KCSE 2020 PRE–MOCK

ALL SUBJECTS SET 1

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KCSE PRE-MOCK EXAMINATION 2020

NAME: ………………………………………………………

INDEX NO : ………………

121/1

MATHEMATICS

PAPER 1

TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

i. Write your name and Index number in the spaces provided above.

ii. This paper consists of two sections: Section I and Section II.

iii. Answer all questions in Section I and only Five questions from Section II.

iv. Show all the steps in your calculations giving your answer at each stage in the spaces provided below each question.

v. Non-programmable silent electronic calculators and KNEC mathematical tables may be used.

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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 MKS)

Attempt all questions.

1. Use tables of reciprocal only to evaluate $1/0.325$ hence evaluate : 3 <u>0.000125</u>
   (3mks)

   0.325.

2. Two boys and a girl shared some money. The elder got **4⁄9** of it, the younger boy got **2⁄5** of the remainder and the girl got the rest. Find the percentage share of the younger boy to the girls share.

   (3mks)

3. Annette has some money in two denominations only. Fifty shillings notes and twenty shilling coins. She has three times as many fifty shilling notes as twenty shilling coins. If altogether she has sh. 3,400, find the number of fifty shilling notes and 20 shilling coin. (3mks)

4. The figure below shows a rhombus PQRS with PQ= 9cm and ‹SPQ=60^0 . SXQ is a circular arc, centre P.

        S   R

  P   Q

Calculate the area of the shaded region correct to two decimal places (Take Pie= 22/7)   (4mks)

5. Solve the equation $2x^2 + 3x=5$ by completing the square method (3mks)

6. Simplify the expression $\dfrac{3x^2 - 4xy^2 + y}{9x^2 - y^2}$
(3mks)

7. Solve the equation **$8x^2 + 2x - 3 =0$** hence solve the equation **$8\cos^2 y + 2\cos y - 3= 0$**
For the range $0^0< y <180^0$
(4mks)

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8. Show that the points P(3,4), Q(4,3) and R(1,6) are collinear. (3mks)

9. Solve the inequalities $x \leq 2x + 7 \leq \frac{1}{3}x + 14$ hence represent the solution on a number line. (3mks)

10. The mean of five numbers is 20. The mean of the first three numbers is 16. The fifth number is greater than the fourth by 8. Find the fifth number. (3mks)

11. The volume of two similar solid spheres are 4752cm³ and 1408cm³. If the surface area of the small sphere is 352cm², find the surface area of the larger sphere. (3mks)

12. Solve for x in the equation $\frac{1}{2}\log_2 81 + \log_2(x - \frac{x}{3}) = 1$ (3mks)

13.   A farmer has a piece of land measuring 840m by 396m. He divides it into square plots of equal size. Find the maximum area of one plot. (3mks)

14.   a) find the inverse of the matrix (1mk)

   b) Hence solve the simultaneous equation using the matrix method (2mks)
      4x + 3y =6
      3x + 5y +5

15.   In the figure below O is the centre of the circle and <OAB=20^0. Find;
   a) <AOB   (1mk)
   b) <ACB   (2mks)

                                                                        A
   B
16.   Each interior angle of a regular polygon is 120^0 larger than the exterior angle. How many sides has the polygon?   (3mks)

SECTION   II   (50MKS)
Choose any fie questions

17.   Three business partners, Bela Joan and Trinity contributed Kshs 112,000, Ksh,128,000 and ksh,210,000 respectively to start a business. They agreed to share their profit as follows:
   30% to be shared equally
   30% to be shared in the ratio of their contributions
   40% to be retained for running the business.

If at the end of the year, the business realized a profit of ksh 1.35 Million. Calculate:

a) The amount of money retained for the running of the business at the end of the year.   (1mk)

b) The difference between the amounts received by Trinity and Bela (6mks)

c) Express Joan's share as a percentage of the total amount of money shared between the three partners.
(3mks)

18.   Complete the table below for the function $y=x^3 + 6x^2 + 8x$ for $-5 \le x \le 1$ (3mks)

X	-5	-4	-3	-2	-1	0	1
X³	-125	-64			-1	0	8
6X²			54		6	0	
8X	-40		-24	-16		0	8
Y		0	3			0	15

a) Draw the graph of the function $y=x^3 + 6x^2 + 8x$ for $-5 \le x \le 1$ (3mks)

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(use a scale of 1cm to represent 1 unit on the x-axis . 1cm to represent 5 units on the y-axis)

b) Hence use your graph to estimate the roots of the equation
$X^3 + 5x^2 + 4x = -x^2 - 3x - 1$
(4mks)

19.   Three islands P,Q,R and S are on an ocean such that island Q is 400Km on a bearing of 030^0 from island P. island R is 520Km and a bearing of 120^0 from island Q. A port S is sighted 750Km due South of island Q.
   a) Taking a scale of 1cm to represent 100Km, give a scale drawing showing the relative positions of P,Q,R and S.
   (4mks)

Use the scale drawing to:
   b) Find the bearing of:
      i.   Island R from island P
           (1mk)
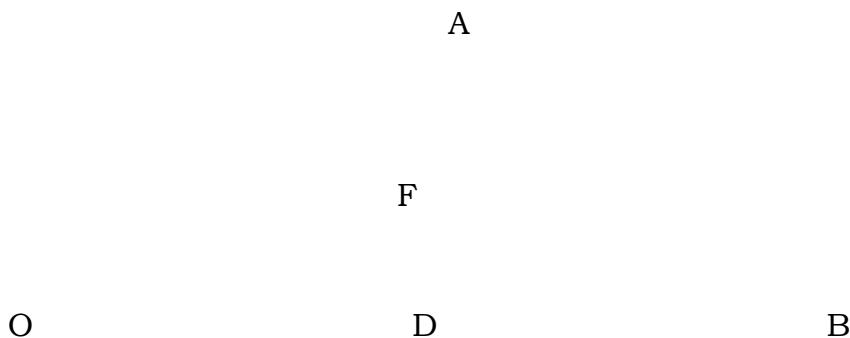
      ii. Port S from island R
           (1mk)

c) Find the distance between island P and R
(2mks)

d) A warship T is such that it is equidistant from the islands P,S and R. by construction locate the position of T.
(2mks)

20. In the figure below, E is the midpoint of AB, OD:DB=@:3 and f is the point of intersection of OE and AD.

A

F

O   D   B

Given OA= a and OB= B

a) Express in terms of a and b
    i.   AD   (1mk)
    ii. OE   2(mks)

b) Given that AF= sAD and OF= tOE find the values of s and t
(5mks)

c) Show that E,F and O are collinear
(2mks)

21.   A bag contains 5 red, 4 white and 3 blue beads . two beads are selected at random one after another.

a) Draw a tree diagram and show the probability space.   (2mks)

b) From the tree diagram, find the probability that;

   i.   The last bead selected is red (3mks)

   ii.   The beads selected were of the same colour   (2mks)

   iii. At least one of the selected beads is blue.   3(mks)

22.   The table below shows how income tax was charged on income earned in a certain year.

Taxable income per year(Kenyan pounds	Rate shilling per K£
1-3630	2
3631- 7260	3
7261 -10890	4
10891 - 14520	5

Mr. Gideon is an employee of a certain company and earns a salary of ksh.15,200 per month. He is housed by the company and pas a nominal rent of Ksh. 1050 per month. He is married and is entitled to a family relief of ksh. 450 per month.

i. Calculate his taxable income in K£ p.a   (2mks)

ii. Calculate his gross tax per month.   (4mks)

iii. Calculate his net tax per month   (2mks)

iv. Calculate his net salary per month   (2mks)

23.   The table below shows the distribution of mathematics marks of form 4 candindates in Mavoko Secondary school.

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
F	4	7	12	9	15	23	21	5	4

Use the above date to calculate:
a) Mean using assumed mean of 65   (3mks)

b) Median (3mks)

c) Standard deviation (4mks)

24. Coast bus left Nairobi at 8.00am and travelled towards Mombasa at an average speed of 80Km/hr. At 8.30am, Lamu bus left Mombasa towards Nairobi at an average speed of 120 km per hour. Given that the distance between Nairobi and Mombasa is 400Km.: determine:

   i. The time Lamu bus arrived in Nairobi. (2mks)

   ii. The time the two buses met. (4mks)

   iii. The distance from Nairobi to the point where the two buses met. (2mks)

iv. How far coast bus is from Mombasa when Lamu bus arrives in Nairobi (3mks)

KCSE PRE-MOCK EXAMINATION 2020

NAME…………………………………………..**ADM.NO**………….**CLASS**………….
Date …………………

121/2
MATHEMATICS
Paper 2
2 ½ Hours

Instructions to candidates

1. *Write your **name, admission number** and **class** in the spaces provided above.*
2. *Sign and write the date of examination in the spaces provided above.*
3. *The paper contains two sections: **Section I** and **Section II**.*
4. *Answer **All** the questions in **section I** and **strictly any five** questions **from Section II**.*
5. *All answers and working must be written on the question paper in the spaces provided below each question.*
6. *Show all the steps in your calculations, giving your answers at each stage in the spaces below each question.*
7. *Marks may be given for correct working even if the answer is wrong.*
8. *Non-programmable silent electronic calculators and **KNEC** mathematical tables may be used, unless stated otherwise.*

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**

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Grand Total

This paper consists of 16 printed pages .Candidates should check the question paper to
Ensure that all the pages are printed as indicated and no question(s) are missing

SECTION A (50 MARKS)
Answer all the questions in this section

1. Use logarithm table to evaluate.   4 mks

2. 200 cm^3 of acid is mixed with 300 cm^3 of alcohol. If the densities of acid and alcohol are 1.08g/cm^3 and 0.8 g/cm^3 respectively, calculate the density of the mixture.

                                                                            3 mks

3. The coordinates of P and Q are P(5, 1) and Q(11, 4) point M divides line PQ in the ratio 2 : 1. Find the magnitude of vector OM.   (3 marks)

Monthly income in Ksh	Tax rate in each Ksh
1 – 9680	10%
9681 – 18800	15%
18801 – 27920	20%
27921 – 37040	25%
Over 37040	30%

4. The table below shows income tax rates in a certain year.

In that year, a monthly personal tax relief of Ksh. 1056 was allowed. Calculate the monthly income tax paid by an employee who earned a monthly salary of Ksh 32500.   (4 mks)

5. Make   the subject of the formulae.   3mks

6. A line passes through points (2, 5) and has a gradient of 2.
    (a) Determine its equation in the form .   2mks

    (b) Find the angle it makes with x-axis.   1mk

7. A quantity **P** is partly constant and partly varies as the cube of **Q**. When **Q**=1, **P**=23 and when **Q** =2, **P**= 44. Find the value of **P** when **Q** = 5.   3mks

8. The vertices of a triangle are A(1, 2) , B(3, 5) and C(4, 1). The co-ordinates of C' the image of C under a translation vector T are (6, -2).
    (a) Determine the translation vector T.   1mk

    (b) Find the co-ordinates of A' and B' under the translation vector T.   2mks

9. (a) Expand   using the binomial expansion.   1mk

Use the first three terms of the expansion in (a) above to find the value of $(0.98)^4$ correct to nearest hundredth.   2mks

10. Find the centre and radius of a circle with equation:
    $\chi^2 + y^2 - 6\chi + 8y - 11 = 0$ (3mks)

11. Two grades of coffee one costing sh.42 per kilogram and the other costing sh.47 per kilogram are to be mixed in order to produce a blend worth sh.46 per kilogram in what proportion should they be mixed.
                                    (3mks)

12. Pipe A can fill an empty water tank in 3 hours while pipe B can fill the same tank in 5 hours. While the tank can be emptied by pipe C in 15 hours. Pipe A and B are opened at the same time when the tank is empty. If one hour later pipe C is also opened. Find the total time taken to fill the tank.
                                    4 mks.

13. Simplify the expression: 3mks.

14. A business bought 300 kg of tomatoes at Ksh. 30 per kg. He lost 20% due to waste. If he has to make a profit 20%, at how much per kilogram should he sell the tomatoes.

3mks.

15. Evaluate without using a Mathematical table or a calculator.
$Log_6\ 216 + [Log\ 42 - Log\ 6] \div Log\ 49$

(2mks

16. Given that the ratio , find the ratio (3 mk)

	-4	-3	-2	-1	0	1	2	3
	-64							27
	-20							
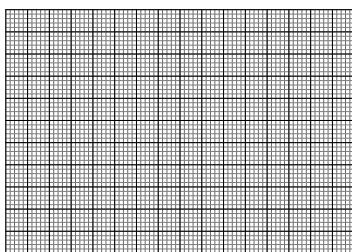
SECTION II (50mks)

Answer only *five* questions in this section in the spaces provide

17. Draw the graph of   for values of x in the range

5mks

(a) By drawing suitable straight line on the same axis, solve the equations.
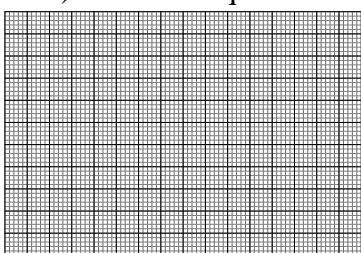
    i)   1mks

    ii)   2mks

    iii)   2mks

18. A transformation represented by the matrix $\begin{pmatrix} 2 & 1 \\ 1 & -2 \end{pmatrix}$ maps the points A(0, 0), B(2, 0), C(2, 3) and D(0, 3) of the quad ABCD onto $A^1B^1C^1D^1$ respectively.

a) Draw the quadrilateral ABCD and its image $A^1B^1C^1D^1$.   (3mks)

b) Hence or otherwise determine the area of $A^1B^1C^1D^1$.   (2mks)

c) Another transformation $\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$ maps A¹B¹C¹D¹ onto A¹¹B¹¹C¹¹D¹¹.
   Draw the image A¹¹B¹¹C¹¹D¹¹.   (2mks)

d) Determine the single matrix which maps A¹¹B¹¹C¹¹D¹¹ back to ABCD.   (3mks)

19. In the figure **below** (not drawn to scale) AB = 8cm, AC = 6cm, AD = 7cm, CD = 2.82cm and
    angle CAB = 50°.

Calculate (to 2d.p.)
(a)   the length BC.   (3 marks)

(b)   the size of angle ABC.   (3 marks)

(c)   size of angle CAD.   (3 marks)

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(d)　　Calculate the area of triangle ACD.　　　　　　　　　　　　　(2 marks)

20. Three variables P, Q and R are such that P varies directly as Q and inversely as the square of R.
a) When P = 18, Q = 24 and R = 4.
   Find P when Q = 30 and R = 10.　　　　　　　　　　　　　　(3mks)

(b) Express P in terms of Q and R.　　　　　　　　　　　　　　(1mk)

(c) If Q is increased by 20% and R is decreased by 10% find:
   (i)　A simplified expression for the change in P in terms of Q and R.　　　(3mks)

   (ii)　The percentage change in P.　　　　　　　　　　　　　(3mks)

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21. A surveyor recorded the following information in his field book after taking measurement in metres of a plot.

	To E	
	1000	
	880	320 to D
720 to F	640	
	480	600 to C
240 to G	400	
	200	400 to B
	From A	

(a) Sketch the layout of the plot.   4 mks.

(b) Calculate the area of the plot in hectares.   6mks

22. A line L passes through points (-2, 3) and (-1,6) and is perpendicular to a line P at (-1,6).
    a)   Find the equation of L.   (2 mks)
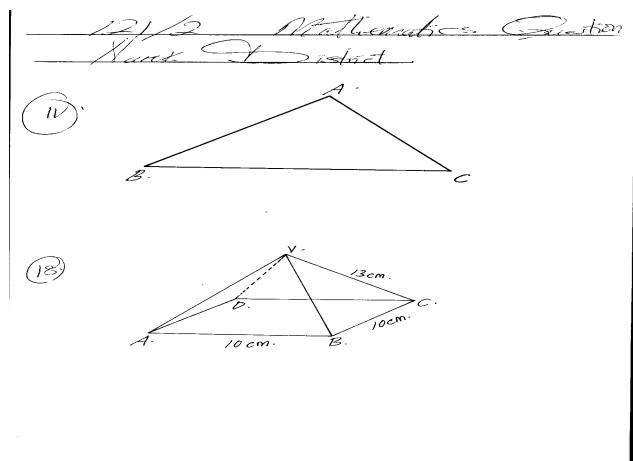
    b)   Find the equation of P in the form ax + by = c, where a, b and c are constant.   (2 mks)

    c)   Given that another line Q is parallel to L and passes through point (1,2) find the x and y intercepts of Q.
                                                              (3 mks)

    d)   Find the point of intersection of lines P and Q.   (3 mks)

23. The figure below shows a square ABCD point V is vertically above middle of the base ABCD. AB = 10cm and VC = 13cm.
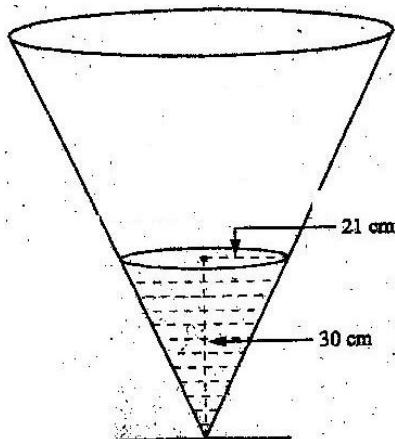
Find;
(a) the length of diagonal AC (2mks)

(b) the height of the pyramid (2mks)

(c) the acute angle between VB and base ABCD. (2mks)

d) the acute angle between BVA and ABCD. (2mks)

e) the angle between AVB and DVC. (2mks)

24. The diagram below represents a conical vessel which stands vertically. The which stands vertically,. The vessels contains water to a depth of 30cm. The radius of the surface in the vessel is 21cm. (Take $\pi=22/7$).

a) Calculate the volume of the water in the vessels in cm³ 3mks

b) When a metal sphere is completely submerged in the water, the level of the water in the vessels rises by 6cm.
Calculate:
(i) The radius of the new water surface in the vessel; (2mks)

(ii) The volume of the metal sphere in cm³ (3mks)

(iii) The radius of the sphere. (3mks)

KCSE PRE-MOCK EXAMINATION YEAR 2020

NAME ---   INDEX NO---------------------------------

DATE_____   CANDIATES SIGNATURE _____

443/1

AGRICULTURE

FORM 4 PP 1

TIME: 2 HRS

Answer all the questions in this section in the spaces provided

1a)Distinguish between flood irrigation and basin irrigation   (1mk)

b) Give two   maintenance practices required in flood irrigation system.   (1mk)

2) State the fate of water added to soil in crop field.   (2mks)

3a)Name two crops which after harvesting are processed using a flail.   (1mk)

b) What name is give to the practice in 3a above.   (1/2mk)

4State two conditions under which opportunity cost can be zero. (2mks)

5. Shown below is part of a record found in Nyali farm

a)i Identify the type of record shown above. (1mk)

ii) Give reason for your answer to a (i) above. (1mk)

b)What other column should be added to this record, to make it complete. (1mk)

6Give two disadvantages associated with burning as a land clearing method. (1mk)

7(a)Name three components of rooting mixture used in polythene sleeves in raising tree seedlings.

(3mks)

b) State two benefits of using polythene sleeves, in raising tree seedlings.   (2mks)

8. a)Define tissue culture.   (1mk)

bGive three advantages of tissue culture

9. Shown below is the average yield and total digestible nutrients (TDN) per hectare of hay cut in June July, August and September

ii) Give reason for your answer to (a)(i) above (1 mark)
....

(b) What other column should be added to this record, to make it complete ? (1 mark)
....

6. Give **two** disadvantages associated with burning as a land clearing method (1 mark)
....

7. (a) Name **three** components of a rooting mixture used in polythene sleeves, in raising tree seedlings (3 marks)
....

(b) State **two** benefits of using polythene sleeves, in raising tree seedlings. (2marks)
....

8. (a) Define tissue culture. (1 mark)
....

(b) Give **three** advantages of tissue culture. (1½ marks)
....

9. Shown below is the average yield and total digestible nutrients (TDN) per hectare of hay cut in June, July, August and September

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a) From the graph identify the relationship between average yield and total digestible nutrients of hay. (1mk)

a) From the graph, identify the most appropriate month of harvesting hay. (1mk)

10. Outline how the age of an animal influences the quality of farm yard manure production form it. (1mk)

11. List four soil requirements for tomatoes. (2mks)

12. Under what circumstance are beans referred to as vegetables. (1mk)

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13a) State two conditions that may lead to land fragmentation. (1mk)
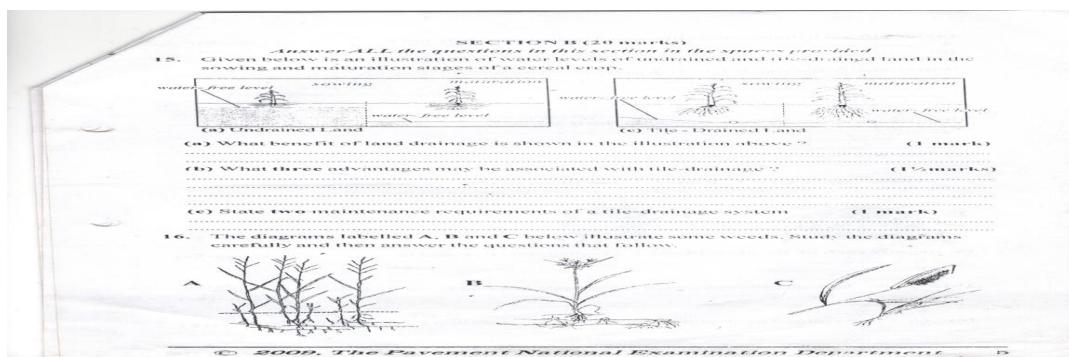
b) Give two benefits of land fragmentation. (1mk)

14a) Distinguish between tillering and thinning. (1mk)

b) Give three features of an ideal green manure crop. (11/2 mks)

SECTION B (20MKS)

15 Given below is an illustration of water levels of undrained and tile – drainage land in the sowing and maturation stage of cereal crop
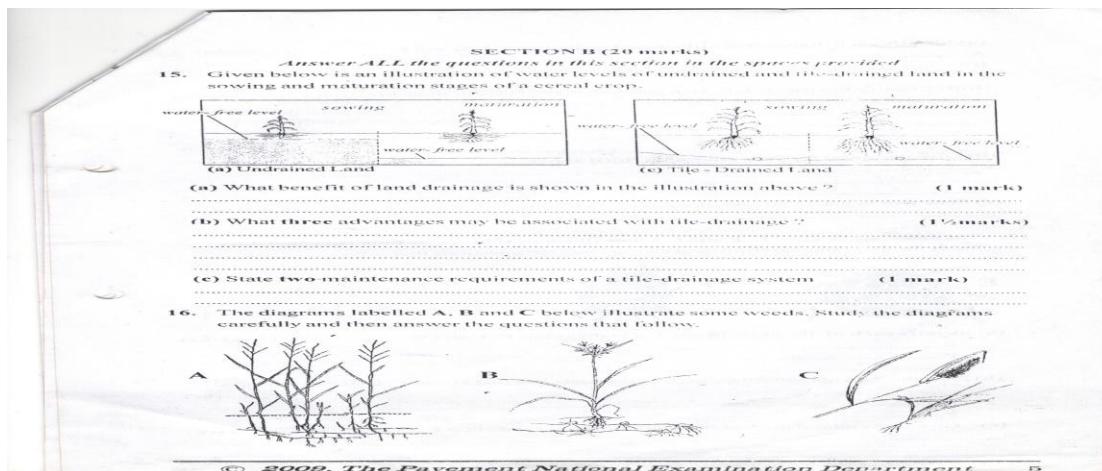
a) What benefit of land drainage is shown in the illustration above? (1mk)

b) What three advantages may be associated with tile-drainage? (11/2mks)

c) State two maintenance requirements of tile-drainage system. (1mk)

16. The diagrams labeled A,B and C below illustrate some weeds. Study the diagrams carefully and then answer the questions that follow.

a) Identify each of the weeds illustrated in diagram A,B and C. (3MKS)

