KCSE PREDICTION 5
ALL SUBJECTS

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

All the best!

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For More e-learning resources contact us via the above contacts

PREDICTION 5

Name……………………………….. Class ..…………………

Sign ………………...…… ADM NO………………………

KCSE PREDICTION 5

MATHEMATICS
PAPER 1
TIME: 2 ½ HOURS

Instructions to candidates

1. Write your name, index and class number in the spaces provided above.
2. The paper consists of two sections**: *section I* and *section II*.**
3. Answer **all** the questions in **section I** and any **five** in **section II**
4. Section I has **sixteen** questions and section two has **eight** questions
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. KNEC Mathematical table and silent non-programmable calculators may be used.

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

1. Evaluate: (3 mks)

$$\left(\frac{\left(1\frac{3}{7}-\frac{5}{8}\right)x\frac{2}{3}}{\frac{3}{4}+1\frac{5}{7}\div\frac{4}{7}\,of\,2\frac{1}{3}}\right)^{-2}$$

2. Mr. Kamau son and daughter needed clothes. The son clothes were costing Ksh 324 while the daughter clothes were costing Ksh 220. Mr Kamau wanted to give them equal amounts of money. Calculate the least amount of money he would spend on the two and how many clothes each will buy. (3 mks)

3. Use reciprocal tables to find the value of $(0.325)^{-1}$ hence evaluate $\frac{\left(\sqrt[3]{0.000125}\right)}{0.325}$, give your answer to 4 s.f. (3 mks)

4. A type of paper is 40cm long, 32 cm wide and 0.8 mm thick. The paper costs sh 10 per m². Find the total cost of a pile of such paper of height 4.8m. (4 mks)

5. A square based brass plate is 2mm high and has a mass of 1.05kg. The density of the brass is 8.4 g/cm³. Calculate the length of the plate in centimeter. (3 mks)

6. Solve for x in the equation: (3 mks)

$$\frac{x-3}{4} - \frac{x+3}{6} = \frac{x}{3}$$

7. A salesman earns 3% commission for selling a chair and 4% commission for selling a table. A chair fetches K£ 75. One time, he sold ten more chairs than tables and earned seven thousand, two hundred Kenya shillings as commission. Find the number of tables and chairs sold. (4 mks)

8. Using the three quadratic identities only factorise and simplify: (3 mks)

$$\frac{(x-y)^2 - (x+y)^2}{(x^2+y^2)^2 - (x^2-y^2)^2}$$

9. Two numbers are in the ratio 3 : 5. When 4 is added to each the ratio becomes 2 : 3. What are the numbers? (3 mks)

10. Given that $\sin(x + 4^0) = \cos(3x)^0$. Find $\tan(x + 40^0)$ to 4 s.f.   (3 mks)

11. In a regular polygon, the exterior angle is $^1/_3$ of its supplement. Find the number of sides of this polygon.   (3 mks)

12. Find the area of a segment of a circle whose arc subtends an angle of $22\frac{1}{2}^0$ on the circumference of a circle, radius 10cm.   (3 mks)

13. An airplane leaves point A (60^0S, 10^0W) and travels due East for a distance of 960 nautical miles to point B. determine the position of B and the time difference between points A and B.

(3 mks)

14. Mr. Onyango's piece of land is in a form of triangle whose dimensions are 1200M, 1800M and 1500M respectively. Find the area of this land in ha. (Give your answer to the nearest whole number). (3 mks)

15. Two men each working for 8 hours a day can cultivate an acre of land in 4 days. How long would 6 men, each working 4 hours a day take to cultivate 4 acres? (3 mks)

16. Find the equation of a straight line which is perpendicular to the line $8x + 2y - 3 = 0$ given that they intersect at $y = 0$ leaving your answer in a double intercept form. (3 mks)

SECTION B

17. (a) Use the mid-ordinate rule to estimate the area bounded by the curve $y = x + 3x^{-1}$, the x-axis, lines $x = 1$ and $x = 6$. (4 mks)

(b) Find the exact area of the region in (a) above. (3 mks)

(c) Calculate the percentage error in area when mid-ordinate rule is used. (3 mks)

18. A car whose initial value is Ksh 600,000 depreciates at a rate of 12% p.a. Determine:
    (a) Its value after 5 years. (4 mks)

    (b) Its value of depreciation after 5 years. (2 mks)

    (c) The number of year it will take for the value of the car to be Ksh 300,000 (3 mks)

19. A square whose vertices are P (1,1) Q (2,1) R(2,2) and S (1,2) is given an enlargement with centre at (0,0). Find the images of the vertices if the scale factors are: (3 mks)

(i)   -1

(ii)   ½

(iii)   3

(b) If the image of the vertices of the same square after enlargement are P^1 (1,1), Q^1 (5,1), R^1(5,5) and S^1 (1,5) find:

    (i)   the centre of enlargement   (2 mks)

    (ii)   the scale factor of the enlargement   (2 mks)

20. On the graph paper provided plot the point P (2,2) Q (2,5) and R (4,4).
    (a) Join them to form a triangle PQR.   (1 mk)

    (b) Reflect the triangle PQR in the line $X = 0$ and label the image as $P^1 Q^1 R^1$. (2 mks)

    (c) Triangle PQR is given a translation by vector. T $\begin{pmatrix} 2 \\ 2 \end{pmatrix}$ to $P^{11} Q^{11} R^{11}$. Plot the triangle P^{11} $Q^{11} R^{11}$.   (3 mks)

    (d) Rotate triangle $P^{11} Q^{11} R^{11}$ about the origin through -90^0. State the coordinates of P^{111} $Q^{111} R^{111}$.   (3 mks)

    (e) Identify two pair of triangles that are direct congruence.   (1 mk)

21. Three warships P, Q and R are at sea such that ship Q is 400 km on a bearing of N30^0 E from ship P. ship R is 750 km from ship Q and on a bearing of S60^{0}E from ship Q. an enemy warship is sighted 1000 km due south of ship Q.

(a) Use scale drawing to locate the position of ships P, Q, R and S.   (4 mks)

(b) Find the compass bearing of: (2 mks)
    (i)   Ship P from ship S
    (ii)   Ship S from ship R

(c) Use scale drawing to determine: (2 mks)
    (i)   The distance of S from P
    (ii)   The distance of R from S

(d) Find the bearing of: (2 mks)
    (i)   Q from R
    (ii)   P from Q

22. The table below shows the amount in shillings of pocket money given to students in a particular school.

Pocket money (Kshs)	201 – 219	220 – 229	230 – 239	240 – 249	250 – 259	260 – 269	270 – 279	280 – 289	290 – 299
No. of students	5	13	23	32	26	20	15	12	4

(a) State the modal class.   (1 mk)

(b) Calculate the mean amount of pocket money given to these students to the nearest shilling.   (4 mks)

(c) Use the same axes to draw a histogram and a frequency polygon on the grid provided.
                                                                              (5 mks)

23. Given that points X (0,-2), Y (4, 2) and Z (x,6);

(a) Write down the column vector $\overrightarrow{XY}$. (1 mk)

(b) (i)   Find $\left|\overrightarrow{XY}\right|$ leaving your answer in index form. (3 mks)

(ii)   Given that $\left|\overrightarrow{XZ}\right| = 11.3170$, find the coordinates of Z. (3 mks)

(c) Find the mid-point of the line YZ. (3 mks)

24. A bus and a matatu left Voi from Mombasa, 240 km away at 8.00 am. They travelled at 90 km/h and 120 km/h respectively. After 20 minutes the matatu had a puncture which took 30 minutes to mend. It then continued with the journey.

(a) How far from Voi did the catch up with the bus. (6 mks)

(b) At what time did the matatu catch up with the bus? (2 mks)

(c) At what time did the bud reach Mombasa? (2 mks)

PREDICTION 5

Name………………………………………………………..Class …..…………………

Index Number ………………….………   Class Number………………………

<u>KCSE PREDICTION 5</u>

MATHEMATICS
PAPER 2

Instructions to candidates

1. Write your name, index and class number in the spaces provided above.
2. The paper consists of two sections**:** *section I* and *section II.*
3. Answer **all** the questions in **section I** and any **five** in **section II**
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For examiner's use only

Section I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total

Section II

17	18	19	20	21	22	23	24	total

Grand

Total

1. Without using logarithm tables or calculator, solve $3^{2x+3} - 28(3^x) + 1 = 0$. (3 mks)

2. Use a mathematical table to evaluate: (3 mks)

$$\left(\frac{4.28 \; x \; 0.01677}{\tan 20}\right)^{\frac{1}{5}}$$

3. Simply and leave answer in surd form. (3 mks)

$$\frac{-9}{\sqrt{13} + \sqrt{3}} - \frac{5}{\sqrt{3} - \sqrt{13}}$$

4. The sides of triangles were measured and recorded as 8.4 cm, 10.5 cm and 15.3. Calculate the percentage error in perimeter correct to 2 d.p. (3 mks)

5. Simplify: (3 mks)

$$\frac{\log 16 + \log 81}{\log 8 \ + \ \log 27}$$

6. Simplify the expression: (4 mks)

$$\frac{(-36 + 9x^2) + (-6y + 3xy)}{3x - 6}$$

7. Given that $\frac{x(x^2-1)}{x+1}$, find $\frac{dy}{dx}$ at the point (2,4). (3 mks)

8. (a) Expand and simplify the expression $\left(10 + \frac{2}{x}\right)^5$ (2 mks)

   (b) Use the expression in (a) above to find the value of 14^5. (1 mk)

