.....  
.....

18. The experiment below was set to compare the porosity and water holding capacity of three different types of soils.



(i) Identify the soils in each of the following funnels labeled. (1½mks)

X:.....

Y:.....

Z:.....

(ii) Which of the types of soil can be said to have the highest porosity rate? (½mk)

.....

(iii) Give reasons for your answers in (ii) above. (2mks)

.....

(iv) Which type of soil would be suitable for planting paddy rice? (1mk)

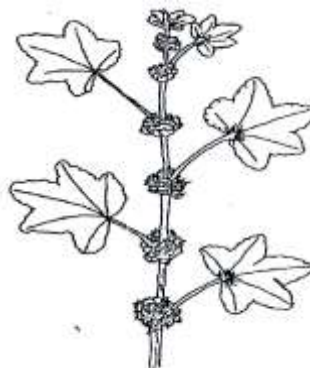
.....

(v) Explain your answer in (iv) above. (1mk)

.....

.....

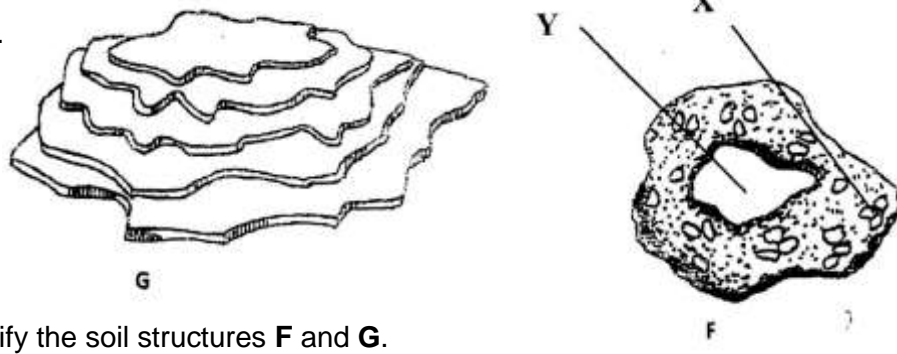
19. Below is a diagram of a Common East African Weed.



(i) Identify the weed illustrated above. (1mk)

- .....
- (ii) Give **one** harmful effect of the weed illustrated above to livestock. (1mk)
- .....
- (iii) State **two** methods of controlling the weed illustrated above. (1mk)
- .....
- .....

20. The diagrams below illustrate some soil structures. Study them and answer the questions that follow.



- (a) Identify the soil structures **F** and **G**. (1mk)
- F**: .....
- G**: .....
- (b) Name the part labeled **X** and **Y** in diagram **F**. (1mk)
- X**: .....
- Y**: .....
- (c) State **two** ways through which structure **G** influence crop production. (2mks)
- .....
- .....

**SECTION C (40 MARKS)**

**Answer any two questions from this section in the spaces provided**

21. (i) Describe the field production of irrigated rice under the following sub-headings:
- (a) Field preparation. (6mks)
- (b) Water control (3mks)
- (c) Field management (5mks)
- (ii) Describe the precautions taken while harvesting:
- (a) Pyrethrum (3mks)
- (b) Tea (3mks)
22. (a) Name **two** types of inventory records in the farm. (1mk)
- (b) Explain **six** importance of farm budgeting. (6mks)
- (c) The inventory for Kipsinende farm as at 01.06.2011

	Kshs.
Cash at hand	5,000

Broilers	30,000
Maize in store	7,000
Calves	15,000
Dairy cattle	120,000
Buildings	75,000
Machinery	95,000
Land	200,000

On the same day, the following information was obtained from the farmers records

Kshs.

Interest payable	2,000
Cash in the bank	20,000
Taxes payable	750
Wages payable	5,600
Bank loan	213,000
Egg sales on credit	10,000
Milk sales on credit	13,000
Farm inputs purchased on credit	19,800
Vegetable sales on credit	5,000

**Required:** Prepare a balance sheet for the farm. (13mks)

- 23. (a) Outline the process of treating water for domestic use using chemical treatment system. (12mks)
- (b) Explain **five** physical factors that increases the rate of soil erosion in a farm. (5mks)
- (c) Explain how monoculture leads to loss of soil nutrients. (3mks)

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# PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... CANDIDATE'S SIGNATURE .....

441/1  
HOME SCIENCE  
Paper 1 (Theory)  
Time: 2½ Hours

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO THE CANDIDATES

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

This paper consists of **THREE** sections A, B, and C.