A

B
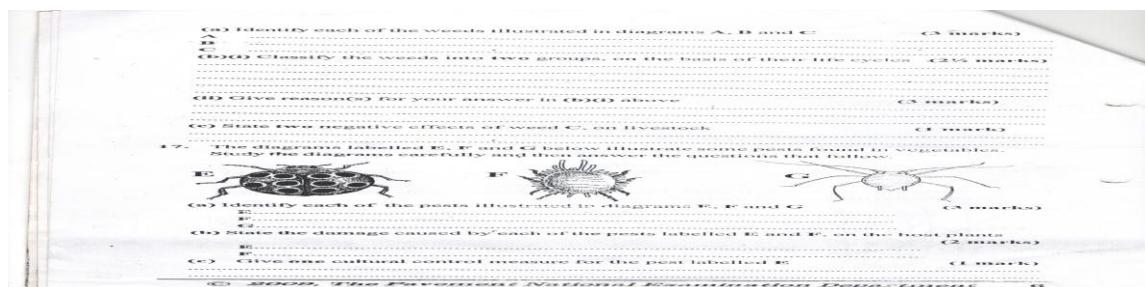
C

B)i Classify the weeds into two groups, on the basis of their life cycles. (21/2marks)

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ii) Give reasons for you answer in (bi) above.   (3mks)

c)State two negative effects of weed C, on livestock.   (1mk)

17. The diagram labeled E, F and G below illustrate some pest found in vegetables study the diagrams carefully and then answer the questions that follow

a)   Identify each of the pest illustrate in diagram E,F, and G.   (3MKS)

B) State the damage caused by each of the pest labeled E and F, on the host plants. (mksa_

c)Give one cultural control measure for the pest labeled E   (1mk)

d) Other than vegetables name two crop plants that may be infested with the pest labeled G

SECTION C (40MKS)

Answer an two question in this section the space provided

18Discuss vegetable crops under the following sub- headings

a)Definition of vegetable.   (1mk)

b)Management of perishability vegetables.   (4mks)

c)Importance of vegetables.   (6mks

d)Common stem vegetables.   (4mks)

e)Staking in tomatoes.   (5mks)

19a) Discuss budding a applied in crop production under the following sub-headings

    i)   Timing   (5mks)

    ii)   Advantages over grafting.   (4mks)

    iii)   Materials used.   (6mks)

    iv)   Briefly describe whip grafting.   (5mks)

20 Discuss wind erosion under the   following sub- headings

a)Destructive effects of wind erosion on crop plants.   (5mks)

e) Factors affecting susceptibility of soil to wind erosion.   (15mks)

NAME………………………………………………………… INDEX NO:………………

CANDIDATE'S SIGNATURE:………………………… DATE:……………………………………

443/1

AGRICULTURE

PAPER 2

TIME 2 HOURS

KCSE PRE-MOCK EXAMINATION YEAR 2020

INSTRUCTIONS TO CANDIDATES

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

2. Sign and write the date of examination in the spaces provided above.

3. This paper consists of three sections, **A**, **B** and **C**.

4. Answer all the questions in sections **A** and **B**.

5. Answer any two questions from section **C**.

6. Answers should be written in the spaces provided.

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Section	Question	Maximum score	Candidates score
A	1 - 14	30	
B	15 - 18	20	
C	19 - 21	20	
		20	
	Total score	**90**	

*This paper consists of **10** printed pages. Candidates should check the question paper to ensure that all the Pages are printed as indicated and no questions are missing.*

SECTION A: (30 MARKS)

Answer ALL questions in the spaces provided

1. (a) State **four** importance of keeping rabbits. (2 marks)

(b) Name **two** dual purpose breeds of cattle. (1 mark)

----

2. Give **two** reasons for flushing in sheep management. (2 marks)

----

3. State **four** qualities of a good vaccine. (2 marks)

----

4. Name any **four** components of a zero-grazing unit.
(2 marks)

----

5. Give **four** management practices carried out in a crush.
(2 marks)

----

6. (a) State **four** symptoms of coccidiosis.   (2
marks)

(b) Give **two** ways in which the health of an animal can be restored.
(1½ marks)

----

7. List **four** abnormalities which may arise during egg formation.
(2 marks)

----

8. Name any **six** milking requirements after restraining a dairy cattle.
(3 marks)

----

9. Name **four** factors that influence the amount of concentrates fed to a milking cow.
(2 marks)

----

10. Give the breeding system involved in each of the following cases;

    (a) Friesian sire mated with Aryshire dam.   (½ mark)

    (b) Friesian sire (father) mated with Friesian dam (daughter).   (½ mark)

        ----

11. State **four** control measures of Tsetseflies.   (2 marks)

----

12. Name **four** examples of succulent feeds.
(2 marks)

----

13. List down **three** methods of treating bloat.   (1½ marks)

----

14. Give **four** reasons for maintaining farm tools. (2 marks)

SECTION B: (20 MARKS)

*Answer **ALL** the questions in the spaces provided.*

15. (a) The diagram below represents a cross-section of a floor of a permanent milking shed.

(i) Label on the diagram, the layers marked 1, 2, 3 and 4.   (2 marks)

1   --

2   --

3   --

4   --

(ii) State **two** factors that influence quality of concrete.   (2 marks)

----

16. Below is a diagram illustrating a farm structure.   Study it carefully and answer the questions below.

(a) Identify the structure. (1 mark)

(b) Name the parts G, H and K. (3 marks)

     G   --

     H   --

     K   --

(c) State the factors to consider when siting the structure. (2 marks)

----

17. Below are illustrations of live stock parasites. Study them and answer the questions that follow.

(a) Identify the parasites A and B. (2 marks)

A   --

B   ---

(b) State **two** control measures for parasite B. (2 marks)

(c) Give **two** symptoms of parasite A attack on cattle.
(2 marks)

----

18. Study the illustrations below and answer the questions below and answer the questions that follow.

(a) Identify the tools J, K, L and M.   (4

   marks)

   J   ---

   K   ---

   L   ---

   M   ---

SECTION C: (40 MARKS)

Answer any TWO questions from this section in the spaces provided.

19. (a) Discuss **five** factors considered when constructing a farm structure.
(5 marks)

(b) State any **five** factors that should be considered when choosing tools and equipment to use in the

    farm.   (5 marks)

(c) Describe ten management practices carried out on a fish pond. (10 marks)

20. (a) Compare the use of animal drawn implement to tractor drawn implements. (10 marks)

    (b) Describe any **five** maintenance practices carried out on an ox-drawn plough. (5 marks)

    (c) Discuss the advantages and disadvantages of using tractor hire serves in the farm over using own

    tractor.   (5 marks)

21. (a) Describe the general effects of parasites on livestock. (8 marks)

    (b) Describe East Coast Fever (ECF) under the following sub-headings.

    (i) Animal attacked   (1 mark)

    (ii) Causal agent   (1 mark)

    (iii) Vectors   (1 mark)

    (iv) Symptoms   (5 marks)

    (v) Control measures   (2 marks)

  (d) Name any **four** internal predisposing factors of animal diseases. (2 marks)

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NAME _____ AD NO _____

DATE _____   Class _____

KCSE PRE-MOCK EXAMINATION YEAR 2020

BIO PP1

TIME:

INSTRUCTIONS:

Answer all the questions in the spaces provided

1. Name the part of a flower that develops into:
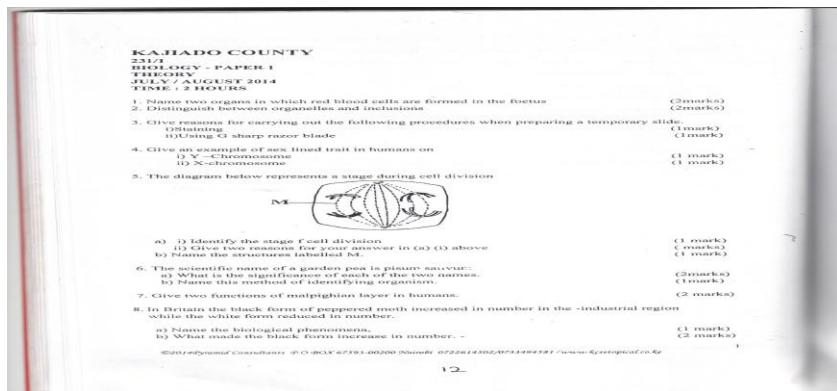
[i] Seed   [1mk]

[ii] Fruit   [1mk]

2. State two ways in which floating leaves of aquatic plants are adapted to gaseous exchange. [2mk]

3. The diagram below represents a stage during cell division

[a] [i] Identify the   stage of cell division   [1mk]

 [ii]Give two reasons for your answer in [a] [i] above   [2mk]

[b] Name the structures labeled M [1mk]

[b] Name the class to which millipede belongs [1mk]

4[a] Distinguish between the terms [2mk]

Homodont and heterodont

[b]what is the function of the carnassial teeth [2mk]

5.An A blood group patient involved in a road accident required an urgent blood transfusion. His relatives were invited to donate blood.

[a]Name the possible relative who would not donate blood to him [2mk]

[b]State why the others would not be in a position to donate blood to him [2mk]

6. The flow chart shows a part of a food relationship in an ecosystem

[a][i]Name the food relationship shown   [1mk]

[ii] How many trophic levels are shown in the diagram   [1mk]

[b]What is the main source of energy in the ecosystem   [1mk]

7. Name   the only epidermal cell in plants that contain chloroplast   [1mk]

8. The equation below represents a metabolic   process that occurs in the mammalian lives

   Amino Acids   Enzyme x organic compound

 [a]Name the process that represents the above equation   [1mk]

 [b]Identify the enzyme represented   by x   [1mk]

[c] What is the importance of the process to the mammal   [1mk]

9. [a] Name the carbohydrate that is stored in mammalian muscle   [1mk]

[b]What name is used to describe removal of indigestible and undigested food material from the   alimentary canal
                                                [1mk]

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10.[a]Carl Linnaeus developed the taxonomic units of classification

[i]What is taxonomy   [1mk]

[ii]Why was the system of classification by carl linneaus described as natural system of classification
[2mk]

11. Phagocytes also called granulocytes or polymorphs are cells found in the blood whose they ingest pathogens and cell debris

[i]why are they called polymorphs.   [1mk]

[ii]Name the cell organelle most abundant in phagocytes to enable them function effectively [1mk]

12. Name the:
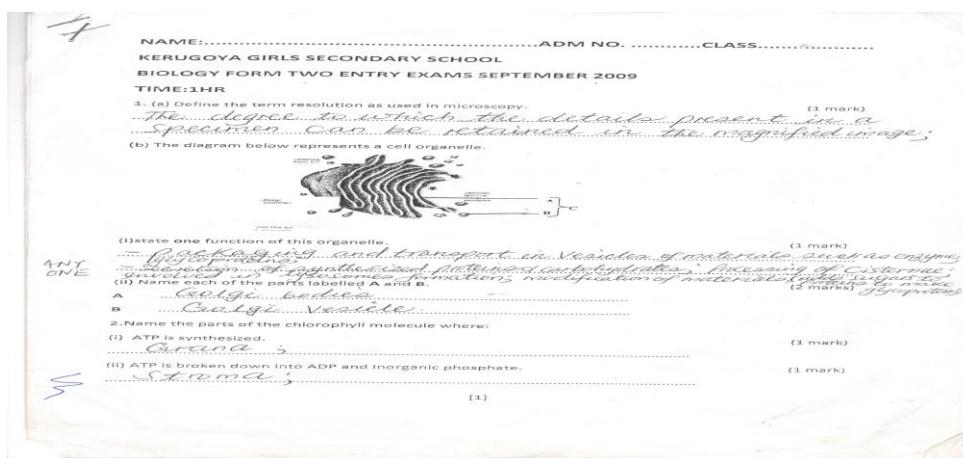
[a] Material that strengthens xylem tissue   [1mk]

[b]Tissue that is removed when the part of a plant is ringed   [1mk]

13. The diagram below represents a cell organelle.

[i]State the function of this organelle   [1mk]

[ii]Name each of the parts A and B

A   [1mk]

B   [1mk]

14. In which two ways do guard cells differ from other epidermal cells   [2mk]

15.Through cellular respiration, the chemical energy stored in glucose molecule is converted into which specific molecule   [3mk]
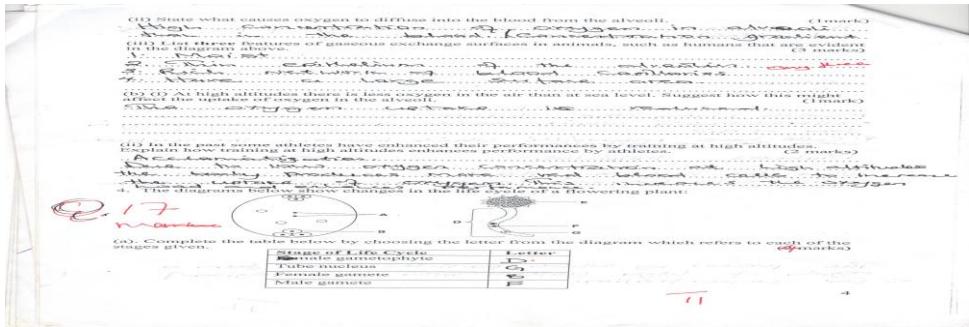
[b]Name the substance that speed up chemical reaction without being used up in those reactions

                                                                                 [1mk]

16.During germination and early growth, the dry weight of endosperm decreases while that of embryo increase explain   [2mk]

17. The diagrams below show changes in the life cycle of flowering plants

[i]Complete the table below by choosing the letters from the diagram which refers to each of the stages given [4mk]

STAGE OF LIFE CYCLE	LETTER
Male gametophyte	
Tube nucleus	
Female gamete	
Male gamete	

[1mk]

3 [a]. State 2 characteristics of kingdom Monera that are not found in other kingdoms   [2mk]

19.State three ways by which plants compensate for lack of the ability to move from one place to another
[3mk]

20. State three physiological processes that are involved in movements of substances across the cell membrane
[3mk]

21. If the human pancrease is not functional:

[a]Name the hormone which will be deficient   [1mk]

[b]Name the disease the human is likely to suffer from   [1mk]

22. The oxidation state of a certain food is represented below by a chemical equation

$2C_3 H_2O_2N + 6O_2$ $(NH_4)_2 CO_2 + 5CO_2 + 5H_2 O$

[a] Calculate the respiratory quotients[RQ] of the food substance   [2mk]

[b]Identify   the food substrate   [1mk]

23. The diagram below shows an apparatus used during collection of specimen

[a]Identify the apparatus   [1mk]

[b]What is the use of the apparatus named above   [1mk]

24. State two factors in an ecosystem that affect the distribution of organisms   [2mks]

25. A DNA strand has the following base sequence G C C T A G A T C A C

    What   is the sequence of the

    [i] Complementary DNA strand   [1mk]

    [ii] M-RNA strand   copied from this DNA   strand   [1mk]

26. State three limitations of fossil records as evidence of organic evolution   [3mk]

27. How does   nutrition as a characteristic   of living organism differ in plants and animals   [2mk]

28.State the function of the following parts of a light microscope .

 [i] Body tube   [1mk]

 [ii] Diaphragm   [1mk]

29. State three characteristics of gaseous   exchange surfaces   [3mk]

30. State two sources of variations   [2mk]

KCSE PRE-MOCK EXAMINATION YEAR 2020

BIOLOGY FORM 4 PAPER 2
TIME 2 Hrs
NAME: ……………………………………………… ADM NO: ……………... CLASS: …….
Instructions to candidates: Answer All Questions in the Spaces Provided
1. The diagram shows two types of cells placed in a certain solution. Study them and answer questions that follow
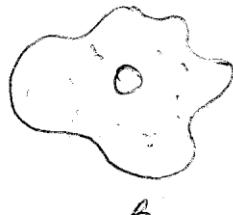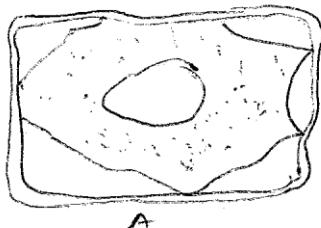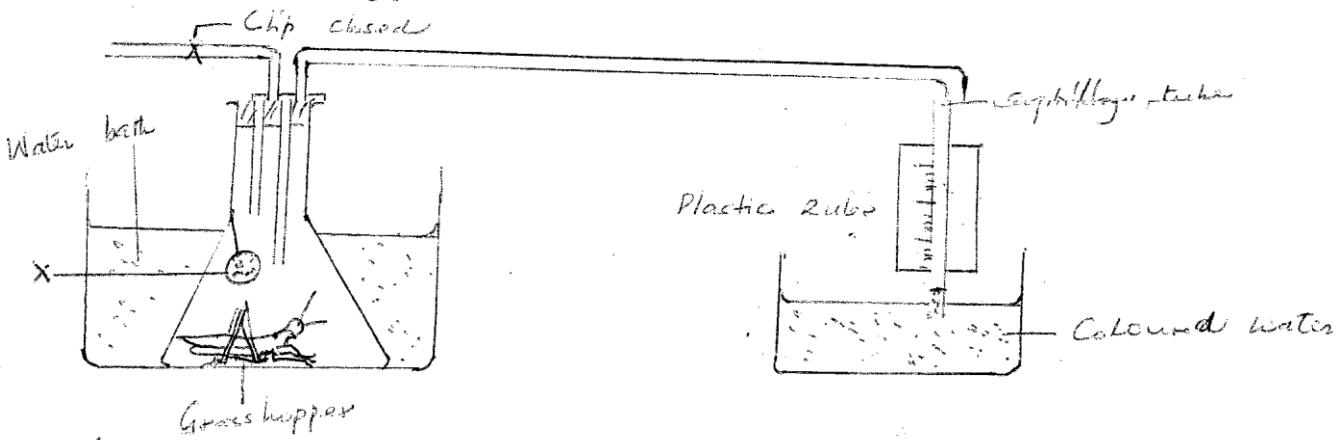
a. Name the physiological process responsible for the observed results. [1 Mark]

b. Give the correct biological term used to describe cells A & B. [2 Marks]
   A –

   B –

2. The equation below shows a chemical reaction that takes place in plants.

   Carbon (iv) oxide + water   A + water
   a. Identify substance A. [1 Mark]

   b. Name the process represented by the equation. [1 Mark]

   c. Other than the reactants state **two** conditions necessary for this reaction. [2 Marks]
      i.

      ii.
3. The diagram below illustrates an experiment used to determine rate of respiration in a small insect.

a. Name the chemical compound labeled X and state its function.   [2 Marks]

　　　Compound –

　　　Function –
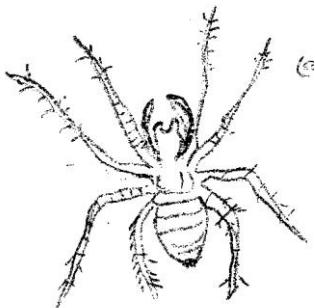
b. Why is the conical flask placed in a water bath?   [1 Mark]

c. What would happen to the level of coloured water after 5 minutes? Explain: [2 Marks]

d. How can a control experiment be set?   [1 Mark]

4. In a biology lesson a student collected the animal in the diagram below.

Use it to answer questions that follow;

a. Name the phylum and class to which the organism belongs

   i. Phylum _____   [1 Mark]

   ii. Class_____   [1 Mark]

b. Give two reasons for your answer in 1 (i), (ii) above   [4 Marks]
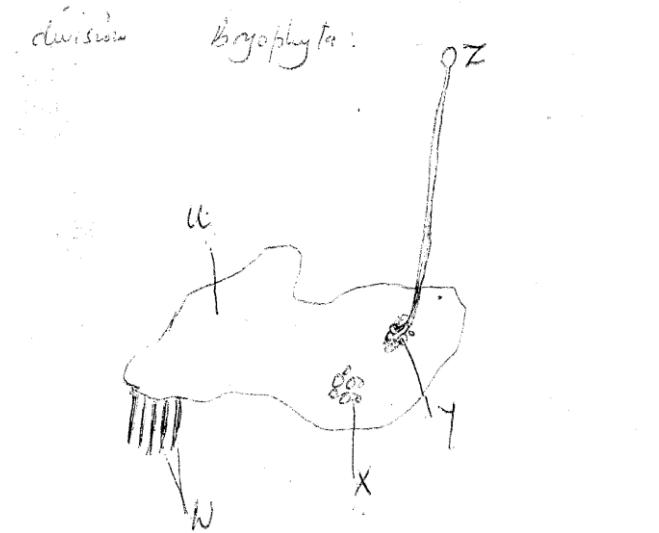
   i. _____

   _____

   ii. _____

   _____

5. The diagram below represents a plant in the division Byrophyta:

a. Name the parts labeled [5 Marks]

U

W

X

Y

Z

b. Name one function of part labeled. [3 Marks]

X

Y

Z

6.

a. It is observed that when apical bud of a plant is removed, lateral buds sprouts, where as they do not sprout in presence of the apical bud;

i. What is the biological term used to describe this? [1 Mark]

ii. Give one application of this phenomena in agriculture. [1 Mark]

b. State four roles of IAA in plant growth and development: [4 Marks]

c. In epigeal germination the cotyledon is brought above the soil surfaces; Explain

[2 Marks]

7.
   a. State 2 structural modifications of nephrons in desert mammals.   [2 Marks]

   b. State a kidney disease whose symptom is coloured and turbid urine   [1 Mark]

8. In a biological experiment; a cross was made between a tall pea plant & dwarfs plants; their progeny was selfed and the resulting plants were in a mixture in the ratio of 3:1. Make a biological cross to show these outcomes.   [4 Marks]

9. Explain geographical distribution as evidence of organic evolution.   [2 Marks]

SECTION B

Answer Questions 10 (Compulsory) and either question 11 or 12 in the Spaces Provided

10. The table below shows the changes observed in the dry weight in milligrams of a barley seedling, its embryo and Endosperm during the first ten days after the onset of germination.

Time (days)	Dry weight in milligrams		
	Embryo	Endosperm	Whole seedling
0	2	41	45
2	2	39	43
4	7	32	41
6	15	21	38
8	22	11	35
10	35	6	43

a. Using a suitable scale and on the same axis, plot a graph of dry weight of embryo, endosperm and whole seedling against time.   [8 Marks]

b. State and account for the changes in dry weight shown by:-

   i. Endosperm   [4 Marks]

   ii. Embryo   [4 Marks]

c. Explain the role of water during germination   [4 Marks]

11.

a. Describe how the mammalian heart is adapted to its function   [10 Marks]

b. How does gaseous exchange take place in terrestrial plants?   [10 Marks]

12.

a. How is the Epidermis of a green plant adapted to its function?   [6 Marks]

b. Describe how structural factors affect rate of transpiration in plants   [8 Marks]

c. Describe how xerophytes adapted to minimize water loss in their habitat.   [6 Marks]

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KCSE PRE-MOCK EXAMINATION YEAR 2020

PAPER 231/3

PRACTICAL.

QUESTIONS.

MAX.40 MKS.

ANSWER ALL THE QUESTION IN THE SPACES PROVIDED.

Answer all the questions in the spaces provided.

1. You are provided with substance L.Carry out food tests on the substance using the reagents provided .Record your procedure , observations and conclusions in the table below.(9mks)

2. a
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

21.

22.

23.

24.

Food substance	Procedure	Observation	Conclusions	
				During a visit to a museum, students were shown ten

specimens of organisms on display.The teacher provided a dichotomous key (shown in a separate page) to enable them to place each species on display into its taxonomic group. Five of the specimens that were on display are shown in the diagrams provided.