9. John buys and sells rive in packets. He mixes 30 pockets of rive A costing sh 400 per packet with 50 packets of another kind of rive B costing sh 350 per packet. If he sells the mixture at a gain of 20%, at what price does he sell a pocket? (3 mks)

10. A chord of AB of length 13cm subtends an angle of 67^0 at the circumference of a circle centre O. find the radius of the circle. (3 mks)

11. Find the coordinates of the image of a point (5, -3) when its rotated through 180^0 about (3,1). (3 mks)

12. Two points P (-3,-4) and Q (2,5) are the points on a circle such that PQ is the diameter of the circle. Find the equation of the circle in the form $ax^2 + by^2 + cx + dy + e = 0$ where a, b, c and e are constants. (4 mks)

13. Two metal spheres of radius 2.3 cm and 2.86 cm are melted. The molten material is used to cast equal cylindrical slabs of radius 8 mm and length 70mm. If $^1/_{20}$ of the meal is lost during casting. Calculate the number of complete slabs cast. (3 mks)

14. A right pyramid has a rectangular base of 12 cm by 16cm. its slanting lengths are 26 cm. Determine:

    (a) The length of AC (1 mk)

    (b) The angle AV makes with the base ABCD. (2 mks)

15. Determine the inverse, T^{-1} of the matrix $T \begin{pmatrix} 4 & 6 \\ 6 & -2 \end{pmatrix}$ hence solve :   (3 mks)

    $2x + 3y = 30$
    $3x - y = 10$

16. Use squares, square roots and tables to evaluate: (3 mks)

    $3.045^2 + (49.24)^{-1/2}$

SECTION B

17. The table below shows the frequency distribution of diameter for 40 tins in millimeters.

Diameter (mm)	130 – 139	140 – 149	150 – 159	160 – 169	170 – 179	180 – 180
No of tins	1	3	7	13	10	6

Using a suitable working mean calculate:

(a) The actual mean for the grouped lengths. (4 mks)

(b) The standard deviation of the distribution. (6 mks)

18. A $^3/_2$ Bao yearly plan is a school pocket money (SPM) saving scheme requiring 12 months payments of a fixed amount of money on the same data each month. All savings earn interest at a rate of p% per complete calendar month.

Lewis Kamau decides to invest K£ 30 per month in this scheme as advised by Gumbo and Oteinde 4Q and 4P class governors a.k.a class secretaries and witnesses by very determined mathematics. Martine Mutua Mukumbu (M^3) and makes no withdrawals during the year.

(a) Show that after 12 compelete calendar months, Lewis first payment has increased in value to K£ 30 r^{12}, where $r = 1 + \dfrac{P}{100}$ 　　　　　　　　　(4 mks)

(b) Show that the total value, after 12 complete calendar months, of all 12 payments is K£ 30 $r = \dfrac{r(r^{12}-1)}{(r-1)}$ 　　　　　　　　　(3 mks)

(c) Hence calculate the total interest received during the 12 months when the monthly rate of interest is ½ per cent. 　　　　　　　　　(3 mks)

19. A mobile dealer sells phones of two types: Nokia and Motorola. The price of one nokia and one Motorola phone is Ksh 2000 and Ksh 16000 respectively. The dealers wishes to have al least fifty mobile phones. The number of Nokia phones should be atleast the same as those of Motorola phones. He has Ksh 120,000 to spend on phones. If he purchases x Nokia phones and y Motorola phones;

(a) Write down all the inequalities to represent the above information. (3 mks)

(b) Represent the inequalities in part (a) above on the grid pro\vided. (4 mks)

(c) The profit on a nokia phone is Ksh 200 and that on a Motorola phone is Ksh 300. Find the number of phones of each type he should stock so as to maximize profit. (3mks)

20. The vertices of parallelogram are O (0,0), A (5,0) B (8,3) and C (3,3). Plot on the same axes:

(i) Parallelogram O'A'B'C', the image of OABC under reflection in the line x = 4

(4 mks)

(ii) Parallelogram O''A''B''C'' the image of O'A'B'C' under a transformation described by the matix $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$ Describe the transformation. (4 mks)

(iii) Parallelogram O'''A'''B'''C''' under the enlargement, centre (0,0) and scale factor ½

(2 mks)

21. A particle moving with acceleration $a = (10 - t)$ m/s^2. When $t = 1$ velocity $V = 2$ m/s and when $t = 0$ displacement $S = $ OM.

   (a) Express displacement and velocity in terms of t.

   (b) Calculate the velocity when $t = 35$

   (c) What is the displacement when $t = 5$

   (d) Calculate maximum velocity.

22. (a) Three quantities x, y and t were such that the square root of y varies directly as x and inversely as t. find the percentage change in t if x decreases in ratio 4 : 5 and y increases by 44%. (5 mks)

(b) If y varies as the square root of x and the sum of the vale of y when x = 4 and y = 100 is 2:

(i)   Find y in terms of x (3 mks)

(ii) Find x correct to one d.p when y = 14 (2 mks)

23. Use a ruler and pair of compasses only in this question. ABC is a fixed triangle in which AB = AC = 6 cm and angle BAC = 90^0. Show clearly on a two dimensional drawing the locus of Q in each case below.

(a) When Q is equidistant from both lines CA and CB. (5 mks)

(b) When the area of triangle ABC = areas of triangle QBC. (5 mks)

24. Two fair dice are tossed once. The event A and B are defined as follows:
   A: the score on the two dices are the same
   B: at least one die shows a 4.

   (a) Draw a probability space representing the tossing. (2 mks)

   (b) Calculate:
      (i)   The probability of even A (1 mk)

      (ii)   The probability of even B (2 mks)

      (iii)   The probability of even A and B (2 mks)

   (c) If the two dice are tossed three time
      (i)   Draw a tree diagram showing the event A happening for the three tosses. (1 mk)

      (ii)   Calculate the probability that A occurs:
               (a) Exactly once (1 mk)

               (b) At least once (2 mk)

               (c) At most once (2 mks)

PREDICTION 5

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

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

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

101/1

ENGLISH

PAPER 1: FUNCTIONAL SKILLS

TIME: 2 HOURS

Instructions to candidates

a) Write your name and index number in the spaces provided.
b) Sign and write the date of the examination.
c) Answer all the questions in this question paper
d) All your answers must be written in the spaces provided.
e) Candidates should answer all the questions in English.

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	20	
2	10	
3	30	
TOTAL		

1. Imagine you had some guests from Sweden who visited you to celebrate your birthday. They enjoyed the special meal that you had prepared for them. One of them has requested for the recipe. Send it by e-mail. (20mks)

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2. **<u>CLOZE TEST</u>**
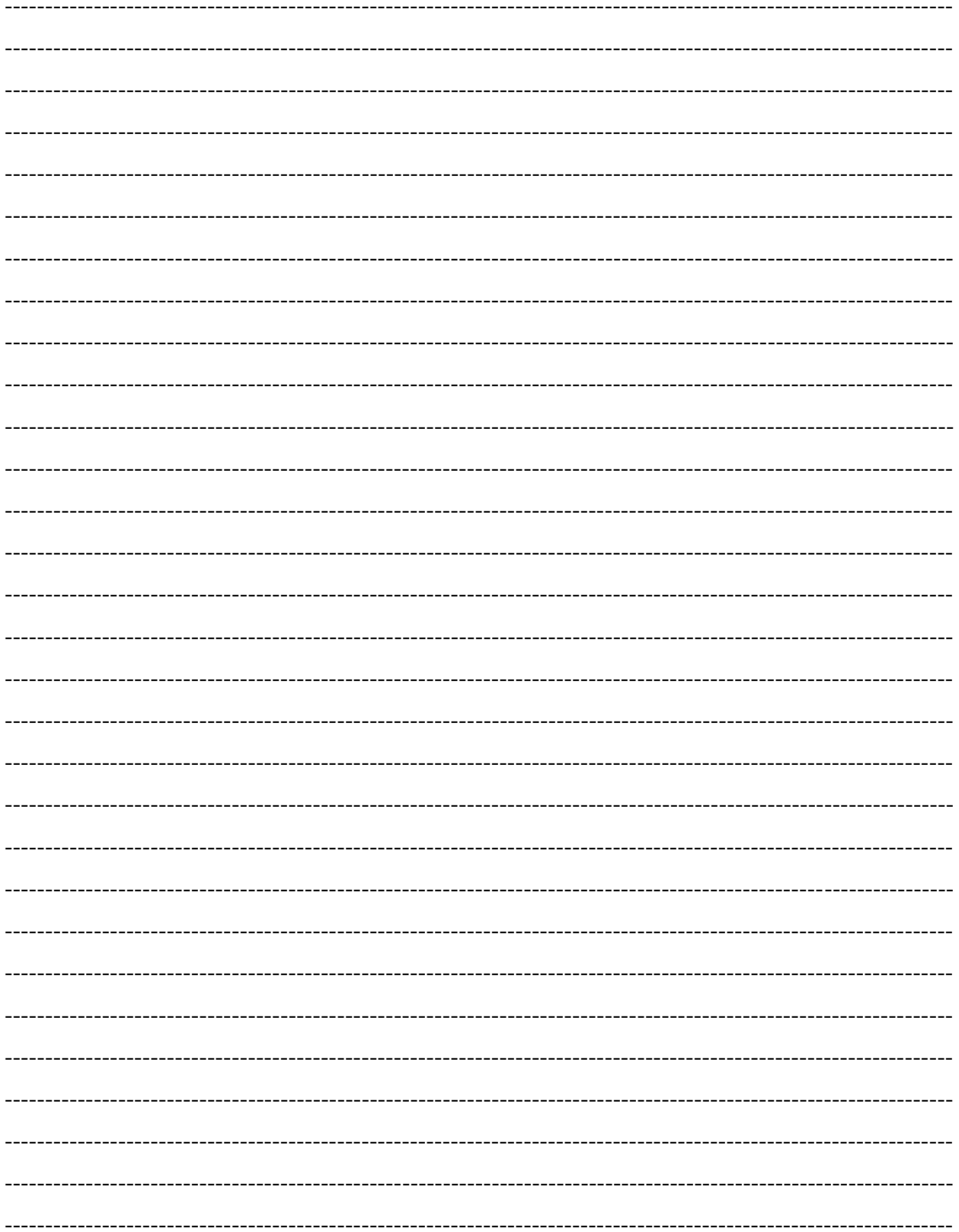
The broadened freedom of speech bestowed upon people ------------------------- the rise of social media platforms does have its merits, as many now -------------------------a platform where they can -------------------- their concerns about injustices within the society. ----------, everything has its good things and bad things as ---------------------. The freedom on social media has also rendered these avenues -----------------------grounds for hate --------------------. Many use it to promote their bigoted ideology. They encourage hatred ----------------------- warring individuals or parties simply because they are ---------------------- to the views, beliefs, or behavior that differ from --------------------------.