Answer **ALL** the questions in section A and B

Answer any **TWO** questions from section C

## For examiners use only

Section	Questions	Maximum score	Candidates score
A	1- 16	40	
B	17	20	
C		20	
	<b>TOTAL SCORE</b>		

*This paper consists of 7 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

**SECTION A (40 MARKS)**

Answer ALL questions in this section in the spaces provided

1. Mention two functions of cholecalciferol in the body. (2 Marks)

.....  
.....

2. Suggest three causes of malnutrition. (3 Marks)

.....  
.....  
.....

3. What are the effects of immersing a hot aluminium frying pan in cold water? (2 Marks)

.....  
.....

4. Explain three forms of advertisements. (2 Marks)

.....  
.....  
.....  
.....

5. Write the following abbreviations in full (2 Marks)

- BCG.....  
- TBA.....

6. Name two methods which could be used to serve meals at home. (2 Marks)

.....  
.....

7. What are the determinants of safe parenthood? (3 Marks)

.....  
.....  
.....

8. Identify three points to bear in mind when buying land for a family house. (3 Marks)

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.....  
.....

9. State three basic instructions on the use of medicines. (3 Marks)

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.....  
.....

10. Give three advantages of using credit cards. (3 Marks)

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.....  
.....

11. Name four fabrics that should not be wrung during laundering. (2 Marks)

.....  
.....  
.....

12. State three functions of pressing cloth. (3 Marks)

.....  
.....  
.....

13. State two qualities to look for when choosing a stiletto. (2 Marks)

.....  
.....

14. Identify six substances that are added to soap during manufacturing. (3 Marks)

.....  
.....  
.....

15. Give two ways of purifying water for small scale use. (2 Marks)

.....  
.....

16. Differentiate between food fortification and food supplements. (2 Marks)

.....  
.....

### **SECTION B (20 MARKS)**

#### **Compulsory**

17. You are preparing to host your grandparents over the weekend.

a) Describe the method you would use to clean a varnished wooden table to be used in the dining room. (6 Marks)

b) Give six principles you would observe when removing stains from the table clothe to be used. (6 Marks)

c) Outline the procedure you would use when cleaning a toilet to be used by your grand parents (8 Marks)











# **PREDICTION 2**

**441/2**  
**HOME SCIENCE**  
**(CLOTHING CONSTRUCTION)**  
**PAPER 2**  
**(PRACTICAL)**  
**Time 2<sup>1</sup>/<sub>2</sub> hours**

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

**CONFIDENTIAL**

## **INSTRUCTIONS TO SCHOOLS**

The school is advised to provide the candidates with the following materials.

1. Plain light weight cotton fabric 50cm by 90 cm wide.
2. Sewing thread to match fabric.
3. Sewing machines at least 4 per 10 students.

## **PREDICTION 2**

**441/2**  
**HOMESCIENCE (CLOTHING AND TEXTILES)**  
**PAPER 2**  
**PRACTICAL**  
**TIME: 2½ HOURS**

*Kenya Certificate of Secondary Education*

*This paper consists of 2 printed pages.  
Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

A pattern of a girl's skirt is provided. You are advised to study the sketches, the question paper and lay out carefully before you begin the test.

### **MATERIALS PROVIDED**

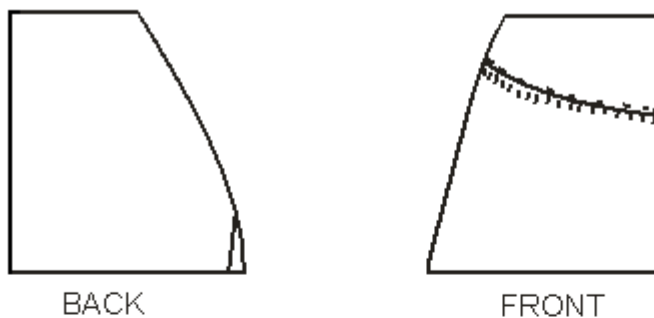
1. Pattern pieces
  - A. Skirt front
  - B. Skirt back
  - C. Pockets
  - D. Front yoke
2. Light weight cotton fabric 50cm by 90cm wide.
3. Sewing thread to match the fabric