Dichotomous Key.
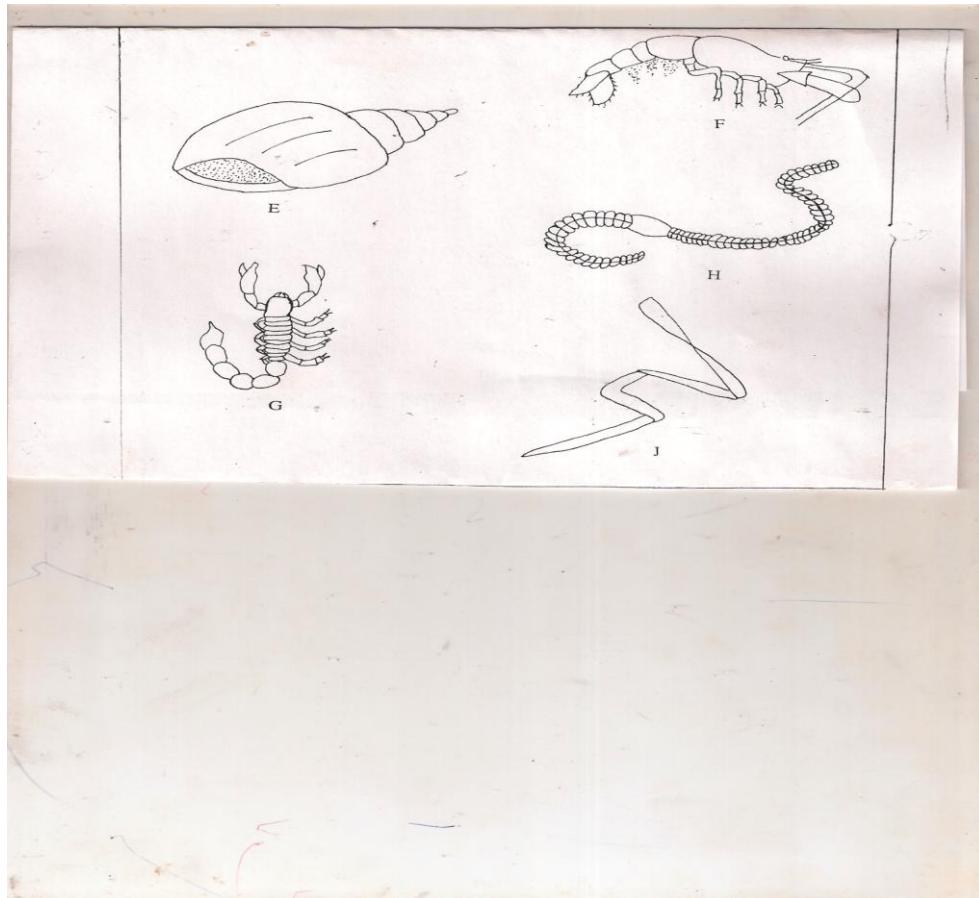
1.(a) Animal with a flattened body….. ………………………………….go to 9.

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(b)Animal without a flattened body…………………………………… go to 2.

2.(a)Animal with body in a shell …………………….…………………Mollusca.

  (b)Animal with body in shell………………………………….. go to 3.

3.(a)Animal with segmented body….. ………………………………….go to 4.

  (b)Animal with body not segmented…………………….………………Nematoda.

4.(a)Animal with jointed appendages go to 6.

  (b) Animal without jointed appendages to 5.

5.(a)Animal with long and cyndrical body………………………………..annelida.

  (b)Animal with short stout body…………………………………….. Trenada.

6.(a) Animal with antennae……………………………………………...go to7.

  (b) Animal without antennae ….. ………………………………….go to 8.

7.(a)Animal with one pair of antennae…………………………………… Insecta.

  (b) Animal with more than one pair of antennae……………………….. crustacean.

8.(a)Animal with pincer –like mouthparts………………………………. Arachida.

  (b) Animal with sucking mouth parts…………………………………Acarina.

9.(a)Animal with long ribbon-like body …………………….……………cestoda.

  (b) Animal with circular body…………………………………….. rinoidea).

Use the dichotomous key to identify the taxonomic group of each of the five specimens shown in the drawings.

In each case, show in sequence the steps (ef 1a,2a,5a, 7b) in the key that you followed to arrive at the identify of each specimen.(5mks)

Animal	Steps followed	Identity
E	…………………………………………..	
	…………………………………………………………..	
F	………………………………….…..	
	…………………………………………………………..	
G	………………………………………	
	…………………………………………………………..	
H	………………………………………	
	……………………………………………………………	
J	………………………………………	
	………………………………………………………….	

b)i)Nam the phylum and the class to which specimen M belongs(2mks)

Phylum:

Class:

ii) Name the observation features that enabled you to place it in the class above.(3mks)

(c)With the help of a hand lens, examine the body of specimen M.

i)State with a reason in each case he observable features that enable the specimen to be a disease vector.(2mks

(ii) Name one disease transmitted by specimen M.(1mk)

iii) State two methods that can be used to prevent specimen M from spreading diseases.(2mks)

25. You are provided with specimens labeled S_1 S_2 and S_3
    a. Using a scarpel blade split S_1 longitudinally and draw a well labeled diagram to show the internal structures.
    State your magnification (4mks)

    b. With a reason ,state the class to which the plant from specimen S_1 belongs to.
    Class(1mk)

    Reason(1mk)

c. Specimen S_2 is a germinated seedling of S_1.In the table below, name three structures and say which structure in S_1 developed into the structure in S_2.

Structure in S_1	Structure in S_2

d.(i) Using specimens S_1 and S_3 ,name the type of germination in :-

S_1

S_3 (1mk)

ii. Give the difference between the this type of germination in (d) (i) above (2mks)

iii.Account for the type of germination in :-
S_1 2mks

S_3(2mks)

NAME…………………………………………ADMNO…………….CLASS………

KCSE PRE-MOCK EXAMS YEAR 2020

565/1

BUSINESS STUDIES – FORM FOUR
PAPER 1

2 HOURS

INSTRUCTIONS TO CANDIDATES
a) Write your name, class and admission number in the spaces provided above.
b) Answer all the questions.
c) All the answers should be written in the spaces provided in this booklet.
d) All the questions should be answered in English.

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1. State **four** characteristics of services.   (4mks)

   a)…………………………………………………………………………………………...

   b)………………………………………………………………………………………

   c)…………………………………………………………………………………………...

   d)………………………………………………………………………………………

2.   Outline **four** disadvantages of division of labour.   (4mks)

   a)………………………………………………………………………………………..

   b)………………………………………………………………………………………..

   c)………………………………………………………………………………………

   d)…………………………………………………………………………………………...

3. Mention **four** advantages of using Automatic Vending Machines.   (4mks)

   a)…………………………………………………………………………………………...

   b)………………………………………………………………………………………..

   c)…………………………………………………………………………………………

   d)…………………………………………………………………………………………...

4. Give **four** benefits one gets from self-employment. (4mks)

   a)………………………………………………………………………………………….

   b)………………………………………………………………………………………

   c)………………………………………………………………………………………….

   d)………………………………………………………………………………………..

5. Outline **four** factors to consider when intending to buy office furniture. (4mks)

   a)………………………………………………………………………………………..

   b)………………………………………………………………………………………..

   c)………………………………………………………………………………………

   d)………………………………………………………………………………………..

6. Name the source document to which each of the following description relate. (4mks)
   Description   **source document**

   (i)   Issued by the seller to a buyer for cash paid
   (ii)
          Used for processing and authorizing payments

   (iii) Sent to a credit buyer to demand payment

   (iv)   Used to correct undercharge

7. Outline **four** principles of co-operatives.   (4mks)

   a)……………………………………………………………………………………

   b)…………………………………………………………………………………...

   c)…………………………………………………………………………………..

   d)…………………………………………………………………………………..

8. Highlight **four** measures that the government puts in place to create conditions that will be favorable for business development.   (4mks)

   a)………………………………………………………………………………….

   b)…………………………………………………………………………………

   c)…………………………………………………………………………………..

   d)…………………………………………………………………………………..

9. State **four** advantages of transporting oil by pipeline rather than by road. (4mks)

   a)…………………………………………………………………………………

   b)………………………………………………………………………………….

   c)…………………………………………………………………………………

   d)………………………………………………………………………………….

10. Outline **four** advantages of audio-visual communication. (4mks)

   a)…………………………………………………………………………………..

   b)…………………………………………………………………………………...

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c)………………………………………………………………………………………….

d)…………………………………………………………………………………………..

11. Highlight **four** ways in which the production activities of firms in your country affect the environment. (4mks)

a)………………………………………………………………………………………....

b)………………………………………………………………………………………..

c)………………………………………………………………………………………….

d)…………………………………………………………………………………………..

12. Highlight **four** disadvantages of a private warehouse. (4mks)

a)………………………………………………………………………………………...

b)…………………………………………………………………………………………

c)………………………………………………………………………………………..

d)………………………………………………………………………………………….

13. Ragati and Nzonge operates a business with a stock valued at ksh.350,000 and have interests of 3/5 and 2/5 respectively. Ragati decided to insure 2/4 of the stock against fire. Sometimes later fire occurred at their business premises and destroyed stock worth ksh. 250,000. Calculate the amount of compensation Ragati would get from the insurance company. (4mks)

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………….....................................

14. Outline **four** sources of monopoly power. (4mks)

a)…………………………………………………………………………………..

b)……………………………………………………………………………………………

c)……………………………………………………………………………………….

d)………………………………………………………………………………………

15. Name **four** sources of public finance. (4mks)

a)………………………………………………………………………………….

b)………………………………………………………………………………….

c)………………………………………………………………………………….

d)………………………………………………………………………………….

16. State **four** benefits that would accrue to a customer who borrows a loan from a non-bank financial institution. (4mks)

a)…………………………………………………………………………………..

b)………………………………………………………………………………….

c)………………………………………………………………………………….

d)…………………………………………………………………………………..

17. Match **each** of the statements given below with the relevant type of capital. (4mks)

Statement   **Type of capital**

a. Resource invested into a business by the owner

b. Excess of current assets over current liabilities

c. Amount invested into the business by outsiders

d. Represents total finance in a firm

18. The following information was extracted from the books of farmers choice supermarket on 31st Dec 2009

	shs
Average stock	30,000
Closing stock	40,000
Purchases	336,000
Carriage inwards	2,000
Return outwards	18,000

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Required. Calculate sales for the year .   4mks

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

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…………………………………………………………………………………………

…………………………………………………………………………………………

19. Outline **four** important characteristics of a general journal.   (4mks)

a)……………………………………………………………………………………..

b)……………………………………………………………………………………

c)……………………………………………………………………………………...

d)……………………………………………………………………………………

20. Apex traders provided you with the following
Margin   25%
Cost of sales   15,000
Opening stock   2,000
Closing stock   1,000
Operating expenses 2% of capital
Sales and capital are in the ratio of 1:4

Calculate :
a.   Rate of stock turnover
b.   Purchases
c.   Return on capital

………………………………………………………………………………………..

………………………………………………………………………………………..

…………………………………………………………………………………………

21. Indicate the subsidiary ledger in which each of the following should be recorded. 4mks

   Account   **Subsidiary ledger**

a. Return inwards

b. Bank

c. Drawings

d. Juma traders (a debtor)

e. Discount received

f. Uchumi wholesalers (a supplier)   …………………………………

22. Highlight **four** types of advertising.   (4mks)

   a)…………………………………………………………………………...

   b)………………………………………………………………………….

   c)………………………………………………………………………….

   d)………………………………………………………………………….

23. State **four** natural sources of energy in Kenya. (4mks)

   a)………………………………………………………………………….

   b)………………………………………………………………………….

   c)………………………………………………………………………….

   d)…………………………………………………………………………..

24. The statement below described various types of goods. Identify the type of goods best described by each statement.   (4mks)

   a. Owned by the government on behalf of its citizens.

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b. Goods that are capable of directly satisfying human want.

c. Goods that are used to make other goods.

d. Goods that get spoilt within a very short time.

25. Identify **four** reasons why many youths in urban centre are starting hawking businesses. (4mks)

a)……………………………………………………………………………………….

b)……………………………………………………………………………………….

c)……………………………………………………………………………………....

d)……………………………………………………………………………………....

FORM FOUR BUSINESS STUDIES
KCSE PRE-MOCK EXAMS YEAR 2020

565/2
PAPER 2
Instructions to the candidates.
Choose any five questions. All questions carry equal marks.

1. (a) Highlight five characteristics of an efficient tax system. (10mks)

(b) Differentiate between a public limited company and a public corporation. (10mks)

2. (a) Explain clearly the malpractices by traders against which consumers may need protection by the government. (10mks)

(b) Explain clearly with the aid of a diagram the change in equilibrium as a result of a change in demand of a commodity. (10mks)

3. (a) Discuss five benefits that a customer may get by using Automated Teller Machine (ATM) for financial transactions. (8 mks)

(b) The following trial balance related to Kimani's business as at 31st December 2012

	DR(SHS)	CR(SHS)
Stock on 1st January 2003	60,000	
Purchases and sales	400,000	580,000
Returns	20,000	50,000
Debtors and Creditors	65,000	40,000
Premises	540,000	
Machinery	200,000	
Fixtures and fittings	100,000	
Carriage outwards	8,000	
Wages and salaries	30,000	
Discounts	25,000	32,000
Commissions	16,000	14,000
Cash in hand	70,000	
Capital		818,000
	1,534,000	1,534,000

REQUIRED:
(a) Prepare a trading profit and loss account for the period ended 31st December 2012 and a balance sheet as at that date if the closing stock was worth shs 70,000 (12 mks)

4. (a) Explain clearly the problems associated with expenditure approach method in measurement of
national incomes. (10mks)

(b) Outline five reasons why ethical practices is necessary in product promotion. (10mks)

5. (a) Jane, a petty cashier was given Sh ,2000 on 1st June 2005. During the month, she
made the following payments:
2005

June   2 Stationery Sh 100, staff tea Sh 80.
        5 Telephone bill Sh 50, postage stamps Sh 100.
        8 Travelling Sh 200, telephone Sh 100.
        10 Stationery Sh 50, staff tea Sh 100.
        15 Postage stamps Sh 50, travelling Sh 100.
        20 Sundry expenses Sh 100.
        23 Stationery Sh 80, telephone Sh 40.
        25 Travelling Sh 50, sundry expenses Sh 100.
        28 Envelopes Sh 20, staff tea Sh 50.
        30 Adhiambo, a creditor, was paid Sh 100.

Use the following analysis columns to prepare a petty cash book:
Stationery, Staff tea, Travelling. Telephone, Sundry expenses. Ledger accounts.   (12 mks)

(b) Explain five demerits that a country may suffer when the government becomes a major investor
in business. (8 mks)

6. (a) Explain the role played by insurance industry in promoting the
development of Kenyan economy.   (10mks)

(b) Explain clearly the tools of monetary policy used by the central bank to control inflation. (10mks)

NAME---CLASS -------------------------------

ADM NO -----------------------------

SIGNATURE ------------------------

DATE ---------------------------------

233/1
FORM 4
CHEMISTRY
PAPER 1

TIME: 2 HOURS
KCSE PRE-MOCK EXAMINATION YEAR 2020
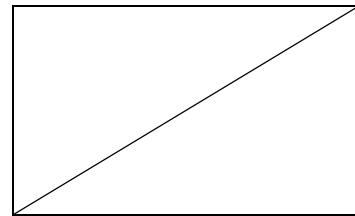
INSTRUCTIONS

- Answer all the questions in the spaces provided
- Mathematical tables and silent electronic calculators may be used
- All working must b e clearly shown where necessary

For examiners use only

1. The figure below shows the cooling curve for water is gaseous state.

    i)   Using the same axis draw a curve obtained if the water used in the experiment was impure.

                                                                                        (1mk)

ii)   Name the process taking place between

S and T   (1mk)

U and V   (1mk)

2. On addition of a few drops of aqeous sodium hydroxide to solution M a white precipitate forms which dissolves on a addition of excess sodium hydroxide. A white precipitate forms when solution M is reacted with sodium chloride solution. Suggest the identity of the cation present and explain.
                                                   (2mks)

3. 1g of sodium hydroxide is added to $30cm^3$ of 1M HCl. How many cm^3 of 0.1M KOH solution will be needed to neutralize the excess acid.   (3mks)

4. Describe how you can prepare crystals of magnesium chloride starting with $50cm^3$ of 2M magnesium hydroxide.   (3mks)

5.Use the following information to answer the questions that follow

$\Delta H_{lattice}$ $MgCl_2 = -2489$ KJ/ mol $^{-1}$

$\Delta H_{hydration}$ $Mg^{2+} = -1891$ kJ/ mol

$\Delta H_{hydration}$ $Cl^- = -384$ kJ/ mol

   a) Calculate the heat of solution of magnesium chloride.   (2mks)

b)Draw an energy level diagram for the dissolving of magnesium chloride.   (2mks)

6.The reaction between hydrochloric acid and potassium dichromate can be used to demonstrate a reversible reaction. The ionic equation is given below

$2CrO_4^{2-}{}_{(aq)}$ + $2H^+{}_{(aq)}$ $\qquad$ $Cr_2O_7{}^{2-}{}_{(aq)}$ + $H_2O_{(l)}$

Yellow $\qquad\qquad\qquad\qquad$ orange

Explain the observation that would be made when dilute hydrochloride acid is added to the equilibrium mixture.
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ (2mks)

7.The table below gives the rate of decay for a sample of a radioactive element P

Mass of P (g)	number of days
48	0
18	90
6	180

a)Determine its half-life $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ (2mks)

b)Complete the following nuclear equation. $\qquad\qquad\qquad\qquad$ (1mk)

$$^{233}\text{Pa} \longrightarrow \quad + \quad ^{0}_{-1}e$$
$$_{91}$$

8. Study the following flow chart. Use it to answer the question that follow

a)Identify   (3mks)

i) Solid A

ii)Solid B

iii)Gas E

b)Name the reagents used in step   (2mks)

i) I

ii) II

9.i)Name two salts responsible for permanent hardness of water.   (2mks)

ii)Explain the precipitation method used to remove water hardness.   (1mk)

10. When steam was passed over heated charcoal as shown in the diagram, below, hydrogen and carbon (II) oxide gases were formed.

a)Write the equation for the reaction which takes place.   (1mk)

b)Name two uses of carbon (II) oxide gas which are also uses of hydrogen gas. (2mks)

11.a) State and explain the observations made when a few drops of concentrated Sulphuric (vi) acid is added to sucrose (C_{12}, O_{22}, O_{11}) (2mks)

b)Using an equation show how the above reaction takes place. (1mk)

12.Students from Sunshine Secondary School suspected that some water contained either sulphate or sulphite cons. Explain how the ion present can be determined. (3mks)

13.A mixture of ethane, oxygen and nitrogen are ignited. On cooling the residual gas occupied 58 cm^3 when shaken with aqeous alkali, the volume was reduced to32 cm^3. A further 18 cm^3 of the product was absorbed by alkaline pyrogallo. Calculate the composition of the original mixture. (C = 12, H = 1, N = 14, O = 16 and molar volume at r.t.p = 24dm3. (4mks)

14.0.24g of a divalent metal x dissolves in 50 cm^3 of 0.25 M sulphuric acid. The resulting solution required 5.0 cm^3 of 1.0 M sodium hydroxide solution to neutralize the excess acid. What is the reactive atomic mass of x.

15.Study the diagram below and answer the questions that follow.

a)Identify liquid x   (1mk)

b)Write an equation for the reaction that occurs in the flask.   (1mk)

c)Describe the confirmatory test for oxygen gas.   (1mk)

16.When zinc metal is reacted with a solution of hydrogen chloride gas in water there is effervescence. When the experiment is repeated with a solution of hydrogen chloride gas in methylbenzene there is no observable change. Explain this observations.   (3mks)

17. Compare the rate of diffusion of carbon dioxide (CO_2) & ozone (O_3) at the same temperature. (C = 12, O = 16)   (3mks)

18. Starting with Lead metal describe how to prepare a solid sample of Lead (II) Sulphate salt.
                                                                (3mks)

19. Given the following reaction

$HCN_{(aq)}$ + $NaOH_{(aq)}$ $NaCN_{(aq)}$ + $H_2O_{(l)}$

T_1 = initial temperature of solutions before additions = 18.0^oC

T_2 = final temperature of solution at neutralization = 19.2^oC

50 cm^3 1M HCN

50 cm^3 1M NaOH

Calculate Molar enthalpy of neutralization of hydrogen cyanide   (3mks)

20. Compound K reacts with sodium hydroxide as shown

a)What type of reaction is represented by the equation.   (1mk)

b)To what class of organic compounds does K belong.   (1mk)

c)How is M separated from aqueous mixture of L and M.   (1mk)

21.Draw a diagram to show how an aluminium spoon can be electroplated with pure copper.

(2mks)

22.An ion of element Z can be represented as shown below,

Use the information to answer the questions that follow

a)Identify the period in which the element belong.   (½mk)

b)Write the electron configuration of the ion of Z   (½mk)

c)What would be the nature of the solution of the chloride of Z if dissolved in water.   (1mk)

23. What is P^H scale   (1mk)

ii) State whether the values of the following solution are strong or weak acids and bases.

P^H =   8   (½mk)

P^H =   5   (½ mk)

P^H =   2   (½ mk)

P^H =   13   (½mk)

24.Draw the structure of;

a) i) Hydroxonium ion H_3O^+ (1mk)

ii) Aluminium oxide   (Al = 13, 0 = 8)   (1mk)

b) Aluminium chloride has a melting point of 120°C while Aluminium oxide has a melting point of 2977°C. In terms of structure and bonding explain how the differences come about.   (2mks)

25.State the use of the following laboratory apparatus

i)

ii)

26.The diagram below shows heating of Lead nitrate

i)State the observations made in the above experiment   (2mks)

ii) Write an equation for the reaction that takes place.   (1mk)

27.Give two differences between nuclear reactions and chemical reactions.   (2mks)

28. 3.1 g of an organic compound containing carbon, hydrogen and oxygen only produced 4.4 g of carbon oxide and 2.0 g of water on complete combustion:

a)Calculate its empirical formulae   (2mks)

b)Calculate its molecular formulae if its formulae mass is 62.   (2mks)

29. Two cleansing agents are represented below

i) $R - COO^-Na$ and   ii) $R - OSO_3^-Na^+$
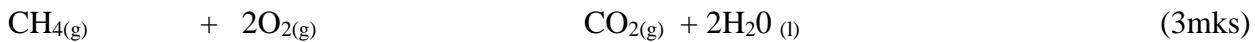
a) Name the detergents   (2mks)

i)

ii)

b) Select one of the detergents that would be suitable for washing in water containing magnesium chloride. Explain.   (2mks)

30.Use the data below to calculate the enthalpy change for the reaction below

$CH_{4(g)}$ $+$ $2O_{2(g)}$ $CO_{2(g)}$ $+ 2H_2O_{(l)}$ (3mks)

Bond	**Energy (KJ)**
C – H	314
O = O	296
C = O	149
H – O	283

KCSE PRE-MOCK EXAMINATION YEAR 2020

Name: ……………………………………………………... Class: ………… Adm.No……………..

School: …………………………………………………... Date: …………………………………

Sign:………………………………………..