3. ORAL SKILLS

Read the oral poem below and respond to the questions that follow.

A BAREFOOT BOY

A barefoot boy! I mark him at his play…

For May is here once more, and so is he,…

His dusty trousers, rolled half to the knee,

And his bare ankles grimy, too, as they:

Cross- hatchings of the nettle, in array

Of feverish stripes, hint vividly to me

Of woody pathways winding endlessly

Along the creek, where even yesterday

He plunged his shrinking body – gasped and shook

Yet called the water 'warm' with never lack

Of joy. And so, half enviously I look

Upon this graceless barefoot and his track,…

His toe stubbed…, his big toe-nail knocked back

Like unto the clasp of an old pocketbook.

     i)   Identify and illustrate two devices that make the poem musical.   (2mks)

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    ii)   How would you effectively recite line 13 of this poem?   (2mks)

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    iii)   Which word would you stress in line 12? Give a reason.   (2mks)

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b) One of the features in listening skills is maintaining a meaningful eye-contact with the speaker. Why do you think it is important to do so?   (3mks)

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c) Consider the following oral literature item.

Mi moet moet a moita (There is a wound in a calf's stomach)

    i)   Classify the above genre   (1mk)

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ii)   Identify and illustrate two features of sound in the above genre.   (2mks)

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iii)   Explain what is lost if the item above is translated from its original language. (2mks)

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iv)   Give one role of the above item   (1mk)

----

d) Underline the silent letter(s) in the following words   (3mks)

i) sword   iv) bouquet

ii) debris   v) victual

iv)grandmother   vi)corps

e) Which is the odd one out in the following groups of words based on the underlined sounds?
                                                                                    (3mks)

a) beer   bare   bear   pair

b) tough   giraffe   dough   photograph

c) honest   honour   heifer   heir

f) For each below, provide another that is identical in pronunciation.   (4mks)

i) clue   iii) board

ii) sole   iv) tear

e) Imagine you are the leader of a discussion group in your class. How would you ensure that
the discussion is fruitful.   (5mks)

PREDICTION 5

101/2

ENGLISH PAPER 2

KCSE PREDICTION 5

1. **COMPREHENSION**

    Read the following passage and answer the questions that follow. **(20 marks)**

    In the end I was duly discharged (from hospital) and sent back relieved but not cured. A very elaborate belt kept death at arm's length. My congregation was deeply sympathetic, but started making representations for my transfer. Shortly afterwards the final blow was delivered. The circumstances in which I was forced to retire from the work for which I had sacrificed my youth and strength and hope were so confused and sad that a bitter taste will forever remain. I had toiled for over half a century only to end like this. Somehow I feel my third courtship had something to do with it, for I drew bitter opposition from some new relations of the lady. The campaign of mudslinging grew to ugly proportions and became an organized campaign to throw me out. Charges were tramped up. I was declared feeble, aged and unable to visit outstations, and probably I was secretly called immoral. These charges were duly handed to the superintendent minister.

    Meanwhile at Mankessim angry mobs made the place untenable. I was in the end transferred – nowhere. That was the end. My retirement was skillfully managed by the chairman and superintendent minister, and I went quietly into obscurity with no lauvels and no respect, no last-minute farewell or godspeeds; no visible means of support save that which my own sons were hopefully expected to give. For catechists are the scum of the earth and command no respect and expect none. They are entitled to no gratuities or pension and when they are strong enough to outlive their usefulness….. "God will provide" I had worked half a century to bring salvation to other people. It would probably be appropriate to say, "Physician heal theyself." Sometimes I think we, the workers in the Lord's vineyard, have the greatest need of salvation 'in the obscurity of retirement I can now have time to look back on my life and into my soul and try to assess where I failed and try to effect my own salvation.' God indeed never leaves those who believe in Him really desolate. I have my wife with me now. My sons are all securely settled in life and work to support my old age. At the throne of God, I hope the Almighty will not deal too harshly with his servant, but in His infinite mercy will forgive my sins and accept even me.

    (From: Joseph W. Abruquah, The Catechist, London – 1965)

    Questions

    a) What was the narrator's occupation before he was taken ill?   (1 mark)
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    ....
    ....
    ....

    b) Mention **four** factors responsible for the narrator's dismissal from his duty.   (2 marks)
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    ....
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c) Justify the narrator's bitter attitude in the third paragraph. (3 marks)

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d) Identify and explain the feature of style in the sentence below: They are entitled to no gratuities or pension and why they are strong enough to outlive their usefulness….. "God will provide."
(2 marks)

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e) Basing your argument on one major failing of the narrator, why should you not be sympathetic with is situation (2 marks)

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f) On the whole, what feelings towards the narrator does this passage arouse? Explain your answer.
(3 marks)

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g) The narrator uses the word 'salvation' to elicit two implications. Explain these two implications.
(2 marks)

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h) Quote a statement in the last paragraph that hints at the narrator's sense of remorse.

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i)   My congregation was deeply sympathetic but started making representations for my transfer.
     (Rewrite this sentence beginning: Much as …………………   (1 mark)

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j)   Explain the meaning of the following words and clause in the passage   (3 marks)

    (i)   Mudslinging

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    (ii)   Obscurity

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    (iii)   Physician heal theyself

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2.   EXCERPT

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

Krogstad:	Are you aware that is a dangerous confession?
Nora:	In what way? You shall have your money soon.
Krogstad:	Let me ask you a question: Why did you not send the paper to your father?
Nora:	It was impossible: papa was so ill. If I had asked him for his signature, I should have had to tell him what the money was to be used for: and when he was so ill himself, I couldn't tell him that my husband's life was in danger – it was impossible.
Krogstad:	It would have been better for you if you had given up your trip abroad.
Nora:	No, that was impossible. That trip was to save my husband's life. I couldn't give that up.
Krogstad:	But did it never occur to you that you were committing a fraud on me?
Nora:	I couldn't take that into account: I didn't trouble myself about you at all. I couldn't bear you, because you put so many heartless difficulties in my way, although you knew what a dangerous condition my husband was in.
Krogstad :	Mrs. Helmer, you evidently do not realise clearly what it is that you have been guilty of. But I can assure you that my one false step, which lost me all my reputation, was nothing more or nothing worse than what you have done.
Nora:	You? Do you ask me to believe that you were brace enough to run a risk to save your wife's life?

Krogstad:	Foolish or not, it is the law by which you will be judged, if I produce this paper in court.
Nora:	I don't believe it. Is a daughter not to be allowed to spare her dying father anxiety and care? Is a wife not to be allowed to save her husband's life? I dont know much about law: but I am certain that there must be laws permitting such things as that. Have you no knowledge of such laws – you who are a lawyer? You must be very poor Mr Krogstad.
Krogstad:	Maybe. But matters of business – such business as you and I have had together – do you think I don't understand that? Very well. Do as you please. But let me tell you this – if I lose my position a second time, you shall lose yours with me. (He bows and goes out through the hall) Nora (appears buried in thought for a short time, then tosses her head) Nonsense! Trying to frighten me like that! – I am not so silly as he thinks. (begins to busy herself putting the children's things in order) And yet-? No it's impossible! I did it for love's sake.

Questions:

a) Briefly describe the dangerous confession Nora admits to in the onset of the excerpt.

(3 marks)

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b) Explain why Nora did not send the paper to her father for signing.   (3 marks)

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c) Explain **two** themes evident in the excerpt above.   (4 marks)

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d) Contrast Krogstad's and Nora's views on the law   (2 marks)

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e) How is Krogstad portrayed in the excerpt (2 marks)

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f) The law cares nothing about motives. (Add a question tag) (1 mark)

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g) Krogstad informs Nora that "one false step, lost him all reputation." Briefly explain how.
   (2 marks)

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h) "……….If I lose my position a second time, you shall lose yours with me." From elsewhere in the play, show the truth of this statement (2 marks)

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i) What is the general tone in this excerpt? Explain your answer. (3 marks)

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j) Explain the meaning of the following words as used in the excerpt. (2 marks)

   (i) defiantly

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   (ii) false step

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3. **ORAL POETRY**

   Read the oral poem below and then answer the questions that follow. *(20 marks)*

5

Ha! That mother who takes her food alone
Ha! That mother before she has eaten
Ha! That mother she says, "lull the baby for me".
Ha! That mother, when she has finished eating,
Ha! That mother, she says, "give the child to me."

Questions

a) What type of oral poem is this?   (2 marks)

....

....

....

....

b) Explain briefly what the above oral poem is about   (4 marks)

....