### **THE TEST**

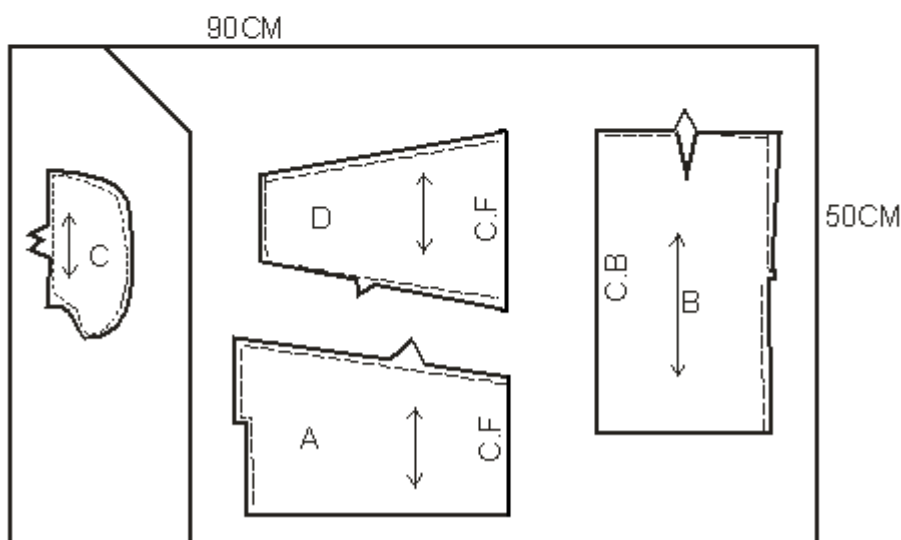
- a. Using the materials provided, cut and make the right half of the skirt to show the following processes.
- b. The preparation of the gathers on the skirt front piece.
- c. Attachment of yoke piece to the skirt front piece using a neatened overlaid seam. Use loop stitches.
- d. Attachment of front pocket piece to the skirt front and back pocket piece to the skirt back.
- e. The making of an unneaten open seam at the side above and below the pocket mouth.
- f. The joining of the pocket bag seam (do not neaten)
- g. Use preparation of the skirt hem and slip hemming it.

At the end of the examination, firmly sew onto your work on a single fabric a label bearing your **Name** and **admission Number**. Remove the needles and pins from your work then fold it neatly.

### **SKIRT VIEW**



### **THE LAYOUT (not drawn to scale)**



# PREDICTION 2

NAME..... INDEX NO.....  
SCHOOL..... CANDIDATE'S SIGNATURE.....  
DATE .....

**451/1**  
**COMPUTER STUDIES**  
**PAPER 1 (THEORY)**  
**TIME: 2 ½ HOURS**

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

## INSTRUCTIONS TO CANDIDATES

- This paper consists of TWO sections A and B
- Answer all questions in section A.
- Answer question 16 (Compulsory) and any other **THREE** questions in section B.
- All answers should be written in the spaces provided in the question paper

## FOR EXAMINER'S USE ONLY.

Section	Question	Candidates Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
<b>Total Score</b>		

This paper consists of 8 Printed pages, candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing

**SECTION A (40 MARKS)**Answer all questions from this section in the spaces provided

1. List the components of a computer system hardware. (2 Marks)
- .....
- .....
2. Describe the term key to storage systems (1 Mark)
- .....
- .....
3. One classification of software is system software
- (a) i. What is meant by system software (1 Mark)
- .....
- .....
- ii. Give one example of system software. (1 Mark)
- .....
- .....
- (b) i. Name one other software classification (1 Mark)
- .....
- .....
- ii. Give one example of this type of software (1 Mark)
- .....
- .....
4. a. What do you understand by the term database management system? (DBMS)? (1 Mark)
- .....
- .....
- b. Define the following terms as used in a database. (2 Marks)
- i. Primary Key
- .....
- ii. Record
- .....
5. Differentiate between COMports and LPT ports (2 Marks)
- .....
- .....
6. List three factors to consider when deciding on the choice of electronic data processing method (3 Marks)
- .....
- .....
- .....

7. Ventilation is an important practice in the computer lab because it enhances proper circulation of air. (3 Marks)  
Outline three ways in which air is regulated in the computer room.  
.....  
.....  
.....
8. What do the following control measures against computer crime involve? (4 Marks)
- a. Audit trail  
.....
  - b. Data encryption  
.....
  - c. Log files  
.....
  - d. Passwords  
.....
9. Highlight the use of find and replace features in word processors. (2 Marks)  
.....  
.....
10. Explain why two's complement is preferred to one's complement in computing. (1 mark)  
.....  
.....
11. Computers have evolved through a number of generations. List any three characteristics of the first generation of computers. (3 marks)  
.....  
.....  
.....
12. List four formatting techniques used in Ms excel (2 Marks)  
.....  
.....  
.....  
.....
13. List four examples of flat panel displays. (2 Marks)  
.....  
.....  
.....  
.....