233/2

CHEMISTRY

Paper 2

Time: 2 hours

INSTRUCTIONS TO CANDIDATES

- *Write your name, admission number, date and school in the spaces provided.*
- *Answer **all** the questions in the spaces provided.*
- *All working must be clearly shown where necessary.*
- *Scientific calculators may be used.*
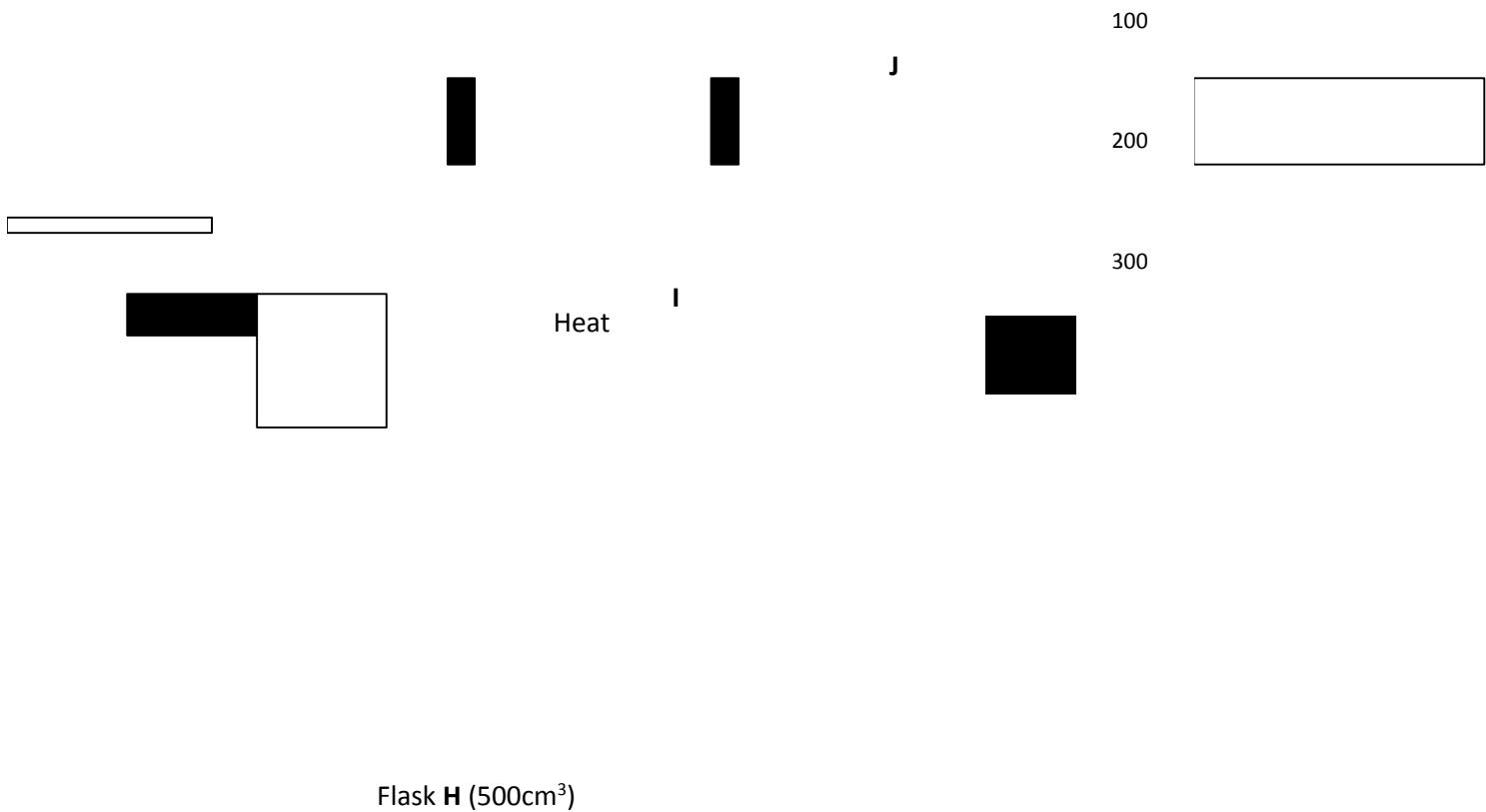
Questions	Maximum Score	Candidate's Score
1	10	
2	12	
3	10	
4	12	
5	13	
6	12	
7	11	
TOTAL	80	

This paper consists of **13** printed pages. Candidates are advised to check and to make sure all pages are as indicated and no question is missing.

1.   A.   In an experiment to determine the percentage of oxygen in air, the apparatus below were set up. Study the set up and the information provided to answer the

questions that follow.

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Copper turnings

100

J

200

ater

300

I

Heat

Flask **H** (500cm^3)

A 500cm^3 measuring cylinder **K** was filled with water and assembled for gas collection.   Copper turnings were heated red hot and water was slowly passed into 500cm^3 flask **H**   until it reached the 500cm^3 mark. A colourless gas was collected in **K**.

(i)   What was the purpose of passing water into flask **H**?   **(1 mark)**

      ....

(ii)   What observations were made in the tube **I**?   **(1 mark)**

      ....

(iii)   Name one of the gases that is likely to be found in **J**.   **(1 mark)**

      ....

(iv)   What was the volume of the gas collected in the measuring cylinder at the end of   the experiment?   **(1 mark)**

………
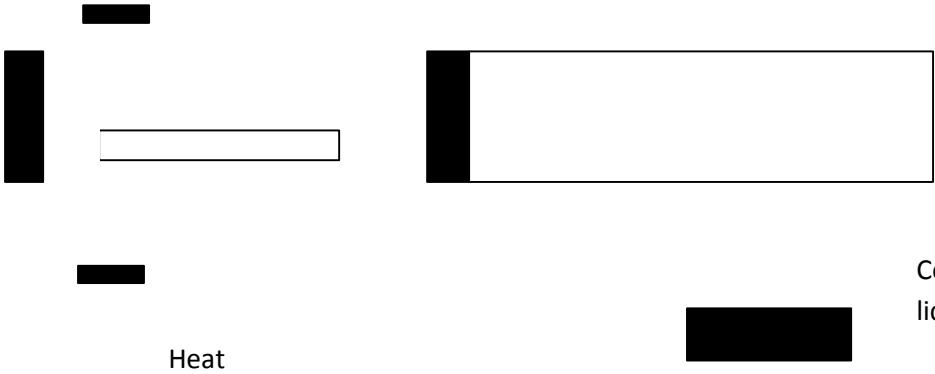
(v)   Calculate the percentage of oxygen in air using the above results.   **(2 marks)**

B.   Study the diagram below and answer the questions that follow.

Copper (II) oxide   Ice cold water

$_{2(g)}$

Colourless
liquid **Y**

Heat

(a)   Give *one* observation made in the combustion tube after some time. **(1 mark)**

………

(b)   Write an equation for the formation of the colourless liquid **Y**.   **(1 mark)**

………

(c)   What was the aim of the above experiment as demonstrated in the combustion

tube? Explain.   **(2 marks)**

………

………

………………………………………………………………………………………

2.   Use the information below to answer the questions that follow. The letters are not the   actual symbols of the elements.

Element	Atomic No.	M.P⁰C	B.P⁰C	Ionic radius (nm)
P	11	98	890	0.095
Q	12	650	1110	0.065
R	13	660	2470	0.050
S	14	1410	2360	0.041
T	15	44.2 & 590	280	0.034
U	16	113 & 119	445	0.184
V	17	-101	-35	0.181
W	18	-189	-186	-

(a)   (i)   Write the electronic configuration of the atoms represented by letters **T** and **W**.   **(1 mark)**

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(ii)   State the nature of the oxides of the elements represented by **Q** and **U**.
(2 marks)

....

....

(b)   Why does the elements represented by the letters **T** and **U** have two values of   melting
points?   **(1 mark)**

....

(c)   Explain the following observations in terms of structure and bonding.

(i)   There is an increase in boiling point from **P** to **R**.   **(2 marks)**

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

(ii)   Element **S** has a high boiling point.   **(2 marks)**

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

(iii)   There is a decrease in boiling points from **U** to **W**.   **(2 marks)**

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

(d)   (i)   Compare the atomic radius of **U** and **V**.   **(1 mark)**

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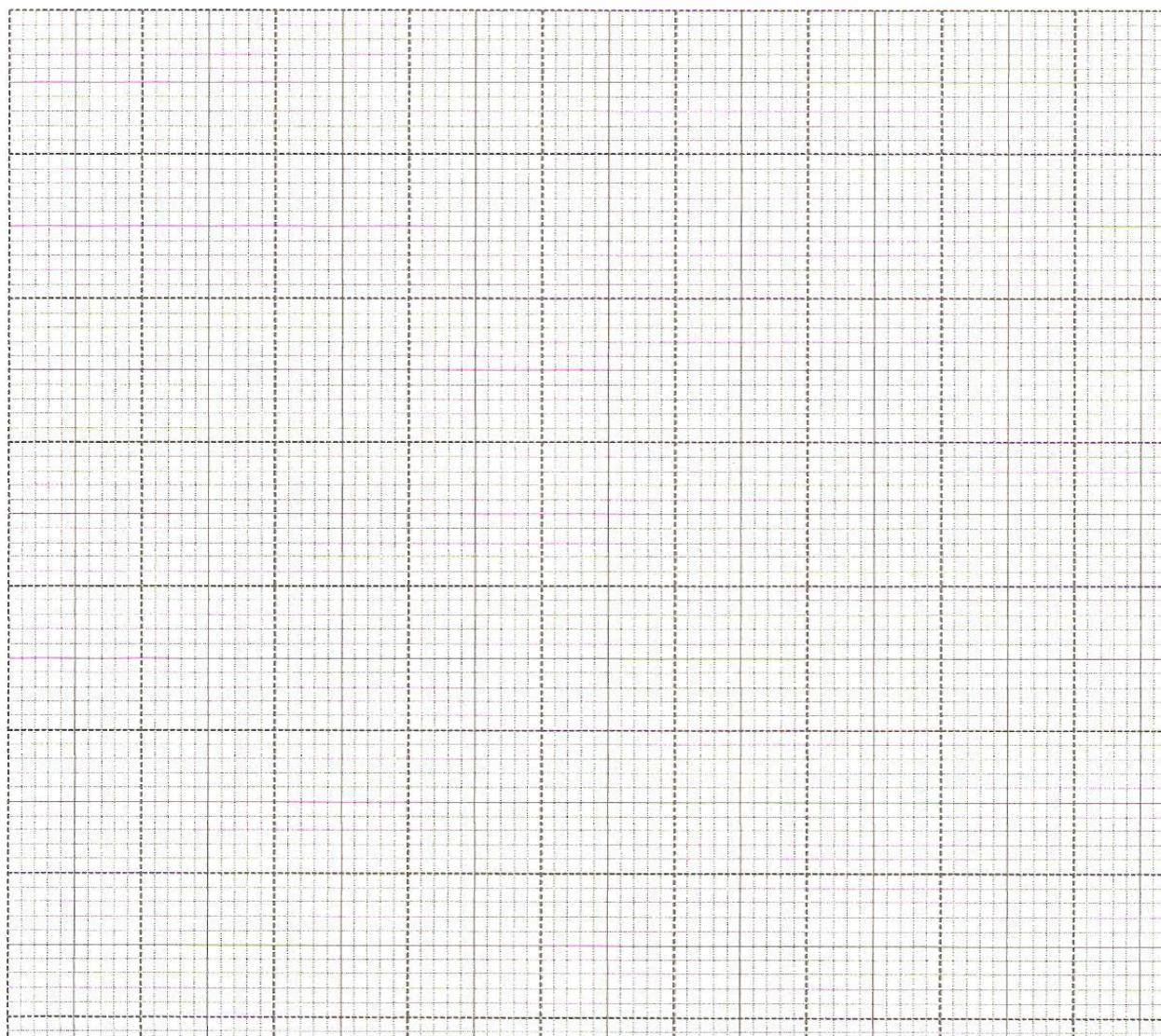
(ii)   Why is there no ionic radius for **W** reported in the table?   **(1 mark)**

....

....

3.   (a)   The solubilities of potassium nitrate and potassium bromide at different temperatures was determined. The following data was obtained.

Temperature ^0C		0	10	20	30	40	50	60	70	80
Solubility g/100g H_2O	KNO_3	5	15	26	43	61	83	105	135	165
	KB_r	50	55	60	65	70	77	85	90	95
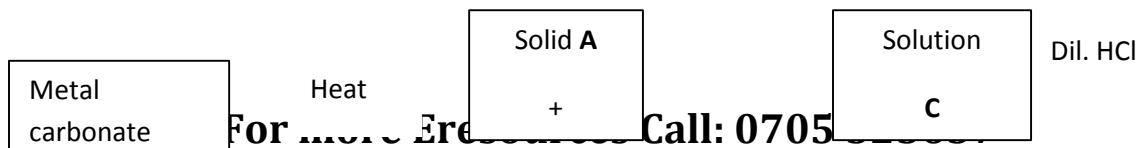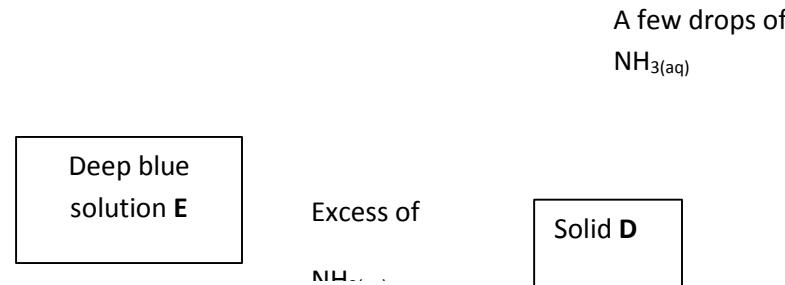
(ii)   What was the solubility of each salt at 65^0C?   **(1 mark)**

(iii)   100g of a saturated solution of potassium nitrate at 70^0C was cooled to 20^0C. What mass of the crystals will be crystallized?   **(2 marks)**

(b)   Study the flow chart below and answer the questions that follow.

| Metal carbonate | Heat | Solid **A** + | | Solution **C** | Dil. HCl |

For ...... Eresources Call: 0705........

A few drops of NH$_{3(aq)}$

Deep blue solution **E**	Excess of NH		Solid **D**

(i) Write an equation for the formation of solid **A** and gas **B**.   **(1 mark)**

....

(ii) Name;

Solution **C**   -   ………………………………………………....   **(1 mark)**

Solid **D** -   ………………………………………………....   **(1 mark)**
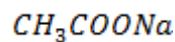
(c) Write the formula of the complex ion in solution **E**.   **(1 mark)**

....

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

III

II
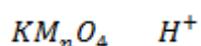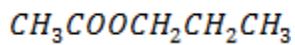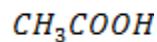
| CH_3COONa | | CH_4 | CH_3C_l |

W

Na₂CO₃   NaOH

I

| CH_3COOH | | $CH_3COOCH_2CH_2CH_3$ |

KM_nO_4 H^+ NaOH

IV

Na

Q | CH_3CH_2OH | | CH_3COONa | | $CH_3CH_2CH_2OH$ |

V   **X**   **Z**

| $CH_2 = CH_2$ | HI   **R**

VI

```
H        H



C        C
```
Y

n
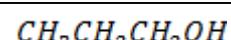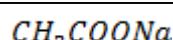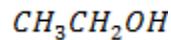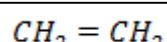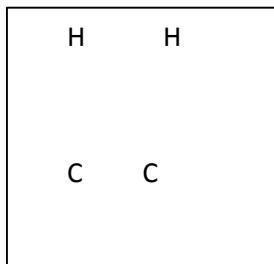
(a)   Name substance.   **(3 marks)**

X   -   ……………………………………………………………

   Q   -   ………………………………………………………………

   R   -   ………………………………………………………………

(b)   Write down an equation for the reaction represented by step III.   **(1 mark)**

………

(c)   What are the conditions and reagent required for steps?

(i)   **I**   **(2 marks)**
      Reagent   -   …………………………………………………………………………
      Condition   -   …………………………………………………………………………

(ii)   **IV**   **(2 marks)**
      Reagent   -   …………………………………………………………………………
      Condition   -   …………………………………………………………………………

(b)   Name the process represented by: **(4 marks)**

I   -   ……………………………………………………………….

II   -   ……………………………………………………………….

IV   -   ……………………………………………………………….

V   -   ……………………………………………………………….

5.   **I.**   Study the scheme below and answer the questions that follow.

| Substance **A** | | Substance **B** |

| Ammonia gas | resources C | Colourless | 525657 | Brown gas |

Step I

Oxygen

Catalyst **F**   Oxygen

(a)   Identify substances.   **(3 marks)**

   A   -   ……………………………………………………………

   B   -   ……………………………………………………………

   D   -   ……………………………………………………………

(b)   State the catalyst necessary for;   **(2 marks)**

   Step **I** -   ……………………………………………………………………………

   Step **II** -   ……………………………………………………………………………

(c)   Write an equation for the reaction taking place in step **II**.   **(1 mark)**

……

(d)   Write two balanced chemical equations for the reaction between chlorine

   gas and;
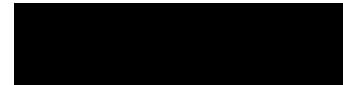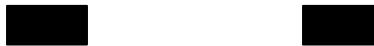
(i) Hot and concentrated sodium hydroxide. **(1 mark)**

………………………………………………………………………………………………………

(ii) Dilute and cold sodium hydroxide. **(1 mark)**

………………………………………………………………………………………………………

II. The diagram below shows an experiment in which the Lead (II) nitrate crystals are heated.

wdered
$(NO_3)_2$

Gas **Y**

Ice

Liquid **P**

(a) Name; **(2 marks)**

(i) Liquid **P** - ………………………………………………………………………..
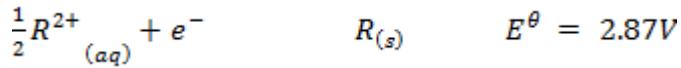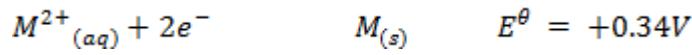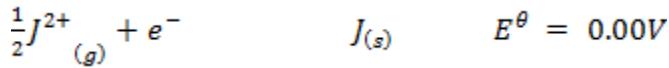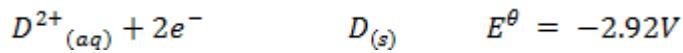
(ii) Gas **Y** - ………………………………………………………………………..

(b) Write a balanced chemical equation for the decomposition of Lead (II) nitrate.

(1 mark)

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(c)   Explain how you can distinguish between nitrogen (II) oxide and nitrogen (I) oxide.
                                                                            (2 marks)

....

....

....

....

6.   **I.**   Study the standard electrode potentials given below and answer the questions that

         follow.

$D^{2+}_{(aq)} + 2e^-$ $D_{(s)}$ $E^\theta = -2.92V$

$G^{2+}_{(aq)} + 2e^-$ $G_{(s)}$ $E^\theta = -2.36V$

$\frac{1}{2}J^{2+}_{(g)} + e^-$ $J_{(s)}$ $E^\theta = 0.00V$

$M^{2+}_{(aq)} + 2e^-$ $M_{(s)}$ $E^\theta = +0.34V$

$\frac{1}{2}R^{2+}_{(aq)} + e^-$ $R_{(s)}$ $E^\theta = 2.87V$

(a)   Identify the strongest:
       (i)   Reducing agent   ....   **(1 mark)**
       (ii)   Oxidizing agent   ....   **(1 mark)**
(b)   Calculate the e.m.f of a cell made of G and M.   **(2 marks)**

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(c)   Write the cell representation for the above cell in (b).   **(1 mark)**

(d)   Draw a cell diagram for the cell in (b) above.   **(2 marks)**

(e)   Write the cell reaction for the drawn cell diagram in (d) above.   **(1 mark)**

II.   Electrolysis of aqueous solution of metal M resulted in the deposition of 1.07g of metal upon passage of a current of 1.32 amperes for 75 minutes.

(M = 52, 1F = 96500C)

(i)   Calculate the quantity of electricity passed through the cell.   **(1 mark)**

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(ii)   Calculate the charge on the metal ion.   **(3 marks)**

7. Extraction of iron involves two main processes, smelting and refining. Below is the blast furnace which is used to smelt iron from its ore.

CO_2, CO

300^0C

c

Carbon (IV) oxide
recycled

500^0C

600^0C

B

A

Fire brick lining

Hot air blast from stove

Slag tap

Slag

Iron

(a)   (i)   What does the word smelt mean?   **(1 mark)**

……..…………………………

………………………………………………………………………………………………………

(ii)   Name the reducing agent in the process.   **(1 mark)**

………

……

(iii)   What is the role of the hot air blast in the process?   **(2 marks)**

………

………

………

(b)   Write equations for the reactions that take place at the region marked A, B and C.
                                                                              (3 marks)

A - ……………………………………………………………………………………………

B - ……………………………………………………………………………………………

C - ……………………………………………………………………………………………

(c)   What is the purpose of limestone in the extraction process?   **(1 mark)**

……………………………………………………………………………………………………

(f)   Write equations to show how impurities are removed from the ore.

(3 marks)

……

……

………………………………………………………………………………

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

DATE ………………………………….   CLASS ……………..

KCSE PRE-MOCK EXAMINATION YEAR 2020

KENYA CERTIFICATE OF SECONDARY EDUCATION

CHEMISTRY PAPER 3

(PRACTICAL)

2 ¼ HRS

INSTRUCTIONS TO CANDIDATES

(a) Answer all the questions in the spaces provided in the question paper.

(b) You are NOT allowed to start working with the apparatus for the first 15 minutes of the 2 ¼ hrs 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.

(c) All working must be clearly shown where necessary.

FOR EXAMINER'S USE ONLY.

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	13	
2	13	
3	14	
TOTAL SCORE	**40**	

You are provided with
- Anhydrous sodium carbonate solid x.
- Distilled water.
- 0.2m Hydrochloric acid solution A.

You are required to determine molar heat of solution of solid x.

PROCEDURE I
i.   Place 50.0ml of water in 250ml plastic beaker.
ii. Note the temperature of the water and record it in the table I below.
iii. Add all the solid X provided to the water in the beaker, stir gently with the thermometer and record the final temperature of the solution in the table I below. Keep the resulting solution for procedure 2.

TABLE I

Final temperature (^{0}C)	
Initial temperature (^{0}C)	

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Change in temperature (^{0}C)	

(2 mks)

(a) What is the enthalpy change for the reaction? (Assume the density of solution is 1g/cm^3, and specific heat capacity is 4.2 Jg^{-1} K^{-1}).   (2 mks)

PROCEDURE II
Transfer the contents of the beaker into 250ml volumetric flask. Rinse both the beaker and the thermometer with distilled water and ass this water into the solution in the volumetric flask. Add more water to make up to the mark. Label this solution as solution X. fill the burette with solution A. Using a pipette place 25.0ml of solution X into a conical flask. Add 3 drops of methyl orange indicator and titrate with solution A. record your readings in table II below. Repeat the titration two more times and complete the table.

TABLE II

Experiment			
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution A used (cm^3)			

(3 mks)

(b) Calculate average volume of solution A used.   (1 mk)

(c) the number of moles of solution A used.   (1 mk)

(d) The number of moles of solution X that reacted with the number of moles of solution A in (c) above.
(1 mk)

(e) The number of moles of solid X used in procedure I.   (1 mk)

(f) Molar heat of solution of anhydrous sodium carbonate. (2 mks)

2. You are provided with:
- A solution of sodium hydroxide labeled B.
- A solution of sulphuric(vi)acid labeled C.

You are required to determine the concentration of the alkali using the following procedure.

PROCEDURE:
(i) Place 40cm^3 of sodium hydroxide solution into a 250 ml plastic beaker.
(ii) Measure 60cm^3 of sulphuric (vi) acid solution.
(iii) Determine the temperature of sodium hydroxide solution at half a minute intervals for two minutes and record it in the table below.
(iv) At 2 ½ minutes, place the 60cm^3 of solution C into the plastic beaker while stirring and resume taking the temperature in the 3rd minute.

(v) Complete the table below.

Time in minutes	0	½	1	1 ½	2	2 ½	3	3 ½	4
Temperature in ^{0}C									

Time in minutes	4 ½	5	5 ½	6	6 ½	7
Temperature in ^{0}C						

(3 mks)

(a) Plot a graph of temperature against time. (3 mks)

(b) From the graph, determine the highest temperature change. (1 mk)

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(c) Determine the heat evolved in this experiment (Density of solution = 1 g/cm^3 specific heat capacity of solution = 4.2 Jg^{-1} K^{-1})   (2 mks)

(d) Given that the molar heat of neutralization is 56KJ/mole, determine the number of moles of sodium hydroxide used in the neutralization reaction above.   (2 mks)

(e) Determine the molarity of sodium hydroxide.   (2 mks)

3. You are provided with solid K. carry out the following tests and write your observations and inferences in the spaces provided.

	TEST	OBSERVATION	INFERENCE
(a)	Place a spatula full of sample K in a clean dry test tube. Heat gently and then strongly.	(1 mk)	(1 mk)

(b)	Put the remaining solid K in a boiling tube. Add about 8cm^3 of distilled water. Shake well and divide the solution into 3 portions.		
(i)	To the first portion add 3 drops of sodium hydroxide solution and then excess.	(1 mk)	(1 mk)
(ii)	To the second portion add 3 drops of ammonia solution and then excess.	(1 mk)	(1 mk)
(iii)	To the third portion add 3 drops of Barium nitrate followed by 3 drops of nitric acid.	(1 mk)	(1 mk)
(c)	You are provided with solid P. carry out the tests below and record your observations and inferences.		