....

....

....

....

....

....

....

c) Who is the speaker in the above oral poem?   (2 marks)

....

....

....

....

d) What is the speaker's attitude towards the mother?   (2 marks)

....

....

....

e) What evidence is there to show that this is an oral poem?   (6 marks)

....

....

....

....

....

....

....

....

f) State **two** functions of the above oral poem. (2 marks)

....

....

....

....

g) Mention **one** feature that is characteristic of this sub-genre (2 marks)

....

....

....

....

4.　**GRAMMAR** (15 marks)

a) Rewrite the following sentences according to the instructions given after each. Do not change the meaning (4 marks)

i) "I get up at six o'clock every morning." Said my friend (Rewrite in indirect)

....

....

ii) It is possible to buy bread here. (Rewrite beginning: There is …………)

....

....

iii) My sister is older than me. (Rewrite using 'I')

....

....

iv) The guard refused a student admittance. (Rewrite the sentence in the passive form)

....

....

b) Complete each of the sentences with an appropriate question tag. (3 marks)

i) It's very cold, ………………………………………………………………………

ii) You are free, …………………………………………………………………………

iii) They haven't come yet, ……………………………………………………………..

c) Use the correct form of the word in brackets to fill in the blank space in each of the sentences below. (3 marks)

i) Peter sang yesterday ....(melody)

ii) The state will undertake the .... (maintain) of the road.

iii) Her argument was obviously …………………………………………. (error)

d) Choose the correct alternative from the words given in brackets after each sentence. (4 marks)

i) The boys left .... (their, there) books in the field.

ii) All matatus have hiked the .... (fair, fare)

e) Rewrite the underlined phrasal verbs with appropriate verbs in each sentence.

(2 marks)

i) Juma's performance did not <u>measure upto</u> the expected standards.

....

....

ii) Mary <u>walked out on</u> her family

....

....

f) Rewrite the following sentence to remove gender bias. (1 mark)

The steward is in the restaurant

....

....

PREDICTION 5

101/3

ENGLISH PAPER 3

1.Imaginative Composition (Compulsory)

Either

a) Write a story illustrating the saying, "All that glitters are not gold."

Or

b) Write a composition with the title, "A miserable journey."

2. The Compulsory Set Text

"Change is inevitable in any society." Validate this statement with illustrations from the novel, Blossoms of the Savannah by Henry Ole Kulet.

The Optional Set Texts

a) Drawing illustrations from the story, Memories We Lost by Lidudumalingani Mqomboti in the anthology Memories We Lost and Other Stories, write an essay on the effects of mental illness.

Or

b) "Kutula republic is a reflection of African states that are ruled by an iron fist." Support this statement basing your argument on the play, Inheritance by David Mulwa.

Or

c) "Family members play a pivotal role in one's life." Basing your argument on Kino in the novel, The Pearl by John Steinbeck, validate this statement.

PREDICTION 5

102/1

KISWAHILI

Karatasi 1

Muda: Saa 1¾

KCSE PREDICTION 5

Andika insha MBILI. Insha ya KWANZA ni ya LAZIMA.

Chagua insha moja nyingine kutoka tatu zilizobaki.

Kila Insha isipungue maneno 400.

Kila Insha ina alama 20.

1. **Lazima :**

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

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

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

4. Andika insha itakayoanza kwa maneno haya:

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

    pande zote…

PREDICTION 5

Jina…………………………………………………Nambari yako………………/………

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

102/2

KISWAHILI

Karatasi ya 2

MUDA: SAA 2 ½

KIDATO CHA NNE

MAAGIZO

1.   Andika **jina lako** na **namba yako** katika nafasi ulioachiwa hapo juu.

2.   Weka **sahihi yako** na **tarehe** ya mtihani katika nafasi ulizoachiwa.

3.   Jibu maswali yote.

4.   Majibu yaandikwe katika nafasi zilizoachwa wazi katika kijitabu hiki cha maswali.

Kwa matumizi ya mtihani pekee.

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

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

1. UFAHAMU: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali yanayofuatia

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

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

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

Ni haki ya kila mtoto kupata elimu. Katika katiba ya Kenya mathalan, elimu ya msingi, yaani kuanzia shule ya chekechea had kidato cha nne ni ya lazima. Tangu hapo hata hivyo, jamii zimekuwa zikiwanyima wanawakiwa wengi elimu. Kwamba kunao wachache wanaowaelimisha baadhi ya wanawakiwa, ni kweli. Hata hivyo, wengi hukosa hata wa kuwapeleka katika shule ya chekechea, hivyo kuishia kutojua hata kuandika majina yao. Mfikirie mtu katika karne ya 21, asiyejua kusoma wala kuandika! Nani ajuaye, huenda huyo mwanamkiwa asiyepelekwa shuleni ndiye angalikuwa profesa, daktari, mwalimu, rubani au msomi mtajika na mtaalamu wa uwanja muhimu katika jamii!

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

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

Maswali

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

_____

_____

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

_____

_____

_____

_____

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

_____

_____

_____

_____

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

_____

_____

_____

_____

_____

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

_____

_____

_____

_____

_____

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

i) Inakera

_____

_____

ii) Majukumu

_____

_____

2. UFUPISHO: (Alama 15)

Soma kifungu kifuatacho kisha ujibu maswali

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

Fauka ya hayo, televisheni ni chemchemi bora ya kutumbuiza na kuchangamsha. Hakuna mtu asiyependa kuchangamshwa. Televisheni ni mojawapo ya vyombo mwafaka vya kutekeleza hayo kutokana na vipindi vyake. Uburudishaji huu huwa ni liwazo kutokana na shinikizo na migogoro tunayokabiliana nayo kila siku. Uburudishaji huu hupatikana kwa urahisi majumbani mwetu.

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

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

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

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

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

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

Kwa hivyo, ni muhimu wazazi na jamii kutambua madhara ya televisheni. Utambuzi huu utawafanya wawaelekeze vijana na watoto jinsi ya kutumia televisheni na video ili kuepukana na madhara yake.

a) Fupisha aya tatu za kwanza za (maneno 70 – 75)   (alama 7, 2 za utiririko)

Matayarisho

_____

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Jibu

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b) Eleza udhaifu wa runinga na video. (maneno 50 – 51)   (alama 5, 1 ya utiririko)

Matayarisho

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Jibu

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_____

Eleza udhaifu wa runinga na video. (maneno 50 – 51)   (alama 5, 1 ya utiririko)

Matayarisho

3. **MATUMIZI YA LUGHA:** (alama 40)

a) Taja aina mbili kuu za ala za kutamkia sauti (alama 2)

_____

_____

_____

b) Taja mfano mmoja mmoja wa sauti zifuatazo (alama 2)

Kimadende_____

Kipasuo kwamizo_____

c) Huku ukitoa mfano, eleza maana ya sentensi sahili (alama 2)

_____

_____

_____

_____

d) Ainisha mofimu katika neno lifuatalo (alama 3)

Tulimpikia_____

e) Ainisha vitenzi katika sentensi: Kitabu anachotaka kusoma ki mezani (alama 3)

_____

_____

_____

_____

_____

_____

f) Tunga sentensi moja ukitumia kiunganishi kiteuzi (alama 2)

_____

_____

_____

g) Nomino zifuatazo zimo katika ngeli gani? (alama 2)

a) Uzi_____

b) Muda_____

h) Tumia 'o' rejeshi ya kati katika sentensi ifuatayo (alama 2)

Watu ambao walifika jana ni wale ambao walitoka mbali

_____

i) Onyesha shamirisho kipozi na ala katika sentensi ifuatayo **(alama 2)**

Mwindaji haramu alimuua ndovu kwa bunduki

_____

_____

_____

j) Changanua sentensi ifuatayo ukitumia mistari au mishale **(alama 3)**

Kilipikwa jana jioni

_____

_____

_____

k) Andika sentensi ifuatayo katika hali yakinishi **(alama 2)**

Msingesoma kwa bidii, msingepita

_____

_____

_____

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

Rai/ombi

_____

_____

_____

m) Ainisha vishazi katika sentensi ifuatayo **(alama 2)**

Mtoto ambaye alianguka jana ana maumivu mengi

_____

_____

_____

_____

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

_____

_____

_____

_____

_____

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

    a) Nomino

_____

_____

_____

    b) Kielezi

_____

_____

_____

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

_____

_____

_____

q) Onyesha matumizi ya kiambishi -ji- katika sentensi   **(alama 2)**

Mwongeleaji stadi anajishaua sana.

_____

_____

_____

_____

_____

_____

r) Andika katika usemi wa taarifa   **(alama 2)**

"Wageni wangu watafika saa ngapi? Mama aliuliza

_____

_____

_____

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

Safari

_____

_____

_____

4. **ISIMUJAMII:** (alama 10)

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

a) Taja sajili inayorejelewa na maneno haya (alama 2)

_____

_____

_____

b) Fafanua sifa nne zinazohusishwa na sajili hiyo (alama 8)

_____

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PREDICTION 5

JINA..NAMBARI..

SHULE.. SAHIHI............................... TAREHE.................

102/3 (FASIHI)

KISWAHILI

KARATASI YA 3

MUDA: SAA 2½

Hati ya kuhitimu kisomo cha sekondari Kenya (K.C.S.E)

102/3(FASIHI)

KISWAHILI

KARATASI YA 3

MUDA: SAA 2

MAAGIZO KWA MTAHINIWA

a.Jibu maswali <u>manne</u> pekee

b. Swali la kwanza ni la lazima

c. Maswali hayo mengine matatu yachaguliwe kutoka sehemu nne zilizobaki; yaani: Tamthilia, Hadithi fupi, ushairi na fasihi simulizi.

d. Usijibu maswali mawili kutoka sehemu moja.