14. Explain the following terms as used in the word processing.

(4 Marks)

a. Indenting

.....

b. Alignment

.....

c. Footnote

.....

d. Endnote

.....

15. Describe the role of an operating system in

i. Memory management

.....

ii. Job scheduling

.....

iii. Error handling

.....

iv. Resource control

.....

**SECTION B (60 MARKS)**

16. a. State the three basic types of program control structures.

(3 Marks)

.....

.....

.....

b. Draw a flowchart which will simulate the processing of student's report. The simulation should be such that the user repeatedly inputs marks per subject for six subjects using a looping control structure. The computer processes the total marks and mean score of the student.

NOTE:

1. It is assumed that the student does six subjects

2. The output required are: Average score and total marks

c. Differentiate between analogue and digital data.

(2 Marks)

.....

.....

.....

.....

d. Outline three advantages of using computers for data processing over other types of office and business equipment.

.....

.....

.....

17. a. Convert the following numbers to their decimal equivalent.

(6 Marks)

i.  $11.011_2$

.....

.....

ii.  $12.15_8$

.....

.....

iii.  $A3.3/6$

.....

.....

b. Outline four ways in which data integrity may be maintained.

(4 Marks)

.....

.....

.....

.....

c. Explain four advantages of using questionnaires as a fact finding tool.

(4 Marks)

.....

.....

.....

.....

d. What is the role of a recycle bin?

(1 Mark)

.....

18. a. Masai teacher's college has decided to automate its library for effective services to the students. Identify four methods they are likely to use to gather information during system development.

(4 Marks)

.....

.....



.....  
.....  
b. What do the following terms mean in relation to internet? (4 Marks)

i. Downloading  
.....

ii. Hyperlink  
.....

iii. Web browsers  
.....

(iv) Internet service providers  
.....

c. Differentiate between sorting and filtering as used in electronic spreadsheet program (2 Marks)  
.....  
.....  
.....

d. What do the following terms mean

i. Spam mail  
.....  
.....

ii. Disk  
.....  
.....

iii. Onboard modem  
.....  
.....

e. What does the term WIMP mean as used in computing?  
.....  
.....

19. (a) Define a database model (1Mark)  
.....  
.....

b. List four advantages of using database systems (2marks)  
.....  
.....  
.....  
.....

c. In a database system, data integrity ensures the correctness and completeness of the data in the database.

Differentiate the following types of integrity constraints:

i. Validity integrity (1mark)

.....

ii. Entity integrity (1mark)

.....

iii. Referential integrity (1mark)

.....

d. Briefly describe the three database models (3 Marks)

.....

.....

.....

e. Using diagrams describe the following three types of relationships. (3Marks)

i. One – to – one

ii. One – to – many

iii. Many – to – many

f. File organization refers to the arrangement of records on secondary storage. Briefly describe the following file organization methods. (3 Marks)

i. Serial

.....

ii. Sequential

.....

iii. Random

.....

20. a. Your School has decided to replace its library control system. The current system was implemented ten years ago but has restricted reporting facilities and has a text – based interface. The school intends to replace the old system with a new computerized system, and is now considering both ‘parallel running ‘ and ‘direct changeover’

i. Briefly explain the terms parallel running and direct change over as used in system implementation. (2 Marks)

.....  
 .....

ii. Give two disadvantages of direct changeover overparallel running (1 Marks)

.....  
 .....

iii. Identify two main risks of direct changeover during system implementation (2 Marks)

.....  
 .....

iv. Mention any two advantages of running both the manual system and the computerized system simultaneously (2 Marks)

.....  
 .....

b. i. What is a website? (2 marks)

.....  
 .....

ii. Name three facilities that are needed to connect to the internet. (3 Marks)

.....  
 .....

c. State three ways students can benefit by having internet in a school (3 Marks)

.....  
 .....

# PREDICTION 2

NAME ..... DATE .....

INDEX NO. .... CANDIDATE'S SIGNATURE .....