(i)	Place half spatula of solid P in a non-luminous flame of a Bunsen burner.	(1 mk)	(1 mk)
(ii)	Dissolve the remaining solid in water and divide into two portions		
(a)	Add 3 drops of universal indicator to the 1st portion and determine the PH of the solution.	(1 mk)	(1 mk)
(b)	To the 2nd portion add a little sodium hydrogen carbonate	(1 mk)	(1 mk)

KCSE PRE-MOCK EXAMINATION
FORM FOUR, CRE
CRE PAPER 1
NAME...ADM...........................CLASS...............

Instruction
Select any five questions.

1. a) Identify the national goals that are achieved through the study of CRE.   (5mks)

   b) Outline the literary forms used in writing Biblical books.   (7mks)

   c) Explain how Christians are continuing with God's work of creation.   (8mks)

2. a) Outline seven ways in which God demonstrated His mercy to the Israelites at Mt. Sinai.   (7mks)

   b) Describe the covenant making process between God and Abraham as indicated in Genesis 15: 1-19 (8mks)

   c) What are the features of marriage that qualifies it to a covenant? (5mks

3. a) Give seven duties performed by Samuel after his call until his death.   (7mks)

   b) Give six factors which contribute to schism between Judah and Israel. (6mks)

   c) List the qualities of Prophet Elijah that a Christian leader should posses in Kenya today.   (7mks)

4. a) Give seven similarities between the traditional Africa prophets and the Old Testament Prophets.   (7mks)

   b) Explain the hypocritical religious practices of the Israelites during the time of Prophet Amos. (8mks)

   c) Identify five attributes of God that Christians can learn from Prophet Amos.   (5mks)

5. a) Explain Jeremiah's prophecy about the new covenant Jeremiah 23:5-6; 30-33 (7mks)

   b) Give six similarities in the life and experience of Nehemiah and Jesus Christ. (6mks)

   c) What lessons does Christian learn from Prophet Jeremiah's teaching on the new covenant? (7mks)

6. a) Explain the importance of marriage in African traditional society. (8mks)

   b) Give five changes that have taken place in property ownership in traditional African community. (5mks)

   c) What are the causes of divorce in the society today?   (7mks)

KCSE PRE-MOCK EXAMINATION
FORM FOUR, CRE
CRE PAPER 2
NAME...**ADM**.............................**CLASS**.................

Instruction
Select any five questions.

1. Give eight ways in which Jesus fulfilled the prophecies of suffering servant of Yahweh. (8mks)
b) Outline the content of Mars's song, the magnificent. (5mks)
c) State seven reasons why Christian must be baptized. (7mks)

2. a) Describe the healing of the woman with flow of blood. (Lk. 8: 43-48) (8mks)
b) How did people react towards Jesus use of miracles?
(7mks)
c) State five ways the church continues with the healing ministry of Jesus.
(5mks)

3. a) Outline seven events that took place during triumphant entry to Jerusalem. Lk. 19: 28-44.

(7mks)
b) Narrate eight teaching of Jesus on Eschatology. Lk. 21:5-36.
(8mks)
c) How are Christian preparing for Jesus parousia?
(5mks)

4. a) Outline the teaching of Peter concerning the people of God. 1st Peter 2: 9-10. (10mks)

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b) Show ways through which Christian can promote unity.
(6mks)
c) State ways in which kindness as a fruit of Holy Spirit is abused in Kenya today.
(4mks)

5. a) Identify similarities between the Christian and Tradition Africa on marriage.
(8mks)
b) Give reasons why young people are choosing to remain unmarried in Kenya today.
(6mks)
c) Show ways in which the church is helping to solve domestic violence in Kenya today.
(6mks)

6. a) What is the Christian view on plastic surgery?
(10mks)
b) Ways through which science and Technology has negatively affected the environment created by God.
(4mks)
c) Shows ways in which the youth in the church can carry out environmental restoration in Kenya today.
(6mks)

Name: ………………………………………………. **Adm No:** …………………………….

Class: …..………………………………………. **Candidate's Sign:** …………………...

Date: ………………………………………………..

101/1

ENGLISH (Functional Skills)

TIME: 2 HOURS

KCSE PRE-MOCK EXAM 2020

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

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FORM FOUR

English

(Functional Skills)

2 hours

INSTRUCTIONS TO CANDIDATES:-

- Write your **Name, Admission number** and **Class** in the spaces provided above.
- **Sign** and write the **date** of examination in the spaces provided above.
- Answer **all** questions in this question paper.

For Examiner's Use Only:

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL SCORE	**60**	

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1. **QUESTION 1 : FUNCTIONAL WRITING** (20 mks)

You have recently read an interesting novel which you feel can be recommended as a class reader for the form two students. Write a book review of that novel.

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2.   Read the passage below and fill in the blanks with the most appropriate word.   (10mks)

Addiction is an escape (1)……………………..reality, and different people will find different (2)……………………. to escape from

the real word. They can be addicted to food water, power, work, gambling, sex, love (3) …………………… even to

destructive relationships. Do these belong in the same category (4)……………… alcohol or drugs? And if so, does recovery

from those "people addictions" work the same way as with alcohol and drugs?

Addicts look for substitutes, and (5)………………reason behind this is always the same: to escape, to close one eye and not

to (6)………………..the facts. By becoming fat, the overeater insulates himself from the world around. It is better to be

rejected (7)………………….the way they look, than for who they are as a person. Thus, being fat becomes a way to avoid

the risk of intimacy. There are people who are (8)………………… to work.   (9)……………………………..will go home late, just to

avoid interaction with the family. Workaholism is a dysfunctional attempt to earn self – esteem by ……………Productive.

3.   Oral skills (30marks)

(a) Read the poem below and answer the questions that follow.

    I wonder by the edge

    Of this desolate lake

    Where wind cries in the sledge

    Until the axle break

    That keeps the stars in their round

    And hands hurt in the deep

    The banners of east and west

    And the girdle of light is unbound,

Your breast will not lie by the breast

Of your beloved in sleep

(i)   Describe the rhyme scheme of the poem.   (2mks)

………

………

………

(ii)   Indentify and illustrate any two sound pattern used in the poem   (4mks)

………

………

………

………

(iii)   How would you say the last two lines of the poem?   (2mks)

………

………

………

(iv)   Give homophones for the following words used in the poem (2mks)
        Wonder –

………

………

        Break-

………

………

(b) Underline the word that is said differently from the sets of words given below. (4mks)

    (i) Fairy   ferry   furry

    (ii) Floor   flower   flour

    (iii) Pear   pare   peer

    (iv) Canal   kernel   colonel

(c) During a presentation you were interrupted severally by some members of the audience. Give three reasons why the audience would do so.   (3mks)

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(d) Classify the words below according to the pronunciation of sounds /s/ and /z/
See, raise, miser, pieces, waste, days   (3mks)

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

(e) You have been summoned in a court of law after being arrested in a swoop targeting hawkers. You have been put on your defence   (10marks)

Prosecutor: is your name James Wambua

You: …………………………………………………………………………………………

………………………………………………………………………………………………..

………………………………………………………………………………………………..

Prosecutor: (*addressing the magistrate*) sorry for that mix – up your honour the name is James Wambura not James Wambua.

(*to the defendant*) You are accused of contravening the city by laws CAP 16/2B of the county Government by hawking goods without a license. What is your plea?

You: ……………………………………………………………………………………

………………………………………………………………………………………..

………………………………………………………………………………………..

(2marks)

Prosecutor: If you were truly coming from school, would you prove to this court that you are really a student?

You: ……………………………………………………………………………………

………………………………………………………………………………………..

………………………………………………………………………………………..

(2marks)

Prosecutor: (*passing some document to the magistrate)* your honour the document looks genuine and has a school stamp (*To the defendant*) but exactly where were you arrested and what were you doing there at that time?

You: ……………………………………………………………………………………

………………………………………………………………………………………..

………………………………………………………………………………………..

(2marks)

Prosecutor: (*to the magistrate*) your honour since the accused is a minor, I have no intention of proceeding with the prosecution of this case.

Magistrate: alright: case dismissed.

You: ………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

(2marks)

Name: ………………………………………………… **Adm No**: …………………..

School: …………………………………………… **Candidate's Sign**: …………

Date: …………………………………………………

101/2

ENGLISH

(COMPREHENSION, LITERARY, APPRECIATION AND GRAMMAR)

PAPER 2

TIME: 2 ½ HOURS

KCSE PRE-MOCK EXAM 2020

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

FORM FOUR

English

Paper 2

INSTRUCTIONS TO CANDIDATES:-

- Write **your name** and **admission number** in the spaces provided.
- Sign and write the **date** of examination in the spaces provided above.
- Answer *all* questions in this question paper.
- Answers to all questions *must b*e written in the spaces provided in this booklet.

For Examiner's Use Only

QUESTION	MAXIMUM SCORES	CANDIDATE'S SCORES

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1	20	
2	25	
3	20	
4	15	
Total Score	**80**	

QUESTION 1   *(20mks)*

Read the passage below and answer the questions that follow

Cities and towns are experiencing massive population growth the world over receiving huge numbers of migrants ever year.

In 1950, urban population accounted for only 29 percent of the world population, according to the United Nations Educational Scientific and Cultural Organization (UNESCO). At the turn of the century, the figure had risen to 45percent. This was enough to declare the Twentieth Century the century of urbanization and city life. Now the figure is projected to hit 70 percent by 2025.

In Africa, urbanization is most intense in Algeria, Tunisia and South Africa, which have more than 50 percent of their population living in urban areas. Generally, cities in the developing world are growing at a rate of 3.5 per cent per annum.

These figures indicate that there is a continuous massive movement of people from rural to urban areas worldwide. Driven by the desire for better living conditions, they flock to cities in droves in search of greener pastures. But, slowly the **illusion** disappears, and is replaced by harsh realities of urbanism: unemployment or underemployment, crime, poverty, hunger and life in the slums.

To cope with this fast – moving wave of rural flight requires new strategies for urban planning and the use of urban spaces. Thus urban planners, policymakers and governments seek **pragmatic** and timely ways of addressing this challenge. The process of urbanization transforms land use and farming systems, patterns of labour force participation, infrastructural requirements, and natural resource systems. When cities grow, their population expands, putting a strain on food production.

As a way of easing the food shortage, many urban households, particularly the poor, have taken to growing food on small plots. Today, if you take a walk through some of the residential estates in Nairobi such as Ngara, Eastleigh and Buru Buru, you might be forgiven for thinking that a green revolution is under way. And on the outskirts of the city, green – houses and ponds compete for space with small gardens planted with flowers, vegetables and fruits. Banana plants and palm trees dwarf wrought – iron gates, their green dotting the skyline, Kale, cabbage and maize gardens sprout in the middle of urban squalor. In this unusual rare blend, urban features and rural agrarian patterns are combined in a new form of settlement and one might call 'garden cities.'

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Although it is often not given much attention, urban agriculture is steadily increasing. The practice involves cultivating, processing and distributing food in and around a town or city. It also encompasses an array of activities including horticulture, aquaculture, animal husbandry and bee keeping.

a) What are the challenges facing major cities and towns   (2mks)

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

b) What does the mention of 70% by 2025 reveal?   (2mks)

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

c) What do we learn about urbanization in Africa from the passage   (2 mks)

………………………………………………………………………………………

………………………………………………………………………………………

d) Mention the reason for rural to urban migration   (2mks)

………………………………………………………………………………………

………………………………………………………………………………………

e) How are urban households easing the problems of food shortage?   (3 mks)

………………………………………………………………………………………

………………………………………………………………………………………

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………

f) What is meant by the term 'garden city?'   (1mk)

………………………………………………………………………………………

………………………………………………………………………………………

g) In note form, list the influences of urbanization   (4 mks)

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

h) Urban populations accounted for only 29% of the world population   (1 mks)

(**Rewrite the statement adding a question tag**)

………………………………………………………………………………………………

………………………………………………………………………………………………

i) Explain the meaning of the following words as used in the passage   (3 mks)

   i)   Illusion

………………………………………………………………………………………………

………………………………………………………………………………………………

   ii)   Pragmatic

………………………………………………………………………………………………

………………………………………………………………………………………………

   iii)   Squalor

………………………………………………………………………………………………

………………………………………………………………………………………………

QUESTION 2: THE COMPULSORY SET TEXT (25 MARKS)

Nora: (*jumping up and going to him*) oh, dear, nice Doctor Rank, I never meant that at all. But surely you can understand that being with Torvald is a little like being with Papa –

(*enter MAID from the hall*)

Maid: if you please, ma'am. (*Whispers and hands her a card*)

Nora: (*glancing at the card*) oh! (*Puts it into her pocket*)

Rank: is there anything wrong?

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Nora: No, no, not in the least. It is only something – it is my new dress –

Rank: what? Your dress is lying there.

Nora: Oh, yes, that one: but this is another. I ordered it. Torvald mustn't know about it –

Rank: Oho! Then was the great secret.

Nora: Of course. Just go in to him: he is sitting in the inner room. Keep him as long as –

Rank: Make our mind easy; I won't let him escape (*goes into HELMER'S room*)

Nora: (*to the MAID*) And he is standing waiting in the kitchen?

Maid: Yes; he came up the back stairs.

Nora: But didn't you tell him no one was in?

Maid: Yes, but it was no good.

Nora: He won't go away?

Maid: No; he says he won't until he has seen you, ma'am.

Nora: Well, let him come in – but quietly. Helen you mustn't say anything about it to anyone. It is a surprise for my husband.

Maid: Yes, ma'am, I quite understand. (*exit*)

Nora: This dreadful thing is going to happen! It will happen in spite of me! No, no, no, it can't happen – it shan't happen!

QUESTION 2 (25 marks)

a) Place this excerpt in its immediate context   (3 mks)

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

………………………………………………………………………………………

b) Indentify and illustrate the character trait of the following characters   (4 mks)
    i)Rank

………………………………………………………………………………………

………………………………………………………………………………………

……………………………………………………………………………………………………

ii)Nora

……………………………………………………………………………………………………

……

………

c)   Who is in the kitchen and why has he come?   (3mks)
……………………………………………………………………………………………………

……

………

d)   Identify and illustrate the dominant theme in the excerpt.   (2mks)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

e)   "……… being with Torvald is a little like being with papa" what does Nora mean by this statement?
                                                       (2mks)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

f)   Explain an incidence of dramatic irony from the excerpt.   (2mks)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

g)   Why is Nora quick to usher Dr. Rank out of the room?   (2 mks)
……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

h)   "This dreadful thing is going to happen. "**Rewrite in reported speech**.   (1mk)
……………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

i)   Explain the dreadful thing that Nora fears might happen?   (2 mks)
………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

j)   Explain the meaning of the following expressions as used in the excerpt.   (3 mks)
   i)   Make your mind easy –
………………………………………………………………………………………………………

………………………………………………………………………………………………………

   ii) I won't let him escape –
………………………………………………………………………………………………………

………………………………………………………………………………………………………

   iii) It was no good –
………………………………………………………………………………………………………

………………………………………………………………………………………………………

   iv) Dreadful -
………………………………………………………………………………………………………

………………………………………………………………………………………………………

QUESTION 3: ORAL LITERATURE (20marks)

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

Once upon a time, all animals in the jungle were of the same plain colour but when they were invited by king lion for his son's wedding, they decided to decorate themselves for the occasion. The tortoise was given the task of making the dye to be used. Though he was slow, he was the most intelligent.

The big day was fast approaching but the tortoise had only managed to make one big pot of black dye. He called a meeting and they all decided to use the available dye to make various patterns in their skins.

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The leopard was allocated the job of painting the rest of the animals. The zebra was the first on queue followed by the giraffe, then the donkey and all the other animals were to follow. The giraffe and the zebra were painted and they looked very beautiful.

Then the donkey's turn came but he was undecided on the pattern to choose. The leopard decided to paint him like a zebra and got down to work. He had a long line along the donkey's spine from head towards the tail. On reaching the tail, the donkey started giggling. The leopard continued and the donkey jumped and threw him his hind legs saying the brush was tickling and he could not contain himself any longer.

He had thrown his hind legs so hard that he hit the pot containing the dye. The dye spattered all over the animals on the queue. The cheetah got speckles all over his body, the leopard got spotted and the crow who happened to be passing by with an urgent letter for the king hanging on its neck was splashed by the dye which covered him the whole body apart from the neck where the letter was. On seeing this, the hyena started laughing but got a large splotch on his mouth.

All the animals rushed to the stream to try and wash out the dye but it was already dried and had become permanent. Nobody could get off the spots, streaks, speckles and splotches. And that is how the donkey was responsible for the various patterns we see on animal's bodies today.

a) Classify the narrative above.   (2mks)

……

……

b) Indentify and illustrate any two social aspects of society from which this narrative is taken
                                                (4 marks)
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c) Indentify and illustrate any three features peculiar to oral narratives evident in this narrative.
                                                (6mks)
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d) Indentify and illustrate any two character traits of the Leopard.   (4 mks)

…………………………………………………………………………………………

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e) Who would be the target audience of such a narrative   (2mks)

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

f) If you were to collect this narrative from the field, what preparations would you make before the actual field work
(2mks)

…………………………………………………………………………………………

…………………………………………………………………………………………………

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…………………………………………………………………………………………………

…………………………………………………………………………………………………

QUESTION 4: GRAMMAR (15 mks)

(a) Rewrite the following sentences according to the instructions given after each. Do not change the meaning.

1. The children welcomed the teachers.

    (Begin with: The teachers)

…………………………………………………………………………………………

…………………………………………………………………………………………

2. John does not take Lunch. His sister does not take Lunch.

    (Begin with: Neither)

…………………………………………………………………………………………

…………………………………………………………………………………………

3. Gatwiri asked, "Can we meet here tomorrow morning?"

    (Rewrite in direct speech)

…………………………………………………………………………………………

…………………………………………………………………………………………

4. This novel is far better than the one I bought last week.

    (Rewrite using the word 'superior')

…………………………………………………………………………………………

…………………………………………………………………………………………………

5. It is not necessary to collect the garbage today.

    (Rewrite being: You do not)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

(b) Rewrite the following sentences to correct the errors.

1. Of the two books, the first is longest

…………………………………………………………………………………………………

…………………………………………………………………………………………………

2. The quarter of the three girls sleeps earlier.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

3. I did not find any fellow colleagues in class when I arrived late.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

(c) Supply the appropriate question tags in the blank spaces in the following sentences.

1. We needn't worry about tomorrow,

…………………………………………………………………………………………………

…………………………………………………………………………………………………

2. Let me have a taste,

…………………………………………………………………………………………………

…………………………………………………………………………………………………

3. They'll come early in the morning,

…………………………………………………………………………………………………

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(d) Replace the underlined words with phrasal verbs formed from the words in brackets

1. Lucy asked Julius <u>not to involve</u> himself with her personal matters. (keep)

…………………………………………………………………………………

2. My mother <u>accidentally met</u> me along Jamhuri highway in the town (run)

…………………………………………………………………………………

(e) Use the words in bracket in their correct form to replace the underlined words.

1. The candidate was <u>not popular</u> amongst the electorate. (famous)
…………………………………………………………………………………

…………………………………………………………………………………

2. The vehicle that <u>was moving very fast</u> caused the accident. (speed)

…………………………………………………………………………………

Name: …………………………………………… **Adm No**: ……………………………

School: …………………………………………. **Candidate's Sign**: …………………….

Date: …………………………………………….

101/3

ENGLISH

(CREATIVE COMPOSITION AND ESSAYS BASED ON SET TEXTS)

PAPER 3

TIME: 2 HOURS 30 MINUTES

For more Eresources Call: 0705 525657

KCSE PRE-MOCK EXAM 2020

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

FORM FOUR

English

Paper 3

INSTRUCTIONS TO THE CANDIDATES:-

- *Answer THREE QUESTIONS in this paper*
  - ❖ *Question 1a or 1b*   *(20mks)*
  - ❖ *Question 2 is compulsory*   *(20 mks)*
  - ❖ *Question 3a or 3b or 3c*   *(20mks)*

- *Where a candidate presents work on more than one optional text, only first one to appear will be marked.*

- *All answers to be written in the answers booklet provided.*

For Examiners Use Only.

Question	Maximum	Candidate's score
1	20	
2	20	

For more Eresources Call: 0705 525657

3	20	
Total Score	**60**	

1. ### <u>Imaginative composition</u>

    (a) *Write a story ending with;*
    ………………. Truth be told, we strongly believe that he was innocent.   (20mks)

    Or

    (b) *Write a story to illustrate the saying:*
       A fool and his money are soon parted   (20mks)

2. ### (<u>The compulsory set test (20mks)</u>

    "People who do bad deeds to others never go unrepaid"

    Show the validity of this statement with reference to Henry Ole Kulet's novel. Blossoms of the savannah"

3. ### <u>The option set – test (20mks)</u>

    Answer only one of the following questions

    Either

    (a) *The short stories*
    Chris Wanjala, memories we lost and other stories

Using Leila Aboud's story "missing out" write an essay on how majoly's stay in London alienates him from his people

Or

(b) Drama
David Mulwa, inheritance

"Pretenders are worse than murderers." Write an easy to show the truthfulness of this statement basing your answer on the inheritance by David Mulwa.

Or

(c) The novel
John Steinbeck, the pearl

"The society has lost its moral values" using illustrations from The Pearl by John Steinbeck show the truth of this statement.

KCSE PRE-MOCK EXAMS 2020
GEOGRAPHY PAPER 1

OPENER TERM 2

INSTRUSTIONS TO CANDIDATE
(a) This paper has two sections A and B.

(b) Answer all the questions in section A.

(c) Answer questions 6 and any other from section B.

(d) Answer must be written in the answer booklet provided.
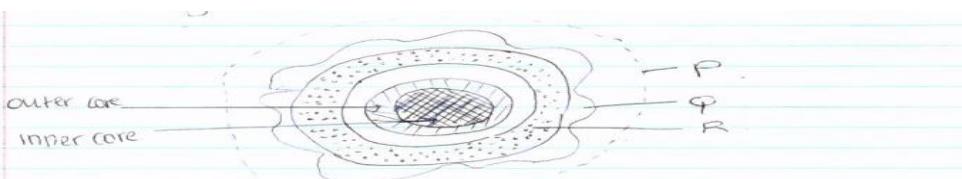
(e) This paper consists of 4 printed pages.

(f) Candidates must check the question paper to certain that all pages are printed as indicated

and no questions are missing

SECTION A

ANSWER ALL THE QUESTIONS IN THIS SECTION

1. The diagram below the structure of the earth.

(a) Name the parts named P, Q and R   3m
(b) Name the Minerals that make up SIAL   (2m)

(c) State the Plate tectonic theory   (2mks)
(d) List three types of boundaries associated with plate tectonic
Movement   (3m

(e) What is a stevenson screen   2mk
(b) State three essential features of a stevenson screen   3m

(a) Differentiate between Weathering and Mass wasting   2m
(b) State three effects of soil creep on the earth surface   6m

5657

(a)Name   the parts marked P, Q and R. (3mks)

(b) Name the minerals that make up SIAL (2mks)

2. (a) State the plate tectonic theory (2mks)

(b)List THREE types of boundaries associated with plate tectonic movement. (3mks)
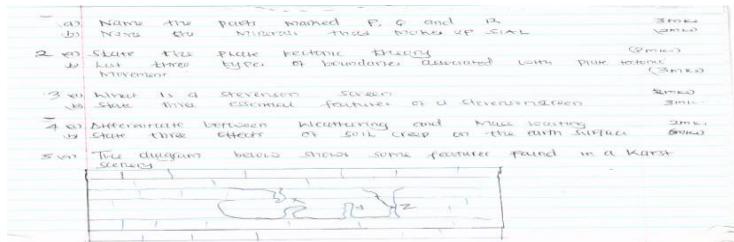
3(a) what is a Stevenson screen (2mks)

(b)State THREE essential features of a Stevenson screen (3mks)

4(a) Differentiate between weathering and mass wasting (2mks)

(b)State THREE effects of soil creep on the earth surface (3mks)

5(a) The diagram below   shows some features found in Karst Scenery.