Kwa matumizi ya mtahini pekee.

Swali	1	2	3	4	5	6	7	8	jumla

SEHEMU YA A: RIWAYA YA : CHOZI LA KHERI(ASSUMPTA .K. Matei)

1.Swali la Lazima

A. ``Kumbe hata wewe shemeji..............upo?''
  ``ndio tu hapa na wengi''
i.Eleza muktadha wa dondoo hili.   alama 4
ii.'Wengi ' wanaorejelewa katika dondoo hili walikumbwa na matatizo yapi?   alama 8

B.``Kule kulazimika kupapasa kwenye giza kutafuta............''
  Mrejelewa katika kauli hii anayafichua maovu yapi katika jamii?   alama 8

SEHEMU YA B. TAMTHILIA KIGOGO (Pauline kea)

2.``Huu moyo wangu wa huruma nao.............................''
  i.Eleza muktadha wa dondoo hili.   alama4
  ii.Fafanua sifa za msemaji.   alama 4
  iii.Onyesha kinyume kinachojitokeza katika dondoo hili.   alama 12

3.Vijana katika tamthilia ya kigogo wamesawiriwa kwa jicho hasi. Fafanua   alama 20

SEHEMU YA C. HADITHI FUPI
TUMBO LISILOSHIBA NA HADITHI NYINGINE (WAHARIRI: A CHOKOCHO NA D. KAYANDA)

4. `..........Lakini shogake................. shogake.................. shogake dada nikamwona ana ndevu'.

a. Eleza muktadha wa dondoo hili.   alama 4
b. Bainisha sifa tatu za `shoga ' anayezungumziwa katika dondoo hili.   alama 6
c.Jadili umuhimu wa `dada' anayerejelewa katika kuendeleza dhamira ya hadithi.   alama 10

5.``Wahusika katika hadithi shibe inatumaliza wanatumia uhuru wao vibaya.''Onyesha ukweli wa kauli hii
  kwa kutoa mifano.   alama 20

SEHEMU YA D. USHAIRI

6. Soma shairi lifuatalo kisha ujibu maswali.

    1. Mbiu naipulizia, kwa wa hapa na ng`ambo,

Kwaani ngoja `mesikia, inaumiza matumbo,
Kwa upole sitafyoa, hata kama kwa kimombo,
Yafaa jihadharia, maisha yas`ende kombo.

2. Maisha yas`ende kombo, kututoa yetu ari,
Zingatia haya mambo, wetu walezi mukiri,
Kuwa wana kwa viambo, huwa Baraka na kheri
Watunzeni na maumbo, msijezusha hatari.

3. Msijezusha hatari, na nyingi hizi zahama,
Wazazi haya si siri, mawi mnayoandama
Twaeleza kwa uzuri, matendoyo yatuuma
Watoto tunayo mori, ni lini mtajakoma?

4. Ni lini mtajakoma, na pombe siso halali?
Sio baba sio mama, mbona ny`hamtajali?
Mwafaja nzi twasema, mwatuacha bila hali
Hangaiko acha nyuma, kwani hamuoni hili?

5. Kwani hamuoni hili, kila saa mwapigana
Nyumbanizo hatulali, jehanamu tumeona
Mwatusumbua akili, twaumia ten asana
Acheni na ukatili, kwani upendo hamna.

6. Kwani upendo hamna, kama mbwa mwatuchapa
Mwatuchoma sisi wana, mioyetu yatupapa
Pa kujificha hatuna, tumebaki tukitapa

7. Tumevunjwa na mifupa, hata leo uke wetu,
Mwatubaka na kuapa, kutung`ata nyi' majitu,
Hayo makeke na pupa, mtakoma utukufu

8. Mtakoma utukufu, na kutumia mikiki
Na tabia zenye kutu, tumechoka nayo chuki
Hatutakubali katu, kutendewa yenye siki
Serikali fanya kitu, kwani nasi tuna haki.

a. Eleza dhamira ya mtunzi wa shairi hili.   alama 2
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....
b. Fafanua tamathali nne za usemi zilizotumiwa katika shairi hili.   alama 4
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....

c. Taja nafsineni katika shairi hili.   alama 1

....

....

d. Eleza bahari nne zinazowakilishwa katika shairi hili   alama 4

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e. Andika ubeti wan ne kwa lugha nathari.   alama 4

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f. Eleza maudhui matatu yanayojitokeza katika shairi hili.   alama 3

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g. Huku ukitoa mfano, taja mfano wa uhuru wa mshairi ambao ume tumiwa katika shairi hili.   alama 2

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7. Soma shairi lifuatalo kisha ujibu maswali.

Mlipozinduka,
Mkaungana na kushikana

Kwa nguvu moja mkavuta, mkavuta
Mdogo akivuta na mkubwa anavuta, nyote mlipovuta
Si makubwa mlitenda!
Babu yangu kajiunga
Babu yako akaja Mmoja alipokohoa, mwenzake akampokea
Homa hiyo kaenea ja moto wa kiangazi
Mau mau wakazalika, nywele ndefu zilizosokotana
Si mkoloni aliondoka!

Ubinafsi upigiwa teke
Kimoja wakajiona
Wala
Si viungo tofauti vya mwili mmoja
Si taifa lilisimama!
Doa ikaitwa Dola
Na wimbo wa taifa, kitambulisho
Vazi la taifa kashonwa
Bendera ilipepea!

Mbona msambaratiko?
Sasa
Mbona wa kwenu tu?
Vicheko si vicheko, bashasha juu ya bashasha
Wa ndani busu moto moto
Wengine soma mgongo!
Na kuta wajijengea, za mawe na za miba
Taba samuyo hela ngapi, waso wakalipe?

Na ndimi zatema ndimi
Miale ya kuunguza!
Wakweapo ulingoni
Wagongesha huyu na yule
Viongozi maluuni, waajiri kikabila
Kiongozi maluuni, cheo wakweza kwa kabila
Maluuni maluuni
Adhabu zako za kikabila!
Twajenga ukibomoa, mzalendo sampuli gani?

Nyoyo zetu lako shamba
Wazichimbua hisia, na mashimo wapanda chuki
Fitina ndo maji yako, Wanyunyiza na kwa bidii
Tofauti za kikabila, na lawama mzomzo
Pindi uwakapo moto, huyoo watakomea!
Kiongozi maluuni.

    a.   Huku ukitoa mifano mwafaka,eleza sifa za shairi huru zinazojitokea katika shairi hili.   alama 6

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b. Fafanua aina tatu zamsambaratiko unaozungumziwa katika shairi hili.   alama 6

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c. Bainisha mbinu sita za kifasihi zinazojitokeza katika shairi hili.   alama 6

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d. Eleza maana ya msamiati ufuatao kama ulivyotumiwa katika shairi hili   alama 2
   i.Bashasha
   ii.sampuli

SEHEMU YA E. FASIHI SIMULIZI.

Katika jamii ya Itaso watoto pacha huchukuliwa kama mkosi. Kwa hivyo, hubidi sherehe maalum ifanywe ili kutakasa wazazi wa watoto hawa. Sherehe hii hufanyika siku tatu baada ya kuzaliwa kwa watoto mapacha.
   a. Tambua kipera kinachodokezwa na maelezo haya na ukifafanua.   alama 2

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   b. Fafanua umuhimu wa kipera cha fasihi ulichotambua katika (a)   alama 8

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   c. Fafanua sifa zozote tano za soga.   alama 5

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d. Ni changamoto zipi zinaweza kumkumba mtafiti akifanya utafiti wa soga nyanjani.   alama 5

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PREDICTION 5

NAME _____   INDEX NO. _____

SCHOOL _____   SIGNATURE _____

DATE _____

231/1
BIOLOGY
(THEORY)
PAPER 1
TIME: 2 HOURS

<u>KCSE PREDICTION 5</u>

<u>INSTRUCTIONS TO CANDIDATES</u>

- Write your name, school and admission number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **all** the questions in the spaces provided.
- Additional pages **must not** be inserted.
- Candidates may be penalized for false information and even wrong spellings of technical terms.
- This paper consists of **8** printed pages.
- Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

<u>FOR OFFICIAL USE ONLY</u>

Question	Maximum score	Candidate's score
1 – 27	80	

1. Explain the meaning of the following branches of biology.

a) Cytology   (1mark)

_____

b) Mycology   (1mark)

_____

2. State **three** reasons why it's necessary to classify living organisms.   (3marks)

_____

_____

_____

_____

3. The diagram below represents a neuron.
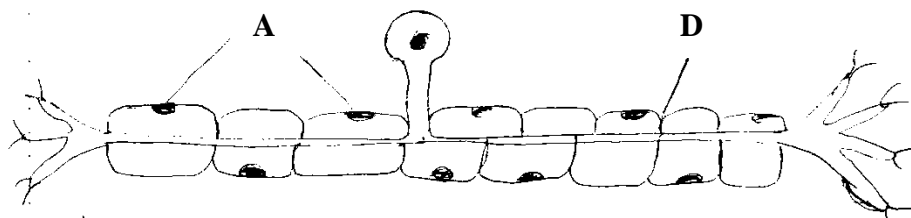
a) i) Identify the neuron.   (1mark)

_____

   ii) Give a reason.   (1mark)

_____

_____

b) Identify the parts labeled A and D.   (2marks)

   A _____

   D _____

c) State the function of neuron.   (1mark)