451/2

COMPUTER STUDIES

PAPER 2

(PRACTICAL)

TIME: 2½ HOURS

*Kenya Certificate of Secondary Education*

## INSTRUCTIONS TO CANDIDATES

- (a) Type your name and index number at the top right hand corner of each print out
- (b) Write your name and index number on the diskette/CD-R provided
- (c) Write the name and version of software used in each question on the answer sheet
- (d) Answer **ALL** the questions
- (e) Passwords **should not be used** while saving in the diskette/CD-R
- (f) All answers **MUST** be saved in the diskette/CD-R
- (g) Make print out of answers on the answer sheet provided

## FOR EXAMINER'S USE ONLY

Question	Candidate's score
1	
2	
<b>Total score</b>	

*This paper consists of 4 printed pages.*

*Candidates should check to ensure that all pages are printed as indicated and no questions are missing*

## QUESTION ONE

1. (a) Assume you are the Director AMACO INSURANCE COMPANY LTD you want to update your customers on the current dues as per the insurance cover each client have. Use mail merge to write an

TURN OVER

official letter to **FIVE CUSTOMERS** informing them of this. Your letter must meet the following conditions.

- i. Must have the header at the top with the company's name as the letter head (2mks)
- ii. Must have footer at the bottom indicating the current date and time, left aligned. (2mks)
- iii. The insurance will cover the vehicles and each client due, car number will not be the same. (2mks)
- iv The address lines will include
  - Title
  - First name
  - Last name
  - Address
  - Country
  - Car no plate
  - Amount due (14mks)

- (b) (i) Prepare the table below in Ms word and then apply formatting as follows and save as MSS (8 mks)

MEYSA SYSTEMS AND SERVICES					
Technical information			Action taken		
Machine description	Problems found		Diagnostic checks	Solutions	
<i>Compaq / evo</i>	hardware	software	Memory video	1	Replacing vga
6522	<input type="text"/>	<input type="text"/>	Faulty component	2	Installing drivers
Desktop	No display		VGA CARD	3	Rebooting system

- (ii) Format the table with border line colour red and choose double line (5mks)

(iii) Shade the table to tight green colour for the first two rows and light blue shading for therest of the table

(5mks)

- (c) Type the paragraph below, save it as computer and apply formatting as stated (4mks)

Computer Program is a set of instructions that direct a computer to perform some processing function or combination of functions. For the instructions to be carried out a computer must execute a program, that is, the computer reads the program, and then follows the steps encoded in the program in a precise order until completion. A program can be executed many different times, with each execution yielding a potentially different result depending upon the options and data that the user gives the computer.

- (i) The text "computer program" should be the title, change its case to upper case font TREBUCHET

MS size 16, colour green

(2mks)

- (ii). Find the word 'instructions' look for its meaning in the computer dictionary and finally replacethe word with new meaning from the dictionary (3mks)

- (iii). Format the whole paragraph to justified alignment shading colour light green (3mks)

NAME	BASIC PAY	DEPARTMENT	AGE	STATUS
------	-----------	------------	-----	--------

2.

Peter	15000	Computer	34	Single
John	17000	Computer	44	Married
Kamau	19000	Finance	33	Divorced
Charles	21000	Research	33	Single
Johns	23000	Research	25	Single
Thomas	25000	Computer	26	Married
Ann	27000	Finance	28	Married
Susan	29000	Finance	29	Divorced
Tina	31000	Research	24	Divorced
Andrew	33000	Computer	40	Single
Hardy	35000	Finance	20	Married
Njeri	37000	Finance	43	Single
Kimani	10000	Research	15	Single
Silamtoi	15000	Finance	35	Divorced
Tina	35000	Computer	25	Married
Moses	59000	Research	33	Single
Miriam	70000	Finance	56	Divorced
Maurice	32876	Computer	70	Divorced
Alphie	43876	Research	98	Divorced
Albert	48098	Research.	32	Single
Langat	6500	Computer	12	Single
Phenny	29000	Finance	70	Single
Hilda	32000	Computer	13	Married

Create data base called personnel and create a table named department

(5 mks)

- (b) Create queries to determine (save each query using the alphabet numbers below)
- i. Number of people with basic salary greater than 32,000/= (5 mks)
  - ii. Number of people with basic salary less than 45,000/= AND come from computerdepartment(5mks)
  - iii. Names of people who are either married or single. (4 mks)
  - iv. Those whose salary fall between 25,000/= and 50,000= (3mks)
  - v. Those whose name begin with letter M or end in letter S (3 mks)
- (c) (i) Create a query to compute the new salary if there is an increment of basic pay by 50% (7mks)
- (ii) Filter using query those who earn above 33000/= and aged between 39 and 70 (5 mks)
- (d) (i) Create a form using form wizard using the Departmental table above. (3mks)
- (ii) Create a form in design view using the departmental table above on the form calculate the total basic salary for the whole table, add current date and time on the form header (5 mks)
- (iii) Create a report for THE ABOVE table using design view and print. (5mks)