(a)Name the features marked X, Y and Z (3mks)

(b) State TWO ways in which lakes influence the natural environment (2mks)

SECTION B
ANSWER QUESTION 6 AND ANY OTHER TWO QUESTIONS FROM THIS SECTION
6. Study the map of MIGWANI (1:50,000) sheet 151/1 provided and answer the following questions
(a (i)Give the latitudinal extent of the area covered by the map (2mks)

(ii)What is the magnetic variation of the map (1mk?)

(iii)Convert the ratio scale of   the map into statements scale (2mks)

(b)Citing evidence from the map give THREE economic activities carried out in the area covered by the map. (6mks)

(c) Explain how relief has influenced the distribution of settlement in the area covered by the map (4mks)

(d) (I)Using a vertical scale of 1cm to represent 100metres, draw a cross-section along the line marked   J-K

(4mks)

(iii)On it mark and label the following
                   -Footpath (1mk)
                    -Road (1mk)
                     - Water pipeline (1mk)
                      -steep slope (1mk)
(Iv)Calculate the vertical exaggeration of the cross-section (2mks)

7(a) (i) what is a river divide (1mk)

(ii)Describe THREE ways by which a river transport its load (6mks)

(b)Describe the characteristics of a river on its old stage (7mks)

(c) Describe each of the following drainage system and patterns

(i) Superimposed drainage system (3mks)

(ii)Centripetal drainage pattern (2mks)

(d)You have planned to carry out a field study of a river in its youthful stage.

(i)State TWO ways in which you would prepare for the study (2mks)

(ii)Name TWO features you are likely to study (2mks)

(iii)List TWO problems you are likely to experience during the study (2mks)

8(a) List FOUR processes through which coasts are eroded (4mks)

(b)Using well-labeled diagram, explain how each of the following features is formed

(i)A spit (4mks)

(Ii)A blow hole (2mks)

(iii)A toll (5mks)

(c) Some students carried out a field study on the coastal features found along the coast.

(i)List THREE features formed as a result of coastal emergence that they are likely to have studied (3mks)

(ii)State THREE methods that student may have used to record their data (3mks)

(iii)Describe TWO ways in which features resulting from coastal emergence are of significance to Kenya (2mks)

9(a) (i)Distinguish between Orogenic And Epeirogenic earth movement(2mks)

(ii)Describe how convectional currents cause earth movements (5mks)

(b)Explain THREE factors that determine the type of features resulting from earth movements (6mks)

(c) Describe the types of boundaries created as a result of earth movement (6mks)

(d)A form two class conducted a field study in an area that had undergone earth movement

(i)Give TWO examples of transform faults they would have observed (2mks)

(Ii)Name TWO oceanic plate they would have observed (2mks)

(Iii)Give the main reason why the interview method was not the appropriate method collecting the data (2mks)

10 (a)(i)Apart from fold mountains name THREE other features resulting from folding (3mks)

(ii)Identify FOUR examples of Fold Mountains outside Africa (4mks)

(b)Explain TWO major factors that influence folding (4mks)

(c) Describe the formation of Fold Mountains using the contraction theory (6mks)

(d)Explain the effects of folding on the following

Agriculture(2mks)

tourism (2mks)

mining (2mks

Transport (2mks)

NAME _____ Adm. No. _____

Student's signature _____   Date _____

School _____

312/2

GEOGRAPHY

PAPER 2

2 ¾ HOURS

KCSE PREMOCK EXAMS 2020

FORM FOUR

INSTRUCTIONS TO STUDENTS

  i)   This paper has two sections: A and B.

 ii)   Answer all the questions in section A.

iii)   Answer question **6** and any other **two** questions from section B.

iv)   All answers must be written in the answer booklet provided.

 v)   This paper consists of 3 printed pages and 10 questions

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

vii)   Answer the questions in English.

SECTION A.

ANSWER ALL QUESTIONS IN THIS SECTION.

For more Eresources Call: 0705 525657

1. a) What is Forestry? (2mks)
   b) Name five exotic species of trees planted in Kenya (5mks)
2. State four factors favouring the growth of forests on Mt. Kenya (4mks)
3. Give four reasons why afforestation is being encouraged in Kenya (4mks)
4. What is a polder? (2mks)
5. Describe the stages involved in reclamation of a polder (8mks)

SECTION B

Answer question 6 and any other two questions in this section

6. The table below shows the number of tourists who visited Kenya from 2010 to 2012. Use it to answer question 6(a)

COUNTRY	NUMBER OF TOURISTS
Canada	90,000
Germany	150,000
Italy	60,000
U.S.A	100,000
France	110,000
TOTAL	510,000

   a) i) Apart from pie charts, name two other statistical methods that can be used to represent the data in the table (2mks)
   ii) Using a radius of 5cm, draw a pie chart to represent the data in the table above. Show your calculations (10mks)
   b) State the advantage of using the data in a pie chart (3mks)
   c) State five steps taken by Kenyan government to promote wildlife resources (10mks)
7. a) What do you understand by these terms?
       i) Land reclamation (2mks)
       ii) Land rehabilitation (2mks)
   b) State five methods used in land reclamation and rehabilitation in Kenya (5mks)
   c) i) Explain four factors that led to the establishment of Perkerra Irrigation Scheme (8mks)
       ii) Apart from Perkerra, name two other large Irrigation schemes in Kenya (2mks)
   d) You intend to carry out a field study on Irrigation farming in Perkerra Irrigation Scheme. Give six reasons why you need a pre-visit or reconnaissance for the study (6mks)
8. a) Name the major cocoa growing areas in Ghana (3mks)
   b) Identify five conditions suitable for the cultivation of cocoa in Ghana (5mks)
   c) Outline the stages in the processing of cocoa (7mks)
   d) You intend to carry out a field study in a dairy farm near your school.
      i) Identify two characteristics of a good hypothesis for the study (2mks)
      ii) State four advantages of using the interview method to collect data during the study (4mks)
      iii) Give four problems you are likely to encounter as you collect the data (4mks)

9. a) Differentiate between fishing and fisheries (4mks)
   b) Use four methods used to preserve fish (4mks)
   c) Identify four Traditional methods of catching fish (4mks)
   d) Give four reasons why Norway is a great fishing nation (8mks)
   e) Identify five measures the Government of Kenya is undertaking to encourage fish culture (5mks)

For more Eresources Call: 0705 525657

10. a) i) What is wildlife? (2mks)
       ii) Give five reasons why it is necessary to conserve wildlife in Kenya (5mks)
    b) Explain four ways in which Human activities are a threat to wildlife (8mks)
    c) You intend to carry out a field study of a National park in your local area.
       i) Which animals are you likely to see in the National park? (3mks)
       ii) State three items you would include in the work schedule (3mks)
       iii)   Give four advantages of studying wildlife through fieldwork (4mks)

NAME _____ ADM. NO. _____

Student's signature _____

Date _____/ ___ /

School _____

312/1

HISTORY PAPER 1

2 ¾ HOURS

KCSE PREMOCK EXAMINATIONS 2020

FORM FOUR

INSTRUCTIONS TO STUDENTS

viii)   This paper has Three sections: A, B and C.

ix)   Answer all the questions in section A.

x)   Answer question **three** questions from section B and two others from section C.

xi)   All answers must be written in the answer booklet provided.

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

SECTION A (25MARKS)
Answer all questions in this section

1. Identify one branch in the study of History and Government of Kenya (1mk)
2. What was the main economic activity of the Cushites in the pre-colonial period? (1mk)
3. State two similarities in the political organization of the Ameru and Abagusii in Kenya during the 19th century (2mks)
4. Identify one way in which the Monsoon winds led to the development of trade between the Kenyan coast and the outside world (1mk)
5. State two functions of Fort Jesus during the Portuguese rule along the Kenyan coast (2mks)
6. Define the term dual citizenship (1mk)
7. Give two categories of human rights (2mks)
8. Give two rules that govern the concept of National justice (2mks)
9. State two terms of Anglo-German-Agreement of 1886 (2mks)
10. Give one reason why the British colonial government encouraged white settlers to come to Kenya (1mk)
11. What was the main reason for the formation of Ukamba Members Association? (1mk)
12. Why was the nomination of Eliud Mathu to the Legco important? (1mk)
13. Name two chambers of parliament under the new constitution (2mks)
14. Name one branch of the police service in Kenya (1mk)
15. Name one superior court in Kenya (1mk)
16. Identify one circumstance that would make a county governor to be removed from office (1mk)
17. State the main function of the National Security Council (1mk)

SECTION B
Answer any three questions from this section

18. a) Why did the Highland Nilotes migrate from their original homeland during the pre-colonial period? (5mks)
    b) Explain five results of the migration and settlement of the Highland Nilotes in Kenya (10mks)

19. a) Give three reasons for the coming of European Christian missionaries to Kenya in the 19th century (3mks)
    b) Explain six factors that hindered the work of early Christian missionaries in Kenya (12mks)

For more Eresources Call: 0705 525657

20. a) What were the reasons for construction of the Kenya – Uganda railway? (3mks)

b) Explain 6 effects of the construction of Kenya – Uganda railway (12mks)

21. a) Why were Africans opposed to the British colonial rule between 1920 – 1939? (5mks)

b) Explain five methods used by African Nationalists in Kenya in their struggle for independence (10mks)

<u>SECTION C</u>
Answer any two questions from this section

22. a) State three factors that have undermined natural unity in Kenya since independence (5mks)

b) Explain five challenges facing the correctional services in Kenya today (10mks)

23. a) Identify three groups of Kenya Defence Forces (KDF) (3mks)

b) Explain 6 functions of the Kenya Defence Forces (12mks)

24. a) Name five survival rights of a child (5mks)

b) Describe five features of the Independence constitution (10mks)

KCSE PREMOCK 2020 EXAMS

312/2

HISTORY AND GOVERNMENT PAPER 2

21/₂ HRS

FORM 4

INSTRUCTIONS CANDIDATES.

a. *This paper consists of three sections: A, B and C.*

b. *Answer all the questions in section A, three questions from section B and two questions from section C.*

c. *Answers to all the questions must be written in the answer booklet provided.*

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

e. Candidates should answer the questions in English.

1. State two disadvantages of oral traditions as a source of History and Government.(2mks)

2. State two circumstances that forced man to start growing crops.(2mks)

3. State the main mode of transport used during the trans – Saharan trade.(1mks)

4. What was the contribution of Alexander Graham Bell in the of Science.(1mk)

5. Identify the form of writing that developed in Egypt as result of development of agriculture.(1mk)

6. State the main factor that led to emergence of Cairo as an Urban Centres (1mk)

For more Eresources Call: 0705 525657

7. Identify one factor that hinder industrialization in third world countries.(1mk)

8. Give two reasons why indirect rule was unsuccessful in Southern Nigeria .(2mks)(1x2)=2mks

9. State two strategic reasons for the scramble and partition of Africa.(2mks)

10. Give two resolution of the Berlin conference of 1884 to 1885(2mks)

11. Give two reasons why the league of nations was formed in 1919(2mks)

12. State one major event that led to the First World War.(1mk)

13. Identify two structural defects of the organization of African Unity(OAU) that have undermined its activities since 1963(2mks)

14. Give two reasons why united state of America (U.S.A) did not join the First World war until 1917.(2mks)

15.   State one use of steel(1mk)

16.   What is the main role of the International Criminal Court?(1mk)

17.   Give the main principle that guides non-aligned movement.(1mk)

SECTION B(45 MKS)
Answer any three questions from this section in sheet provided.

18.   a)State five impacts of early agriculture in Mesopotamia.(5mks)

   b.Explainthe effects of food shortages in third world countries(10mks)

19.   a)Sate five roles of Tuaregs in Trans-Saharan trade?(5mks)

   b)Explain five social effects of Trans-Saharan trade on the people of western Sudan?(2mks)

20.   a)Give the factors that led to the rise of the Baganda Kingdom.(5mks)

   b)Describe the political organization of the Asante?(10mks)   2x5=10mks

21.   a.State five factors which made the Lozi to collaborate with the British (5mks).

   b.Explain five reforms introduced by the German administration in Tanganyika after the MajiMaji rebellion.(10mks)

SECTION C(30MKS)
22.   a)State five reasons why the British used indirect rule to administer Northern Nigeria(5mks)

   b.Why did the French system assimilation fail(10mks)

23.   a)Give five functions of the security council of the united Nations Organization.(UNO) (5mks)

   b)Describe five benefits for being a member of the common wealth of nations(10mks)

24.   a)Give reasons for the formation of Non-Aligned Movement? (5mks)

   b)Explain five effects of the cold war?(10mks)

JINA: ....DARASA:........NAMBARI:...........

KISWAHILI KARATASI YA 1

INSHA

KIDATO CHA NNE.

MAAGIZO:

1. **Jibu maswali mawili.**
2. **Swali la kwanza ni la Lazima.**
3. **Chagua swali moja kati ya maswali matatu yaliyobaki.**
4. **Kila insha isipungue maneno 400.**

1. Swali la LAZIMA

Ukiwa Gavana Mtajika wa Kaunti yako umealikwa kuwazungumzia wanafunzi wa kidato cha nne katika shule ya Mafanikio. Andika Tawasifu utakayowasilisha.

(alama 20)

2. Eleza jinsi udanganyifu katika mitihani utaathiri maisha ya kizazi kijacho.

(alama 20)

3. Andika kisa kitakachothibitisha maana ya methali: Mtenda mema kwa watu atendea nafsiye.

(alama 20)

4. Kamilisha tukio kwa maneno yafuatayo:
"…waliwasili saa tatu baadaye. Uharibifu wa mali na maisha ulikuwa umeshatendeka wala kufika kwao hakukusaidia kwa lolote."   (alama 20)

JINA: ....**DARASA:**........**NAMBARI:**.........
KISWAHILI KARATASI YA 2
KIDATO CHA NNE.

Maagizo.
Jibu maswali yote .

1. **UFAHAMU (ALAMA 15)**
Soma kifungu kifuatacho kisha ujibu maswali

Tangu opresheni ya Usalama kuanza kutekelezwa na maafisa wa usalama katika mtaa wa Eastleigh, kumekuwa na propaganda kuwa inalenga watu wa jamii na dini Fulani.

Harakati hizi za kuwasaka magaidi sharti ziendelee na zichangiwe na kila raia ili zizae matunda tatunayoazimia kupata; kuwanasa wote wanaohusika.

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Wakenya tumeishi kwa miaka mingi bila kubaguana katika misingi ya dini na ukabila. Iweje tuanze sasa miaka zaidi ya hamsini baada ya uhuru? Ndiposa tunawasihi Wakenya wote wenye nia njema kukumbuka kwamba hatuna njia ya mkato katika suala hili la ugaidi. Sharti tupambane nao. Hawa ni watu; ni ndugu zetu, rafiki zetu na watoto wetu.

Hakuna mzazi atakayejitokeza hadharani na kukiri kuwa mtoto wake ni gaidi! Hata kama atajua wazi mwanawe ni gaidi na amelipua Wakenya na ataendelea kufanya hivyo akizidi kupewa nafasi. Atanyamaza na kumtetea kwa hali na mali.

Madhara ya mashambulizi hayo ya kigaidi tayari yameanza kuonekana ambapo wamiliki wa mahoteli ya kifahari wanalalama kuwa idadi ya wageni imepungua maradufu. Hali kama hii ni hatari kwa uchumi wa nchi.

Sisi tukiwa Wakenya wapenda amani hatuna budi kuungana mkono katika oparesheni hiyo na kushirikiana na maafisa wa usalama kwa kutoa habari muhimu kuhusu washukiwa wa ugaidi. Hakuna oparesheni dhidi ya wahalifu ambayo inaweza kuendeshwa bila jamii ambapo wamejificha kuathiriwa. Heri nusu shari kuliko shari kamili; magaidi wana madhara makubwa kuliko oparesheni ya usalama.

Sisi Wakenya kwa sasa tuko katika hali hii tatanishi ya kushindwa kuamua; tupambane na magaidi tuumize na Wakenya wachache wasio na hatia ama tuache tu magaidi wakae kwa sababu tunaogopa kuwasumbua hao wachache.

Kadhalika, badala ya kuangazia maeneo yenye visa vingi vya mashambulizi ya ugaidi oparesheni ya usalama inafaa kuelekezwa pia katika maeneo mengineyo ambayo yamekuwa yakikumbwa na visa vya utovu wa usalama mara kwa mara.

Vikosi vya usalama vinafaa kuhakisha kuwa magenge ya aina hii hayasazwi katika oparesheni hiyo. Aidha, serikali inapaswa kutoa makataa kwa kila Mkenya ambaye anamiliki bunduki kinyume cha sheria kusalimisha silaha hizo mara moja katika vituo vya polisi, la sivyo wachukuliwe hatua kali za kisheria.

Wakenya wote wafaa kuonyesha ushirikiano kwa kuwa makini zaidi. Wajiepushe na maeneo hatari ambayo yaweza kuwa makazi ya magaidi ama ya washukiwa wa ugaidi. Aliye kando haangukiwi na mti ama mshausahau huo maarufu.

(a) (i) Eleza uongo unaosambazwa kuhusu oparesheni ya usalama mtaani Eastleigh.

(alama 1)

…………………………………………………………………………………………………

(ii) Oparesheni hii ina lengo lipi? (alama 1)

…………………………………………………………………………………………………

(b) Eleza jinsi Wakenya wamekuwa wakiishi tangu uhuru. (alama 1)

………………………………………………………………………………………………..

(c) (i) Magaidi wana uhusiano upi nasi kwa mujibu wa kifungu?   (alama 1)

………………………………………………………………………………………………

(ii) Eleza namna wazazi wanavyochangia kuwepo kwa ugaidi nchini.   (alama 2)

…………………………………………………………………………………………………
………………………………………………………………………………………………

(d) Fafanua athari mbili zinazokumba nchi kutokana na ugaidi.   (alama 2)

…………………………………………………………………………………………………
…………………………………………………………………………………………………
…………………………………………………………………………………………………
………………………………………………………………………………………….

(e) Wakenya wamepewa changamoto ipi ili kusaidia katika kuangamiza ugaidi?
                                                                      (alama 2)
…………………………………………………………………………………………………
……………………………………………………………………………………………
(f) "Wakenya wako kwenye njia panda." Tetea kauli hii ukirejelea kufungu.   (alama 2)

…………………………………………………………………………………………………
…………………………………………………………………………………………………
………………………………………………………………………………………….

(g) Serikali inapaswa kuchukua hatua ipi dhidi ya wamiliki haramu wa bunduki?
                                                                      (alama 2)
………………………………………………………………………………………………
(h) Eleza maana ya methali hii kulingana na taarifa.   (alama 1)
    Aliye kando haangukiwi na mti.

……
………………………………………………………………………………………………

2. MUHTASARI.
Soma kifungu hiki kisha ujibu maswali.

Lugha imekuwa kikwazo kikubwa katika kukuza tecknolojia ya habari na mawasiliano
(TEKNOHAMA) barani Afrika . Lugha ambazo zimekuwa zikitumiwa ni za kimagharibi kama vile
kijerumani , kifaransa na kiingereza. Idadi kubwa ya waafrika ,hasa wanaoishi vijijini hawazifahamu
lugha hizi.

        Uamuzi wa shirika la *Microsoft* wa kutumia lugha ya kiswahili katika *program* za kompyuta
kuanzia mwaka 2005 ni mchango mkubwa. Kuzinduliwa kwa mradi huu ni tukio la kipekee kuimarisha
tecknolojia sehemu za mashambani.

Mradi huu umewawezesha wananchi takribani milioni 150 wa janibu za Afrika Mashariki kufaidika na huduma za tarakilishi.

Utekelezaji wa mradi halikuwa jambo jepesi. Kwanza, ilibidi shirika la *microsoft* chini ya uongozi wa *Bill Gates* kulishawishi Bodi lake la wakurigenzi. Bodi liliposhawishika kuwa Kiswahili ni lugha inayo tumiwa na mamilioni ya watu liliidhinisha kuzinduliwa kwa mradi. Hatua iliyofuatia ilikuwa kuteua maneno 700,000 ya kimsingi ya kiiingereza ambayo yangetafsiriwa kwa kiswhili.

Hatua iliyofuata ilikuwa ya kutafuta ushirikiano na dola pamoja na mashirika ya kibiashara na taasisi za elimu ulimwenguni. Ilipobainika kuwa matumizi ya lugha ya Kiswahili yangehanasisha Uwekaji katika vituo vya mtandao vijijini, ushirikiano katika kuendesha mradi huu uliafikiwa bila shida. Mradi huu ulichukua muda wa miezi 18 kukamilika.Uliwashirikisha wahisika katika uwanja wa tecknolojia ya habari mawasiliano, elimu biashara na idara za Kiswahili katika vyuo vikuu vya Africa Mashariki. Vyuo –vikuu ni pamoja na Dar es Salaam . Nairobi, Kenyatta na Makerere.

Waatalamu walioshirikishwa walisaidia katika kubuni faharasa ya istilahi za Kiswahili 3,000. Hizi ni zile ambazo zinafaa kwa matumizi ya kompyuta ya kawaida na ya kila siku.

Mradi huu umeshangiliwa na wakereketwa na wapenzi wa Kiswahili katika nyanja zote. Wasomi, wanariadha , wanamuziki, watalii, wafanyabiashara , wanasiasa ,wafuasi wa dini mbalimbali na wakulima ; wote wamefurahia hatua ya Kiswahili kuingizwa kwenye mtandao.

Watu ambao walikuwa hawawezi kutumia tarakilishi kwa sababu ya kutojua Kiingereza sasa hawana kisingizio. Matumizi ya kiswahili yatapanua na kuimarisha mawasiliano baina ya watu wanaoishi vijijini na pembe zote za ulimwengu.

Jambo la kutia moyo zaidi ni kuwa sasa vyuo vikuu vinavyotoa masomo kwa kutumia mitandao vimepewa idhini ya kutumia programu hizi. Walimu na wanafunzi wanapata habari moja kwa moja kwa kiswahili bila kutafsiri . Kuna uwezekano sasa wa kusambaza mafonzo katika nyanja na viwango vyote kwa mfumo wa elimu ya mbali.

Katika ulimwengu wa utandawazi,tukio kama hili lina manufaa makubwa. Wananchi wa vijijini wanaweza kupata habari na maarifa kutoka pembe zote za dunia na kuhusu masuala tofauti tofauti kwa lugha wanyoielewa barabara.

Kusambaa kwa matumizi ya ngamizi vijijini kutaimarisha biashara inayofungamana na tecknolojia na mawasiliano .Haili hii itainua maendeleoya teknolojia na kiwango cha maisha vijijini. Bila shaka mwachano uliopo baina ya sehemu za mijini na vijijini utapunguwa.

Haya ndiyo maendeleo anayokamia kila mja wa siku hizi . Lililopo ni serikali kupania kupanua na kusambaza muundo mbinu kama –umeme na simu katika sehemu zote za nchi. Pamoja na haya , kuna haja ya kupunguza bei ya ngamizi na vipuri vyake ili kuwatia motisha watu kununua kompyuta kwa wingi. Ikumbukwe – kuwa lengo la kuanzisha mradi huu ilikuwa kuisaidia serikali kupanua na kusambaza matumizi ya huduma za kompyuta na mtandao katika shule, vituo vya kijami na maeneo ya makaazi. Huduma hizi ni msigi wa elimu, biashara na mawasiliano ya makaazi.

Maswali.