_____

_____

4. A form one student trying to determine the size of onion cells observed the following on a microscopes field of view.
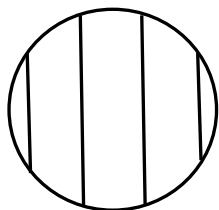
   If the student observed 2 cells across the field of view calculate the length of one cell in micrometers
                                                               (3marks)

5. The diagram below represents a certain organism collected by a student on his way to school
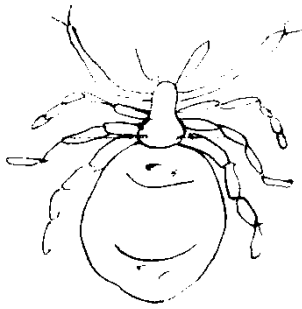
a) State the class to which the organism belongs   (1mark)

_____

b) Give **two** reasons for your answer 5(a) above   (2mark)

_____

_____

_____

6. What is meant by the following terms as used in ecology?

i) Biomass   (1mark)

_____

_____

ii) Ecosystem   (1mark)

_____

_____

7. The diagram below represents a synapse

P
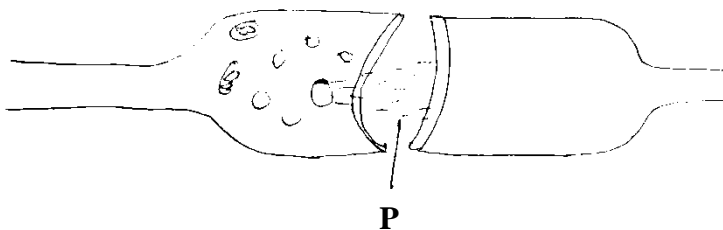
a) Indicate the direction of the impulse on the diagram   (1mark)

b) State **two** significances of a synapse in the body   (2mark s)

_____

_____

_____

8. Name a tissue whose cells are thickened with

a) Cellulose and pectin   (1mark)

_____

b) Lignin   (1mark)

_____

9. The diagram below shows the structure of an organelle
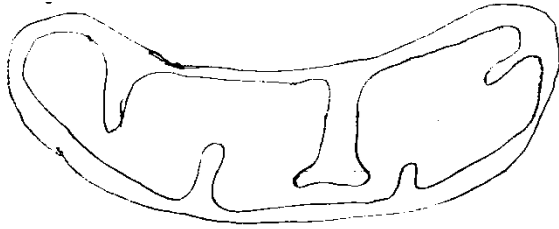
a) State the function of the organelle   (1mark)

_____

_____

b) State **one** adaptation of the above organelle to its function   (1mark)

_____

_____

c) Give the function of the following cell organelles

i) Lysosomes   (1mark)

_____

_____

ii) Golgi bodies   (1mark)

_____

_____

10. The diagram below represents across section of a certain plant
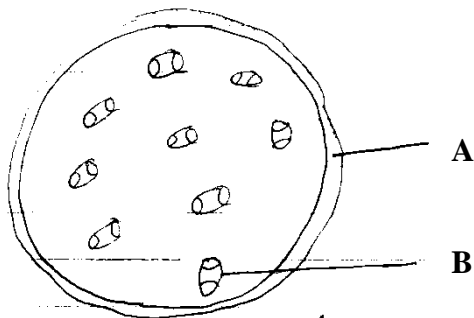
a) Name the parts labeled A and B   (2marks)

A _____

B _____

b) i) State the class to which the plant above belongs   (1mark)

_____

ii) Give a reason   (1mark)

_____

_____

11. During research on different types of plants students found a plant that looked like the one shown below
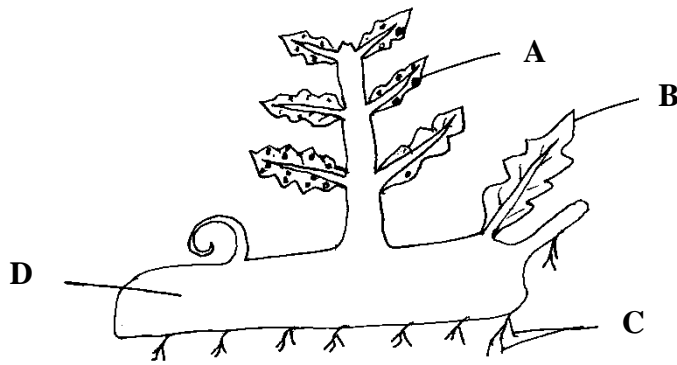
a) Identify the plant.   (1mark)

_____

_____

b) Name the parts labeled A, B, C and D.   (4marks)

A _____

B _____

C _____

D _____

c) State the division to which the plant belongs.   (1mark)

_____

12. Why do you think we experience more discomfort in hot humid weather than we do in hot dry weather
                                                                                                                        (3marks)

_____

_____

_____

_____

_____

13. Explain why a water logged soil does not support plant growth.   (3marks)

_____

_____

_____

_____

_____

14. Name the carbohydrate that is.

a) Found in abundance in mammalian blood.   (1mark)

_____

b) Stored in a mammalian liver.   (1mark)

_____

15. Liver damage leads to impaired digestion of fats. Explain.   (2marks)

_____

_____

_____

16. The letters 'N' and n represents the dominant and recessive genes for hemophilia respectively.

    Write down the genotype of the following   (3marks)

a) Homozygous dominant_____

b) Homozygous recessive_____

c) Heterozygote_____

17. Give **three** adaptations of human male gamete to its functions.   (3marks)

    _____

    _____

    _____

    _____

18. The diagram below represents a longitudinal section of a bean study it and answer the questions that follow:
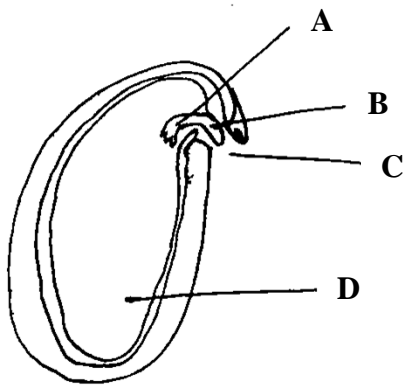
a) Identify the parts labeled A to D.   (2marks)

    A _____

    B _____

    C _____

    D _____

b) Give the role of the plant labeled D.   (1mark)

    _____

    _____

c) What type of germination would the seed shown above undergo?   (1mark)

    _____

    _____

19. a) A person who is blood group AB has an advantage over a person who is blood group O. Explain.

(2marks)

_____

_____

_____

b) Give **two** reasons for screening blood before transfusion. (2marks)

_____

_____

_____

20. a) Define immunity. (1mark)

_____

_____

b) Distinguish between natural immunity and acquired immunity. (1mark)

_____

_____

_____

c) Identify **one** immunisable disease in Kenya. (1mark)

_____

21. State the causative agent of;

i) Cholera (1mark)

_____

ii) Amoebic dysentery. (1mark)

_____

22. Explain why it difficult to calculate the respiratory quotient (RQ) in plants. (2marks)

_____

_____

_____

23. The diagram below represents a stage in the development of human foetus.
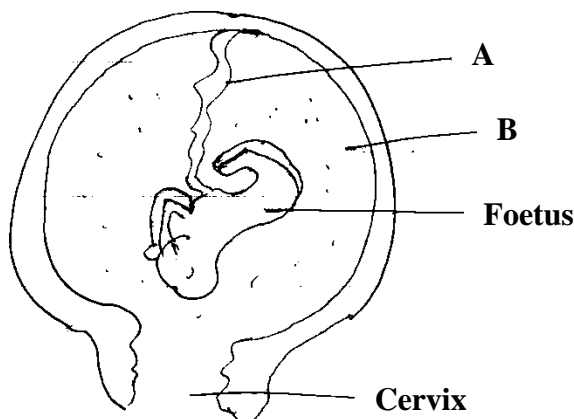
a) State **one** function of each of the structures labeled A and B. (2marks)

A _____

_____

B _____

_____

b) Apart from the size of the foetus what else from diagram illustrates that birth was going to occur in the near future.

_____

_____

24. Give the reasons why Lamar's theory on natural selection in organic evolution was discarde. (2marks)

_____

_____

_____

_____

25. Explain why the following process is essential in living organism.

a) Reproduction   (1mark)

_____

_____

b) Excretion   (1mark)

_____

_____

26. Explain why there are only a few days in each menstrual cycle when fertilization can occur. (2marks)

_____

_____

_____

27. Study the bio-chemical reactions given below.

$$C_6 H_{12} O_6 + C_6 H_{12} O_6 \xrightarrow{\text{I}} C_{12} H_{22} O_n + H_2O$$

$$C_{12} H_{22} O_{11} + H_2O \xrightarrow{\text{II}} C_6 H_{12} O_6 + C_6 H_{12} O_6$$
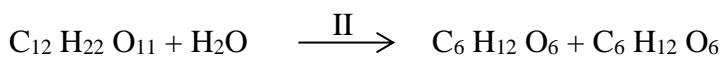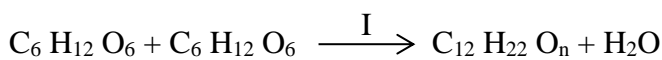
a) Identify the process marked I and II   (2marks)

I _____

II _____

b) Explain how the process marked II can be carried out in a laboratory.   (1mark)

_____

_____

_____

PREDICTION 5

NAME _____   INDEX NO. _____

SCHOOL _____   SIGNATURE _____

                                                 DATE _____

231/2
BIOLOGY
(THEORY)
PAPER 2
TIME: 2 HOURS

<u>KCSE PREDICTION 5</u>

<u>INSTRUCTIONS TO CANDIDATES</u>
- Write your name, school and index number in the spaces provided above.
- Write the date of examination and sign in the spaces provided above.
- Answer **ALL** the questions in **section A** by filling in the spaces provided.
- In **section B**, **answer question 6 (compulsory question)** and **any other one question** from the remaining two questions. (i.e. 7 or 8) in the spaces provided after question 8.
- Candidates may be penalized for false information and even wrong spellings of technical terms.
- This paper consists of 10 printed pages.
- Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

<u>FOR OFFICIAL USE ONLY</u>

| Section	Question	Maximum score	Candidate's score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	Total Score	80	

SECTION A (40 MARKS)

Answer ALL questions

1. A pure breed red flowered plants was crossed with a pure breed white flowered plant. The F1 generate had all pink flowers. When F1 were selfed 1600 plants were obtained in F2 generation

a) Identify the type of dominance   (1mark)

   _____

b) Give a reason for your answer   (1mark)

   _____
   _____

c) i) Using letter R to represent the gene for red color and W for the white colour work out the possible genotypes for F2 generation.   (4marks)

   ii) Work out the answer of plants in F2 with

   Pink flower   (1mark)

   Red flowers   (1mark)

2. Study the food web below and use it to answer the questions that follow
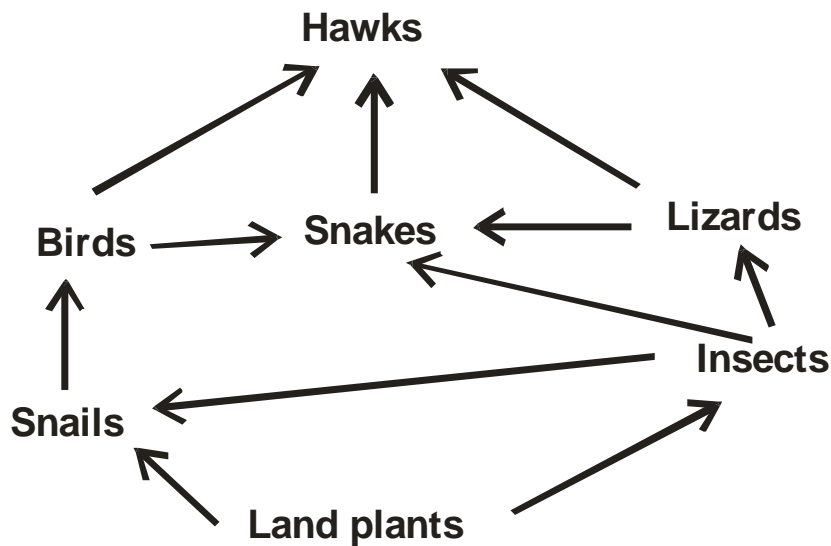
a) Identify the tropical level occupied by the hawks. (1mark)

_____

_____

b) Write down any two food chains from the food web that ends with:

i) Quaternary consumer (2marks)

_____

_____

ii) Tertiary consumer (1mark)

_____

_____

c) Suggest **three** short term effects on the ecosystem if all the snakes died (3marks)

_____

_____

_____

_____

d) Which organism has the highest number of predators (1mark)

_____

3. The diagram below shows how blood glucose in mammalian body is regulated.

```
                    ┌─────────────────────────┐
              Rise  │  Corrective mechanism P │   Fall
                   ↗└─────────────────────────┘ ↘
┌──────────────────┐                              Normal Glucose level
│ Normal glucose level │                                ↗
│ 90mg/100ml blood  │                            Rise
└──────────────────┘ ↘  ┌─────────────────────────┐
              Fall      │  Corrective mechanism Q │
                        └─────────────────────────┘
                              ↘
                               2
```
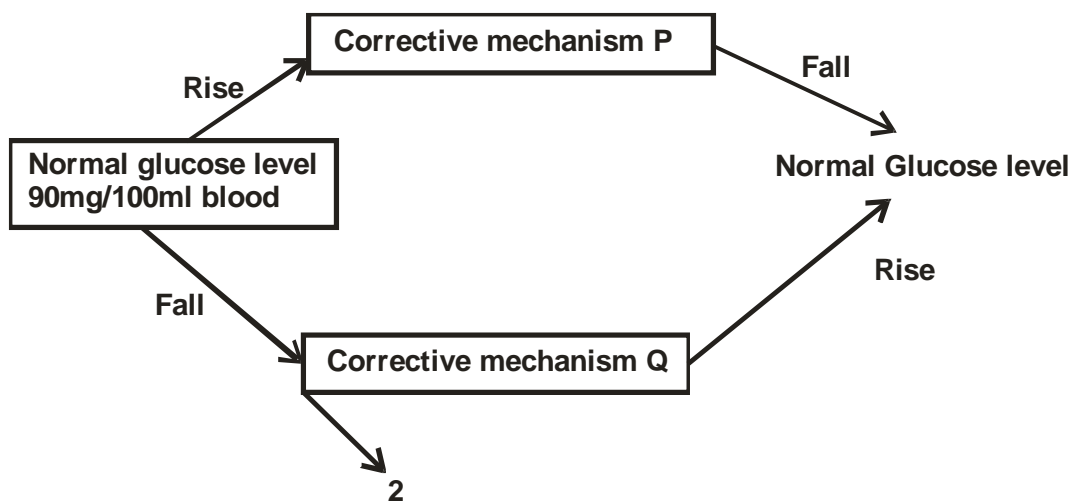
a) Name the feedback represented by 2   (1marks)

_____

b) Explain what happens during corrective mechanism P   (3marks)

_____

_____

_____

_____

c) i) Name **two** organism involved in corrective mechanism P and Q   (2 marks)

_____

_____

_____

ii) Why would glucose level be maintained constant   (1marks)

_____

_____

d) What is osmoregulation?   (1 mark)

_____

_____

4. In a fish pond the number of fish was estimated by use of the following information.

    First captured   =50

    Second captured   =90

    Marked recaptured =25

a) Identify the method suggested above   (1mark)

_____

b) Name **two** other sampling methods used in estimating populations   (2marks)

_____

_____

_____

c) Calculate the total number of fish in the pond   (2marks)

d) Give **three** assumptions of the above method   (3marks)

_____

_____

_____

_____

5. a) The diagram below represents bones and muscles in human arm
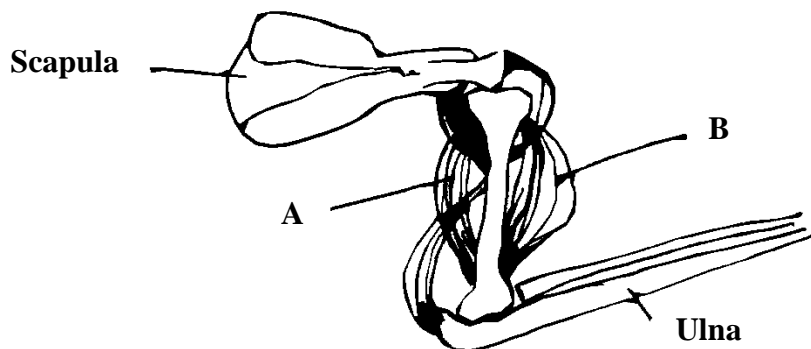
i) Give **two** differences between the type of muscles labeled A and B above and the type of muscles
found in the blood vessel   (2mark)

_____

_____

_____

_____

ii) Explain how the muscles labeled A and B above bring about stretching of the arm   (2marks)

_____

_____

_____

b) Below is diagram of above coiled sacrum
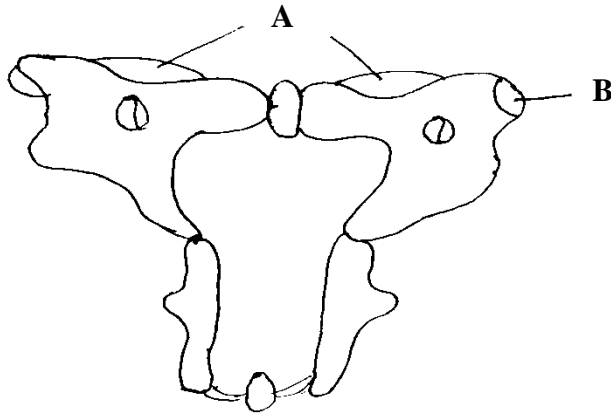
i) State the disgusting feature of sacrum   (1mark)

_____

_____

ii) What is the function of sacrum in the body   (1mark)

_____

_____

iii)How is sacrum adapted to its function   (2marks)

_____

_____

_____

SECTION B (40 MARKS)

Answer question 6 (compulsory and either question 7 or 8 in the provided after question 8.

6. In an experiment to investigate the action of salivary amylase in starch, equal amount of amylase was added to equal amount of starch in in different tubes. The test tubes were placed at different temperatures. The table below shows the time taken for the enzyme to digest starch.