(a)   Bila kubadilisha maana, fupisha aya tatu za kwanza. (Maneno 45-55)   (al.6)

Matayarisho :

Jibu :

(b)   Fupisha faida za mradi wa kutumia Kiswahili katika *program ya* kompyuta.   (Maneno 45-55)   (al.6)

Matayarisho :

Jibu :

(c)   Eleza kwa ufupi serikali inahitaji kufanya nini ili kufanikisha maradi huu?
         (Maneno 15 -20)

MATUMIZI YA LUGHA

a) *Eleza tofauti kati ya sauti za vipasuo na vikwamizo*   (al 2)

   ……………………………………………………………………………………………………

   …………………………………………………………………………………………………

b) *Tunga sentensi ukitumia vitenzi vifuatavyo.*   (al.2)

   (i)   Kitenzi kishirikishi kipungufu
   (ii)   Kitenzi kishirikishi kikamilifu
   (i)……………………………………………………………………………………………

   (ii)……………………………………………………………………………………………

c) *Unda nomino ya dhahania kutokana na vitenzi vifuatavyo*   (al.2)

   (i)   Cheza
   (ii)   Pika
   (i)……………………………………………………………………………………………

   (ii)……………………………………………………………………………………………

d) *Tambulisha aina ya virai vilivyotumika katika sentensi zifuatazo*

   (i)   Walisomba changarawe   (al.1)

……

    (ii)   Kwa hofu alimkabidhi matokeo   (al.1)

………………………………................……………………………………………………………

(e) *Changanua sentensi ifuatayo kwa kutumia matawi.*

    Simba waliojeruhiwa jana walikimbia vichakani   (al.4)

(f)*Taja aina tatu kuu za sentensi kwa kuzingatia muundo*.   (al.3)

    (i)………………………………………………………………………………………

    (ii)………………………………………………………………………………………...

    (iii)………………………………………………………………………………………..

g) *Andika sentensi zifuatazo katika hali ya kutendewa*

    i)Paka alimla panya mkubwa jana jioni   (al.2)

………………………………………………………………………………………………………

………………………………………………………………………………………………………

    (ii)Mwalimu mkuu amenisamehe kosa langu   (al. 2)

………………………………………………………………………………………………………

………………………………………………………………………………………………………

(h) *Kanusha sentensi zifuatazo kwa umoja*

    (i) Nywele zenu hukatika mnapochana   (al 3)

………

………

(ii)Nyinyi ndio mnaopenda kuchezea mbeleko za mtoto   (al.2)

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(i)*Tunga sentensi ukitumia viungo vifuatavyo ili kudhihirisha maana ya dhana katika mabano.*
                                                                                        (al 2)

(i)Kwa………………...........……………………………………………..(umilikaji)

(ii)Ku……………..……………...........………………………………………….(Nafsi)

(j) *Eleza maana mbili zinazojitokeza katika sentensi hii*   (al 2)

Walichukua pesa waliporudi

…………………………………..……………………………………………………………

…………………………………………………………………………………………………

(k) *Andika katika usemi wa taarifa.*

" Lazima ufike leo asubuhi na mapema ama sivyo hutanipata" Juma alimwambia mamake.
                                                                                        (al.4)

……

…………………………………………………………………………………………………

(l) *Onyesha tofauti kati ya sentensi hizi*:   (al 2)

(i) Amefika.

(ii) Amefika!

(i)……………………………………………………………………………………………

(ii)……………………………………………………………………………………………

(m) *Eleza matumizi mawili ya " ki" kisha utunge sentensi moja moja kuonyesha matumizi hayo*
                                                                                        (al 4)

(i)……………………………………………………………………………………………

…………………………………………………………………………………………………

(ii)………….........……………………………………………………………………………

……

(n) *Tumia kirejeshi tamati katika sentensi hii*.   (al 2)

Malipo ambayo anapewa ni yale ambayo yanaridhisha

……

…………………………………………………………………………………………………

ISIMU JAMII

Maenezi ya Kiswahili Afrika mashariki punde baada ya uhuru yalikuwa na chagamoto tele. Fafanua zozote tano.   (al 10)

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CHETI CHA KUHITIMU ELIMU YA SEKONDARI

JINA: ....NAMBANI

YAKO:...................

SAHIHI:..

TAREHE:.................................

MUDA: SAA 2½

CHETI CHA KUHITIMU ELIMU YA SEKONDARI

KISWAHILI KIDATO CHA NNE

KARATASI YA TATU

MUDA SAA 2½

MAAGIZO

- ✓ Jibumaswalimanne.
- ✓ Swali la kwanza ni la lazima

✓ Chaguamaswalimenginematatukutokakwasehemuzilizosalia:

Riwaya, Tamthilia, HadithifupinaUshairi.

✓ Usijibumaswalimawilikutokasehemumoja.

SEHEMUYA A

1. **SWALI LA LAZIMA**

a) i) Semi nini? (alama 1)

ii) Fafanuasifannezamisimu (alama4)

b) **Soma wimboufuataokishaujibumaswali**

Ewe kilizi

Ulozoweakujificha

Nyumaya mama kujikinga, dhidiyamilio

Yanadiilojuuumbinguni

Juakeshonisikuyasiku

Sikuyakujuambivunambichi

Kutofautishajogoonavipora

Naribatakaposhika, chakekisu

Ndipoutakapojuabayana

Ukoowetusiwakunguru

ikiwahutayari

kisukukidhihaki

sithubutukamwe, wanjanikuingia

sijekuniaibishamiye, amiyonaakrabanzima!

Maswali

i) Huuwimbohuitwaje? (alama1)

ii) Elezamajukumuyoyotemanneyanayotekelezwanawimbohuukatikajamii (alama4)

c) i) Mivighaninini? (alama2)

ii) Elezasifatatuzamivigha (alama 3)

d) Fafanuamatatizomatanoambayoyanaikumbwafasihisimuliziduniani (alama5)

SEHEMU YA B

RIWARA: CHOZI LA HERI: ASUMPTA MATEI

2. "...haifaikuchezanauwezowavijana, waonikamananga. Huwezikuzamishanakuiongeamerikebu."

   a) Elezamuktadhawadondoohili   (alama4)

   b) Bainishatamathalimbilizausemizilizotumikakatikadondoo   (alama 4)

   c) Kwakurejeleariwayahii, onyeshajinsivijanawamezamishamerikebuyawahafidhina

                                                                                    (alama12)

3. Baadayadhikifaraja. Onyesha vile ukweliwamethalihiiunavyodhihirikakwenyeriwaya

                                                                                    (alama20)

SEHEMU YA C

TAMTHILIA: KIGOGO: PAULINE KEA

4. "Sitakikuaibishwanamwanamkemimi, siwezi."

   a) Yawekemanenohayakatikamuktadha wake.   (alama 4)

   b) Fafanuakwahojananekuwamsemajiwamanenohayaanafaakuaibishwa   (alama16)

5. a) JadilijinsikumiambazokwazomaudhuiyaukatiliyanajitokezakatikatamthiliayaKigogo

                                           (alama10)

   b) ElezamifanomitatoyamatumiziyakinayakatikatamthiliayaKigogo   (alama10)

SEHEMU YA D : HADITHI FUPI

TUMBO LISILOSHIBA NA HADITHI NYINGINE

6. Elezanafasiyavijanakatikajamiiukerejeleahadithifupizifuatazo.

   a) Mapenziyakifaurongo   (alama 5)

   b) Shogake Dada anaDevu   (alama 5)

   c) MameBakari   (alama10)

7. Ndotoyamashaka: Ali Abdalla Ali

   "Sasanimechokamja.Nimechokahatanaraduakufakulikokuishi.Hadilinihayamashakayakutengenezwa?

   Mashakayamashaka!

   a) Elezamuktadhawadondoohili   (alama 4)

   b) Tambuambinumbilizalughazilizotumika   (alama 4)

   c) Fafanua mambositayanayomfanyamrejelewaaraduekufa.   (alama12)

8. **SEHEMU YA E: USHAIRI**

    Soma shairilifuatalokishaujibumaswali

    Barabarabadonindefu

    Namitayarinimechokatiki

    Natamanikuketi

    Ni'nyooshemisuli

    Nitulizeakili

    Lakini

    Azmayanisukuma

    Mbeleikinihimizakuendelea

    Baadayamiinukonakuruba

    Sasanaonaunyoofu wake

    Unyoofuambaounatishazaidi

    Pundenatumbukiakatikashimo

    Nahitajisihazaidiilikupandatena

    Ghaflanakumbukailivyosema

    Ile sautizamanikidogo

    "Kuwatayarikupandanakushuka".

    Ingawanimechoka

    Jambomojadhahiri

    Lazimahufuatebarabara

    Ingawamachweoyaingia

    Nizamenakuibuka

    Nipandenakushuka

Jambomojanakumbuka; Mungu

Je nimwombetena?Hadilini?

Labdaamechoshwanaombaombazangu

Nashangaatena!

Kitukimojanakiamini

Lazimaniendeleekujitahidikwakilahatuampya

Nijikokotekuiandamahiibarabarayenyeukungu

Nikinaswanakujinasua

Yumkininitafikamwisho wake

Ikiwawangumwishohaitauwahikabla.

Maswali

a) Tajanauelezeainayashairihili   (alama 2)

b) Elezatoniyashairihili   (alama 2)

c) Hukuukitoamifanomwafakaelezatamathalitatuzausemiambazozinajitokezakatikashairi
                                                            (alama 3)

d) Mshairiametumiauhuruwake wautunzi. Elezamifanomitatuhukuukitoleamifano.
                                                            (alama 3)

e) Fafanuadhamirayamtunziwashairihili   (alama 2)

f) Andikakifungu cha mwishokatikalughayanathari.   (alama 4)

g) Elezamaanayamsamiatiufuataokamaulivyotumikakatikashairi   (alama 4)

     i) Kuruba

     ii) Siha

     iii) Machweo

     iv) Kujinasua

KCSE PREMOCK EXAMS 2020

PHYSICS PAPER 1
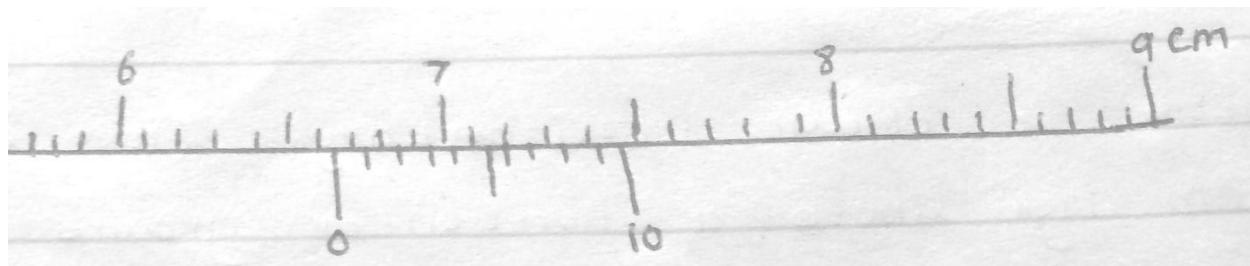
<u>FORM 4</u>

NAME ………………………………………………   ADM …………………………
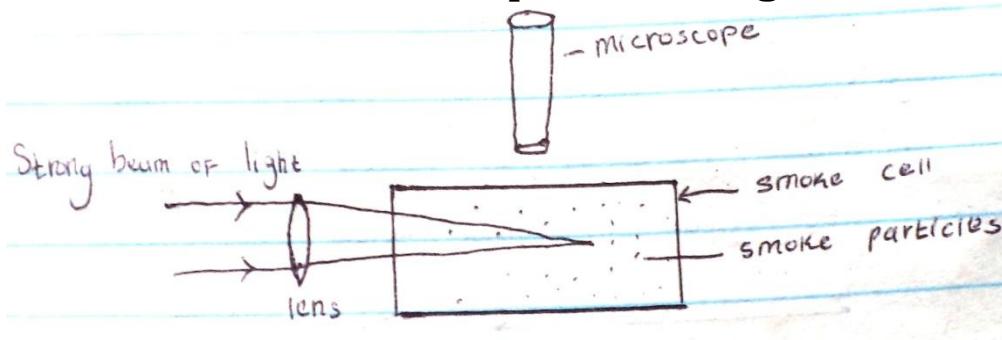
CLASS …………………………..

1. What is the reading of the vernier ealllipers shown in the fly below if it has a positive error of 0.02cm? (3mks)
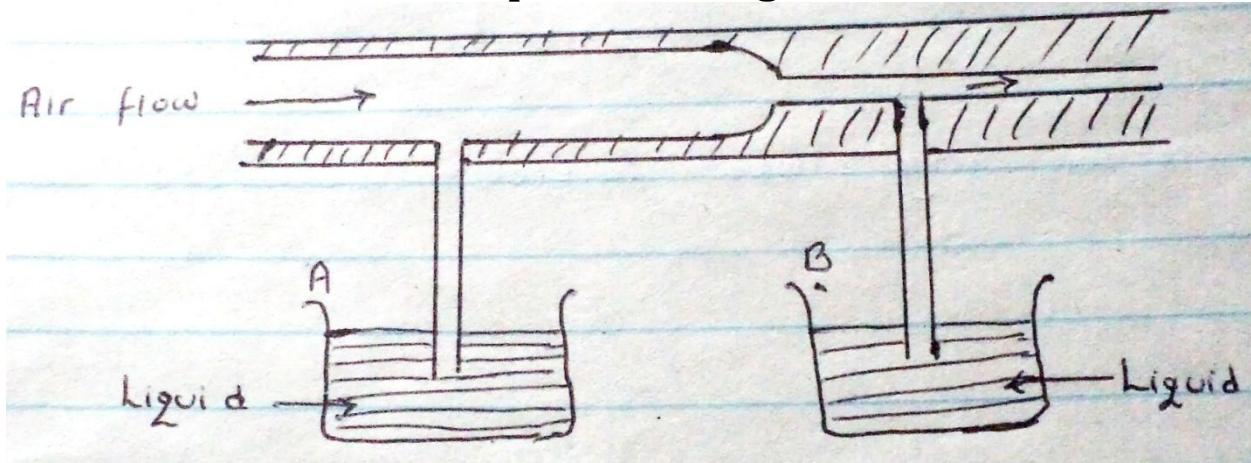
2. The figure below shows apparatus used to observe behavior of smoke particles in a smoke cell.
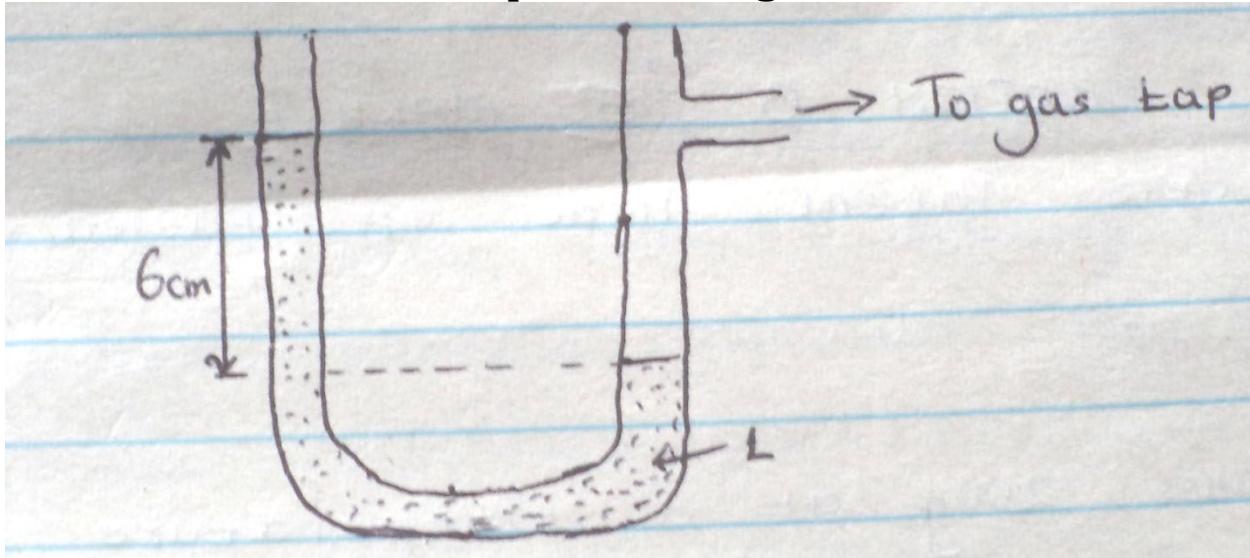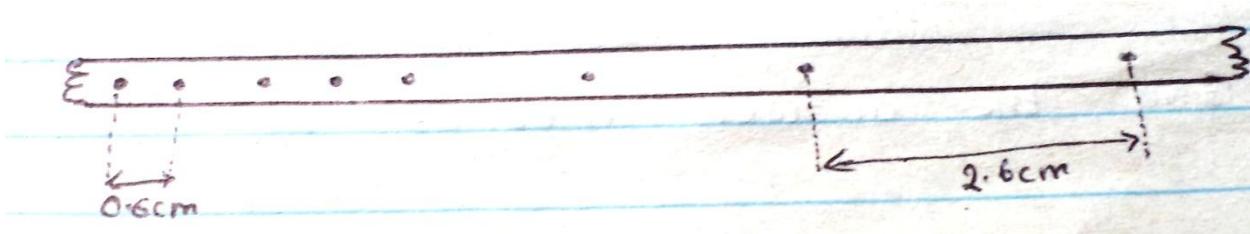
a) State a reason why smoke particles are used in the experiment. (1mk)

b) State the observation made. (1mk)

c) What would happen if temperature was lowered? (1mk)

3. Explain why fish can survive under water when the surface is already frozen. (1mk)

4. State one way on which the stability of the can be increased. (1mk)

5. A stone is thrown horizontally from a building that is 50m high above a horizontal ground. The stone hits the ground at a point, which is 65m from the foot of the building. Calculate the initial horizontal velocity of the stone. (g=10ms^{-2}) (3mks)

6. The figure below shows air flowing through a pipe of non-uniform cross-sectional area .Two pipes A and B are dipped into liquids as shown below.

a. Indicate the levels of the liquids in pipe A and B. (1mk)

b. Explain your answer in (a) above. (1mk)

7. When a mercury thermometer is used to measure the temperature of hot water, it is observed that the mercury level first drops before beginning to rise. Explain (2mks)

8. Figure below shows a u-tube manometer containing a liquid L. One end connectected to a gas tap. Given that the atmosphere pressure is 1.0×10^5 pa, determinate the pressure of the gas (density of liquid L is 900kg/m³, g=10N/kg) (2mks)

9. The figure below represents part of a tape pulled through a ticker-timer by trolley moving down an inclined plane. If the frequency of the ticker-timer is 50Hz, calculate the acceleration of the trolley. (3mks)

10. Explain why a glass container with thick glass walls is more likely to crack than one with a thin wall when a very hot liquid is poured into it. (2mks)

11. Find the amount of work in stretching a sprig constant 25N/M when its lenghth is increased from 0.1m to 0.2m. (3mks)

SECTION B (55MARKS)

12. A) Define specific latent heat of fusion of a substance. (1mk)

b) Water of mass 200g at a temperature of 60^0c is put in a well lagged copper calorimeter of mass of 80g. A piece of ice at 0^0 c and mass 20g is placed in the calorimeter and the mixture stirred gently until all the ice melts. The final temperatures, T of the mixture are then measured. Determine:

i) The heat absorbed by melting ice at 0^0c. (2mk)

ii) The heat absorbed by melted ice (water) to rise to temperature. T (Give the answer in terms of T (2mks)

ii) The heat lost by warm water and the calorimeter. (2mks) (Give the answer interms of T)

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iii) The heat lost by warm and the calorimeter (2mks) (Give the interms of T)

IV) The final temperature T of the mixture. (Specific latent heat of fusion of ice=334,000 Jkg⁻specific heat of water =4200Jkg^{-1}, specific heat capacity of copper =900Jkg^{-1}k⁻) (3mks)

13. A ball bearing x is dropped vertically downwards from the edge of the table and it takes 0.5s to hit the floor below. Another ball bearing Y leaves the odge of the table horizontally with a velocity of 5ms⁻1 find :
    a) The horizontal distance travelled by Y before hitting the floor. (2mks)

    b) The vertical distance of the table top above the floor level. (2mks)

c) A bullet mass of 22g travelling horizontal with a velocity of 300ms^{-1} strikes a block of wood of mass 1978g which rests on a rough horizontal surface. After impact the bullet and the block move together and come to rest when the block has travelled a distance of 5M. Calculate :
   i)   The velocity of bullet and wood after impact. (2mk)

   ii)   The force of friction between wood and surface. (2mks)

(d)A car starts from rest and accelerates uniformly at 2m/s^2 for 5 seconds before accelerating again at 2.5 m/s^2 for 2 more seconds. The car is then brought to rest in another 2 seconds.

i)   Sketch a velocity time graph for this motion. (2mks)

ii)   From the graph, calculate the total distance travelled. (2mks)
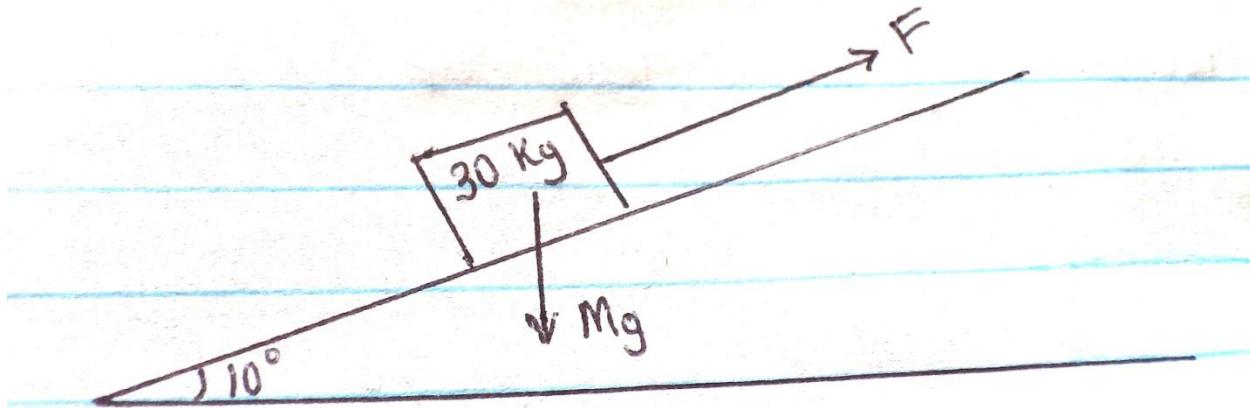
14. A) State two important factors to be considered when selecting the banking angles of a road.

b) A ball of mass 2kg is whirled at the end of a string in a horizontal circular path at a speed of 5m/s^{-1}. If the string is 2.0m long find,
i)   Angular velocity of the stone? (3mks)

   ii.   The tension of the string.

15. The figure below shows a block of mass 30.0kg being pulled up a slope by a force F at a constant speed. The friction force on the block is 200 N.
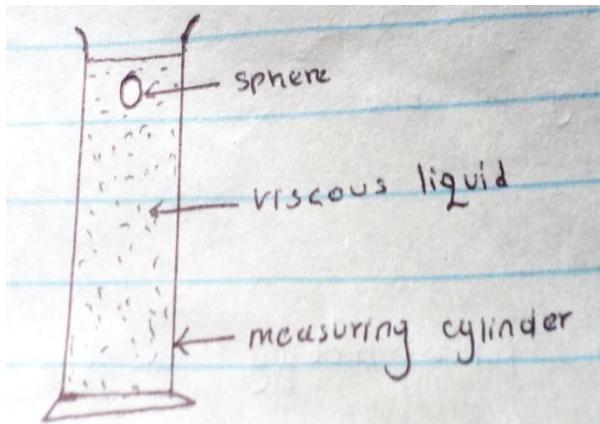
A) I) on the same figure above name and indicate the other forces acting on the block. (2mks)

II) Determine the force acting on the block down the slopes. (2mks)

iii)   Determine the value of F (2mks)

B. On reaching the top of the slopes. The block is left to run freely down the slopes.

i) Which of the force previously acting on the block would then act in the opposite direction? (1mk)

II) Determine the acceleration of the block down the slope. (2mks)

III) What is the effect of increasing the angle of the slopes on your answer in (ii) above? (1mk)
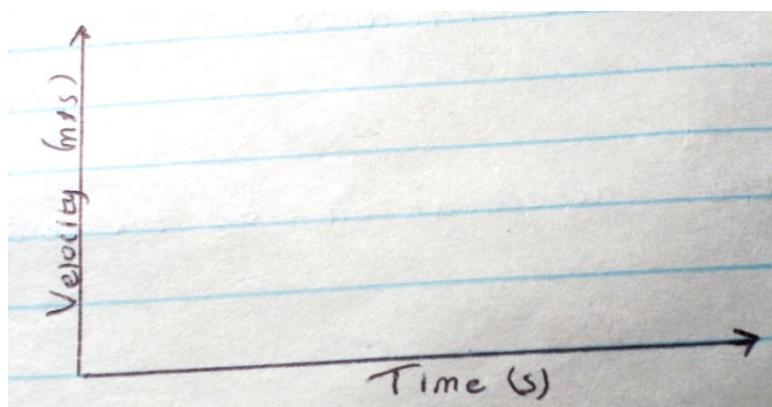
16. A) i) State Newton's second law of motion. (1mk)

ii) The figure below shows a sphere moving in a viscous liquid in a tall measuring cylinder.

Show on the diagram the force acting on the sphere. (3mks)

iii)   Sketch on the Cartesian plane below a graph of the variation of velocity with time until the ball attains terminal velocity.

b) i. State Boyle's law. (1mk)

ii. What is the absolute zero temperature? (1mk)

iii). A bicycle pump with the exit hole closed contains 80cm of air at 760 mmHg pressure and a temperature of 10c. When the air was compressed to 38cm under a pressure of 1700mmHg pressure, its temperature rises. Calculate the rise in temperature. (2mks)

KCSE PREMOCK EXAMS 2020
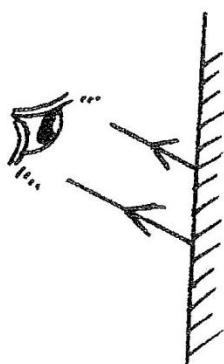
NAME ………………………………………………………………….ADM NO……………CLASS……………
SCHOOL…………………………………………………….

FORM 4 PHYSIC P2

SECTION A: 25 marks
*Answer **all** questions in this section in the spaces provided .*
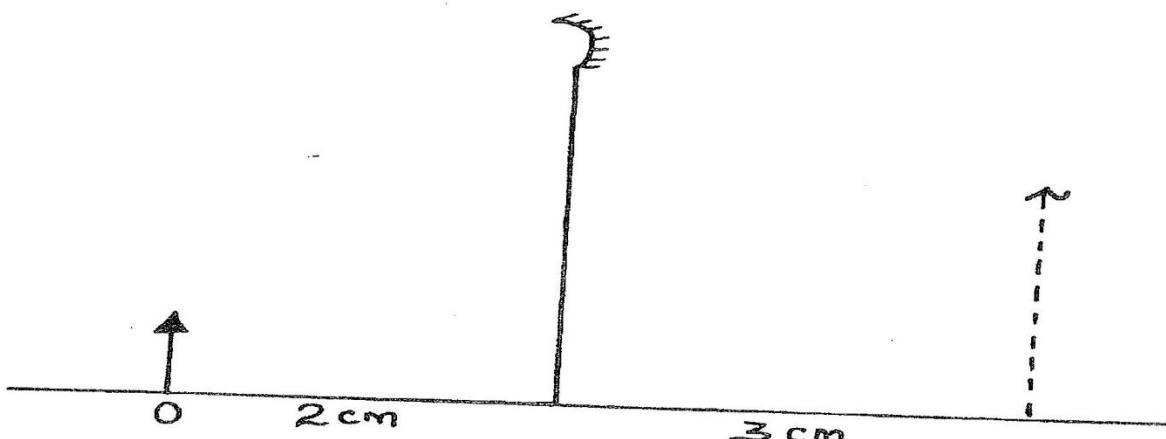
1. Figure 1 below shows reflected rays from a plane mirror.

By ray construction, show the position of the image and the object. (1 mark)

2. Figure 2 represents an object O and the image I formed by a concave mirror.

By suitable rays, determine the focal length of the mirror

3. Two leaders A and B are rated as shown on the table belwo

	Heater A	Heater B
Resistance, ohms	RA	RB
Power, watts	W	3W
Voltage, volts	N	¼

Determine the ratio $R_A : R_B$ (3 marks)

....

....

....

....
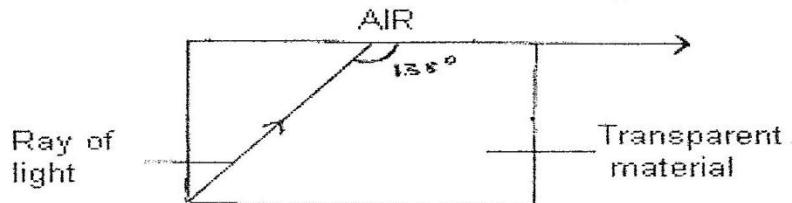
4. **The figure** below shows the path of light through a transparent material placed in air.

AIR

135°

Ray of
light

Transparent
material

Fig.2

Calculate the refractive index of the transparent material. (3 marks)

....

....

....
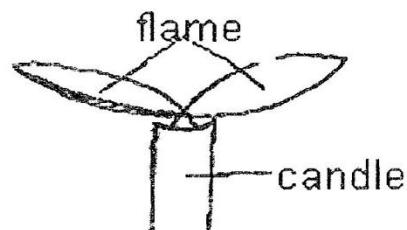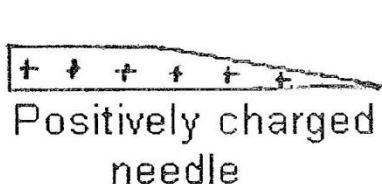
5. Figure 4 below shows a highly charged needle bought near a candle flame

flame

+ + + + + +
Positively charged
needle

candle

Fig.4

Explain why the flame burns in the direction shown (2 marks)

....

....

....

....

6. Explain with an aid of a diagram why to a diver under water, most of the surface looks slivery. Bubbles of air rising from the diver look slivery. (2 marks)

7. Explain why soft iron keepers are suitable for storing magnets (2 marks)

....

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....

8. State **two** quantities that are used to determine whether accumulator require recharging or not. (2 marks)

....

....

9. Figure shows arrangement of three capacities of $10\mu F$, $2\mu F$ and $5\mu F$.
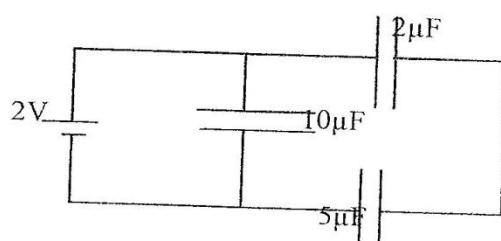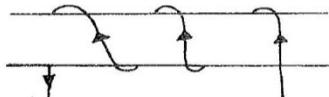
Figure 2

Figure 1

Determine the effective capacitance. (3 marks)

....

....

....

....

10. Sketch the magnetic field for a conductor shown in the figure below.   (2 marks)

11. In a pin – hole camera, what is the effect of making the pin – hole small but square in shape?

(1 mark)

....

....

12. An electric heater is rated 3KW what is the electrical energy in kWh (Kilo watt-hours) consumed by the heater when used on a 240V supply for 180 minutes?   (1 mark)

....

....

....

13. Briefly explain why in domestic wiring all the lamps in the house are connected in parallel

(1 mark)

....

....

SECTION B: 55 marks
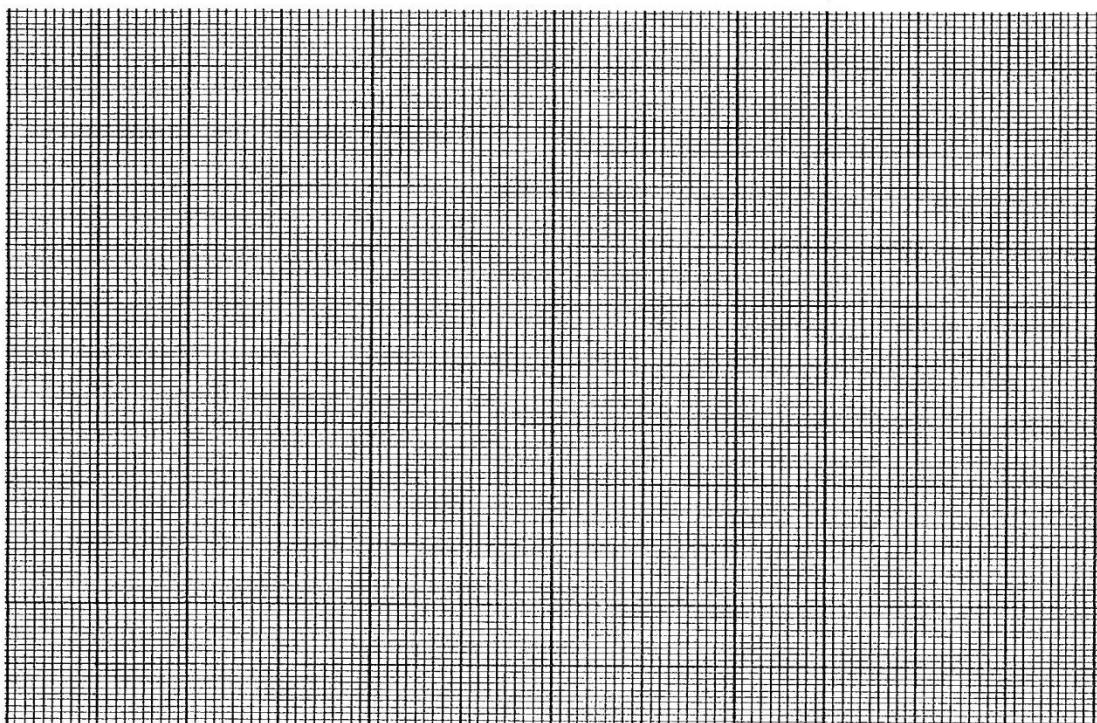
*Answer **all** questions in this section.*

14. (a) In an experiment with capacitor the charge stored was measured for different values of charging potential difference and the following results were obtained.

Charge stored (uc)	7.5	30	60	75	90
Potential difference (v)	1.0	4.0	8.0	10.0	12.0

(i) Plot a graph of charge stored (y-axis) against potential difference on the grid provided.

(4 marks)

(ii) Use the graph to determine the capacitance of the capacitor. (2 marks)

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(b) Resistors of 2Ω and 3Ω are connected in series with a cell and voltmeter connected across the 3Ω resistor reads 1V, but this increases to 1.2V when an extra 2Ω resistor is connected in parallel with the first 2Ω resistor, calculate the e.m.f and the internal resistance of the cell.

(4 marks)

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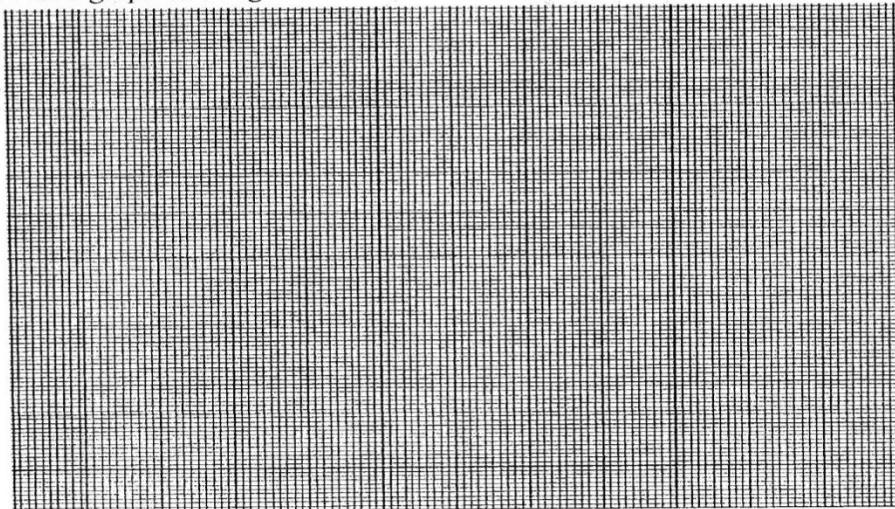
15. (i) The following data was collected to find the focal length of a convex lens.

Image distance, v	13.3	15.0	16.7	20.0	30.0
Magnification, M	0.3	0.5	0.7	1.0	2.0

(a) Plot a graph of M against V
(5marks)

(b) Use your graph to find the focal length of the lens
(3 marks)

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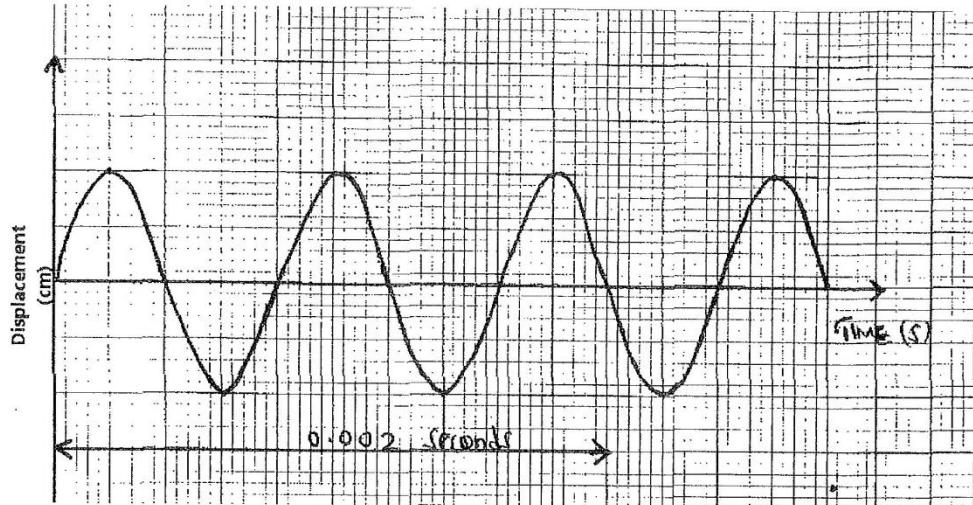
(c)   Find the power of the lens   (2 m arks)

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(d)   State 4 similarities between the eye and the lens camera   (4 marks)

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(e) What is long sightedness?   (1 mark)

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16. State **two** differences between sound waves and electromagnetic waves   (2 marks)

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(b) **Figure** below shows a waveform of a wave moving at velocity of 2m/s.

0.002 Seconds

Fig.8

Determine:

(i)   The periodic time (T)   (2 marks)

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(ii)   The wavelength (λ)   (3 marks)

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(c)   A fathometer produces sound in a ship and receives two echo's where there is a raised sea bed one after 2.5 seconds and the other after 3.0 seconds. Find the height of the raised sea bank if the velocity of sound in water is 1460m/s.   (3 marks)

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17. A 10 μf capacitor is charged to a potential difference of 300V and isolated. It is then connected in parallel to a 5 μF capacitor. Find the resultant potential difference. (3 marks)

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(b) The energy stored before connection. (3 marks)

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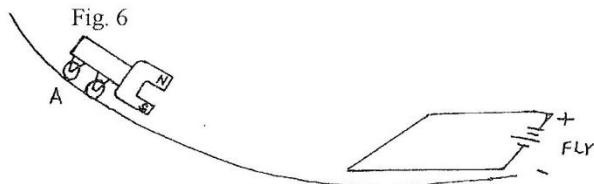
(c) The energy in the **two** capacitors after connection. (3 marks)

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18. (A) State any one properties of magnetic flux lines. (1 mark)

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(b) A model railway truck has a magnet attached to it as shown in fig 6 below, not to scale. It is free to run on rails from a higher level A to a lower level B. At B, a thick loop of copper wire is placed horizontally across the track so that the magnet straddles the wire when the truck is at B. A large electric current passes through the wire, which is connected to a battery.

The truck is released from A and it rebounds without physical contact when reaching B.

Fig. 6

(i) Explain why the truck rebounds in this manner. (2 marks)

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(ii) Describe its subsequent motion. (2 marks)

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(i) What would be the effect of increasing the current through the wire, Explain

(2 marks)

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(ii) What would be the effect of increasing the load in the truck ? Explain (2 marks)

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(v) What would be the effect of reversing the holes of the magnet? Explain. (2 marks)

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KCSE PRE-MOCK EXAMS 2020

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

FORM 4 TERM 1

232/3

PHYSICS PAPER 3

TIME : 2 ½   HOURS

INSTRUCTIONS TO CANDIDATES

1. *Write your name and admission number in the spaces provided.*
2. *Answer all the questions in the spaces provided.*
3. *You are supposed to spend the first 15 minutes of the 2 ½ hours allowed for this paper reading the whole paper clearly before commencing your work.*
4. *Non – programmable silent electronic calculators and KNEC mathematical tables may be used.*
5. *Candidates are advised to record their observations as soon as they are made.*

QUESTION 1

This question consists of part A and B.

Attempt both parts.

PART A

You are provided with the following:
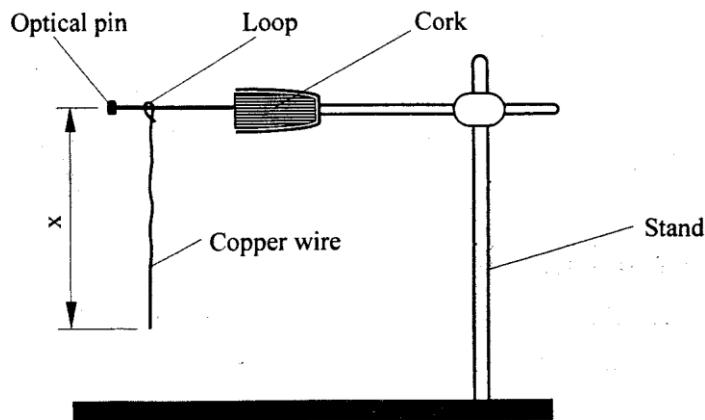
- *A bare copper wire of diameter 0.71 mm (SWG 22) and length 50cm.*
- *A retort stand, boss and clamp*

- *An optical pin mounted on a cork*
- *A stop watch*
- *Wire cutters /pliers(to be shared)*
- *A metre rule or half metre rule*

Proceed as follows:

(a) Clamp the cork so that optical pin is horizontal. Hang the copper wire from the pin by the loop as shown in figure 1. Ensure the wire is straight and the length X between the lower tip and the optical pin is 32 cm. if the length exceeds 32 cm reduce by cutting at the lower tip using the wire cutters provided.

Figure 1

(b) Displace the lower tip of the wire slightly in a plane perpendicular to the optical pin and then release it. Measure the time t=10 oscillations of the wire and record the value in table 1.

(c) Repeat the procedure in (b) above for other values of X shown in the table. (*Note that each length X is obtained by cutting off an appropriate length from the lower tip of the wire. For example to get X= 28 cm cut off 4 cm from the lower end).* Complete the table.
                                        (5 Marks)

Table 1

Length X cm	32	28	24	20	16	12

Time t for 10 oscillations (s)						
Period T= (s)						
T^2 (S^2)						

(d) Plot a graph of T^2 (y-axis) against X (metres) on the graph paper provided. (5 marks)

(e) i) Determine the slope, S, of the graph. (3 marks)

ii) Obtain the value of K in the equation S= (2marks)

PART B
You are provided with the following:

- A cylindrical container (about 20cm high and diameter 8cm or more)- used plastic
   containers can be used by cutting the upper section
- Some water
- A stop watch
- A metre rule or half-metre rule
- A boiling tube
- Some sand (in 100ml beaker)
- Spatula
- A rubber band
Proceed as follows:

(f) Tie the rubber band round the boiling tube so that it is at a distance L =12 cm from the bottom of the tube (see fig 2a). Pour water into the cylindrical container until the level is about 2.0 cm from the top of the beaker. Float the boiling tube in the water in the container. Add sand gradually into the boiling tube until the tube sinks to the 12 cm mark. See figure 2(b).
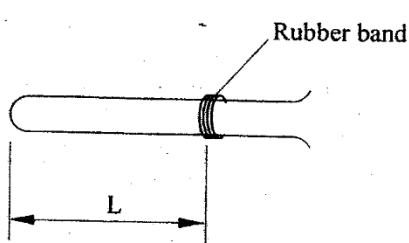
Figure 2(a)
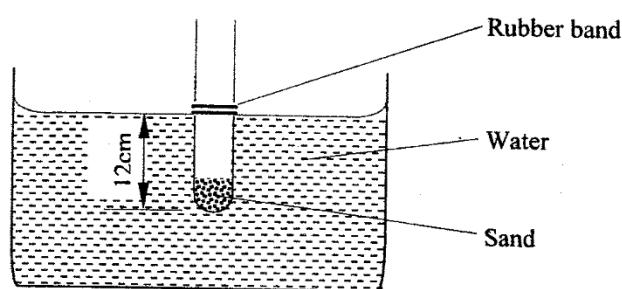
Figure 2(b)

(g) Depress the boiling tube slightly and release so that it oscillates vertically without touching the sides of the container. Measure and record in table 2 the time t_1, for **five** oscillations of the boiling tube. Repeat the procedure two more times to obtain t_2 and t_3 and record the values in

table 2. Complete the table.   (3 marks)

Table 2

t_1((s)	t_2(s)	t_3(s)	Average t(s) $t = \left(\dfrac{t_1 + t_2 + t_3}{3}\right)$	$T = \dfrac{t}{5}(s)$

(h) Evaluate P=given that L is the length of the tube in metres up to the rubber band in part (f) and T is the value obtained in (g) above.   (2 marks)

P=

QUESTION TWO

You are provided with the following.
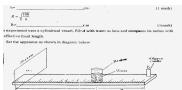
- *A 250 cm³ beaker*

- *Water*

- *a metre rule*

- *Screen*

- *Candle*

i) Add 200cm³ of water to the vessel and obtain 'h' the height in centimetres of the water above the base of the vessel. Determine the appropriate value of R, the internal radius in centimetres from the formulae;
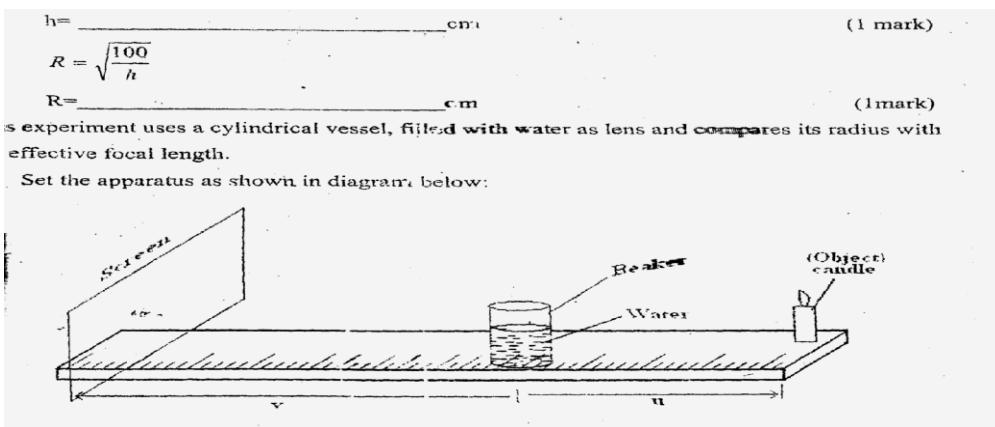
h= _____ cm   (1 Marks)

R=_____cm   (1 Marks)

This experiment uses a cylindrical vessel, filled with water as a lens and compare its radius with the effective focal length.

ii) Set the apparatus as shown in diagram below:

Set u to be about 10R away from the Centre of the 'lens' and adjust the position of the screen to locate the image formed. The image is a sharp vertical line. Measure u and v from the Centre of the vessel. Repeat the experiment

with the follow multiples of R. and record all values of u and V in the table below: (8 marks)

	10R	9R	8R	7R	6R	5R	4R	3R
U (cm)								
V (cm)								

NB: Any other appropriate value of u depending on the value of R obtained can be awarded.

iii) Plot a graph of u (cm) against v (cm).
   (5 marks)

iv) From the graph determine
   a) 'V' the value of V for which v=u
      (1 Mark)

   b) 'U' the value of U for which u=2v
      (1 Mark)

v) **Determine** the effective focal length of the 'lens' from the formulae f=
   (2 Marks)

vi) Hence determine the value of   (1
Mark)