Time (min)	45	27.5	15	05	1.5	1	8	35
Temperature ^{0}c	0	10	20	30	35	38	40	45

a) On the grid provided, plot a graph of time in minutes against temperature. (5marks)
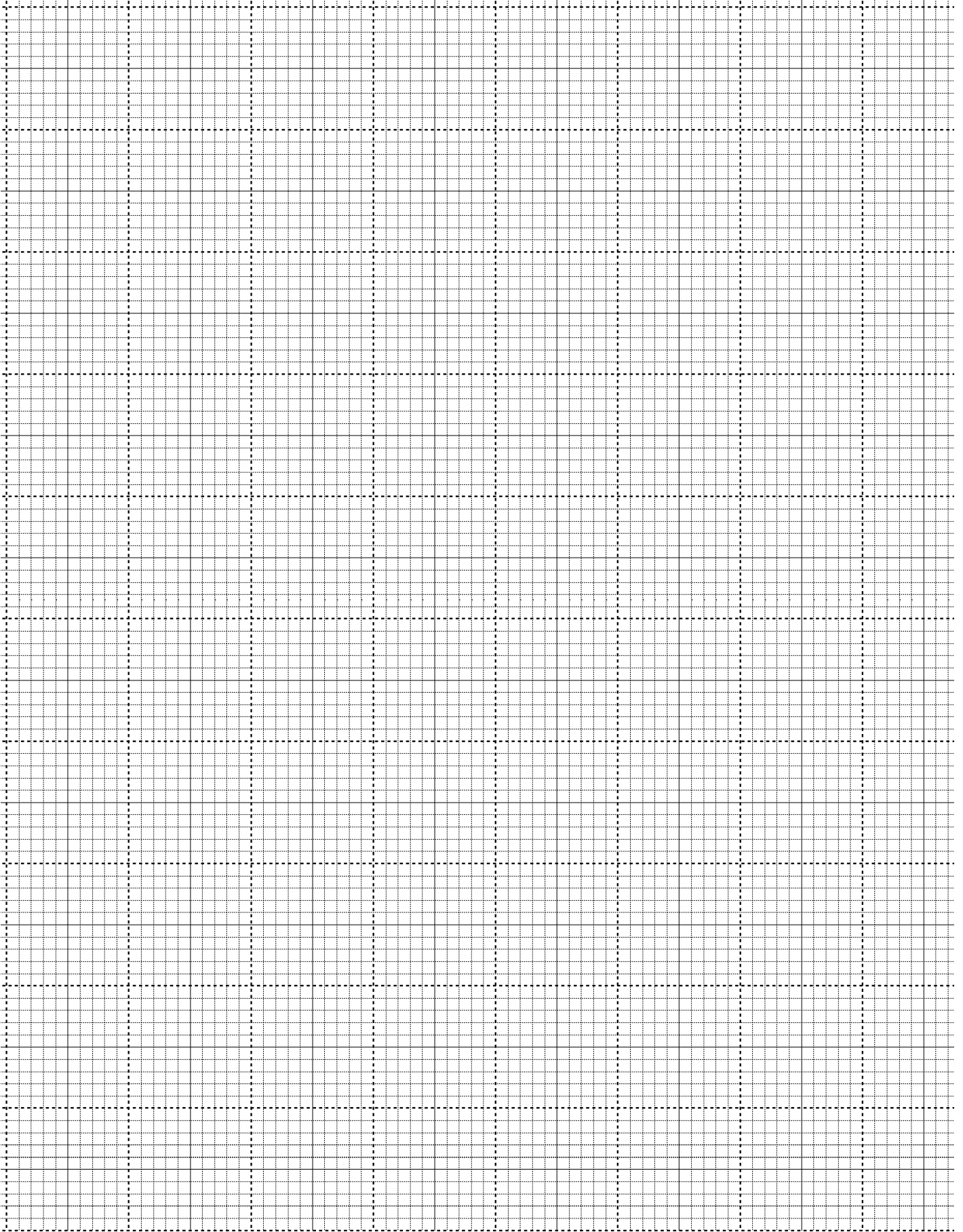
b) What is the optimum temperature of the enzyme (1mark)

_____

c) Account for the time taken to digest starch at

i) 5^0C (2marks)

_____

_____

_____

_____

ii) 45^0C (2marks)

_____

_____

_____

_____

d) Other than temperature name **two** other factors that influence the rate of enzyme action. (2marks)

_____

_____

_____

e) What is the rate of enzyme action at 15^0C? Work out using the graph drawn. (3marks)

_____

_____

_____

_____

_____

f) Salivary amylase continues to digest starch to maltose in the bolus from the mouth down the esophagus but stops in the stomach. Explain. (2marks)

_____

_____

_____

_____

g) Name the secretions received in the duodenum from the pan crease to facilitate the process of digestion (1mark)

_____

h) During a scientific research on a rat hydrochloric acid was carefully introduced in the pancreatic duct to mix with the secretion before it was received in the duodenum it was discovered that no digestion took place in the duodenum. Explain . (2marks)

_____

_____

_____

_____

7. a) Describe the adaptations of the human ear to its function (10marks)

b) Describe the following evidence of organic evolution

i) Comparative anatomy (6marks)

ii) Geographical distribution (4marks)

8. a) Define pollution (2marks)

b) Describe water pollution under the following:

i) Causes (6marks)

ii) Effects of pollutants on plants and animals (6marks)

iii)Methods of controlling pollution (6marks)

_____

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PREDICTION 5

231/2
BIOLOGY
PAPER 3
PRACTICAL

KCSE PREDICTION 5

<u>CONFIDENTIAL</u>

Each candidate should be provided with:-
1. Iodine solution

2. Benedicts solution

3. 1 piece of visking tubing of 10cm

4. Two pieces of thread of 10cm each

5. 30mls of glucose solution labeled L

6. 30mls of starch solution labelled K

7. 4 test tubes

8. Test tube holder

9. Two droppers

10. Means of heating

PREDICTION 5

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

SCHOOL   ………………………………………   SIGNATURE   ……………………..………

DATE   ……..………………...

231/3
BIOLOGY
PAPER 3
(PRACTICAL)
1³/₄ HOURS

KCSE PREDICTION 5

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

231/3
BIOLOGY
PAPER 3
(PRACTICAL)
1³/₄ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your name and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided in the question paper.
- You are **NOT** allowed to start working with the apparatus for the first 15 minutes of the 1³/₄ hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.
- All workings **MUST** be clearly shown where necessary.
- Mathematical tables and silent electronic calculators may be used.
- This paper consists of 6 Printed pages. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing

For Examiners use only.

Question	Maximum Score	Candidates Score
1	12	
2	15	
3	13	
TOTAL SCORE	40	

1. The photograph below shows the arrangements of different type of cells and tissues in a certain living organism. Study it and answer the questions that follow.
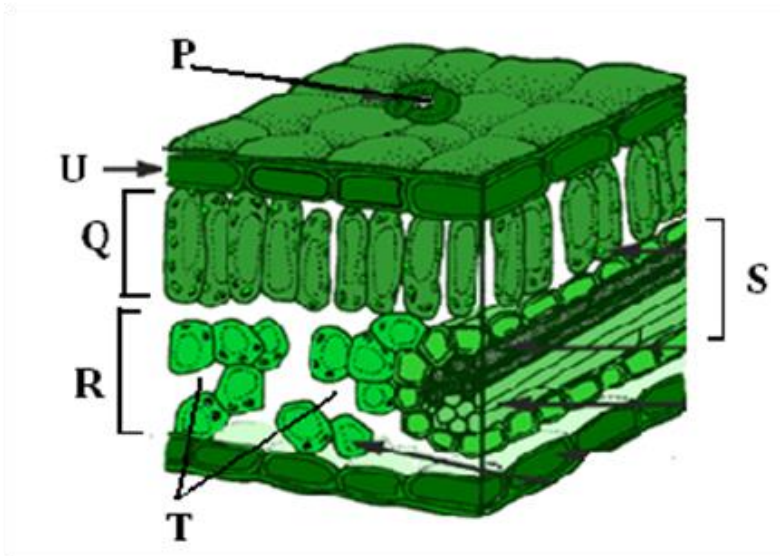
a) i) From what part of the plant was the photograph obtained.   (1 mark)

    ....

    ii) Name the parts labeled.   (3marks)

    P   ....

    Q   ....

    R   ....

    S   ....

    T   ....

b. i) State the function of the part labeled Q.   (1mark)

    ....

    ii) State two adaptations of structure Q to its function.   (2 marks)

    ....

    ....

c. State two environmental factors which regulate the function of the part labeled P.   (2 marks)

    ....

    ....

d. Measure the length of one cell of region labeled Q on the photomicrograph whose magnification is X5000.What is the actual length of the cell in micrometer? Show your working.   (3marks)

    ....231/2 Biology..........

    ....

    ....

2. You are provided with photographs of specimens labeled M and N. Examine them and answer the questions that follow.
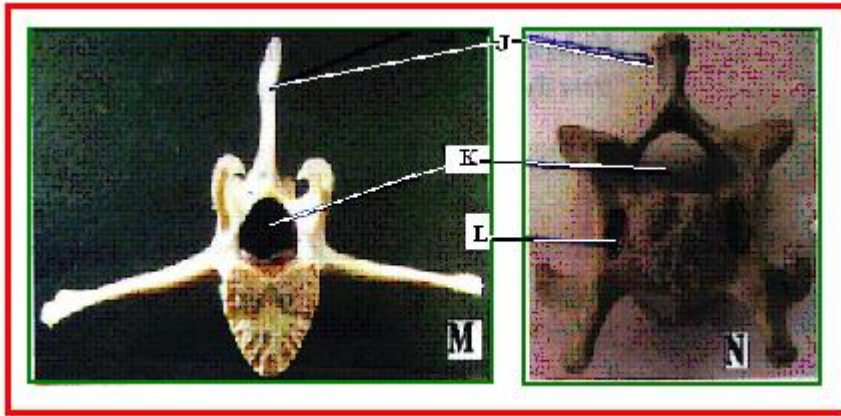
a) i) Identify the specimens represented by the photographs.

M: .... (1 mark)

N: .... (1mark)

ii) label the parts labeled

J: .... (1mark)

K: .... (1 mark)

L: .... (1mark)

b) i) State four observable differences between specimens M and N. (4 marks)

....

....

....

....

ii) Name the region of the body from which the specimens were obtained.

M: ....

N: ....

c) How is specimen N adapted to its function? (4 marks)

....

....

....

....

3. You are provided with solution labeled L and K.
a) Use the reagents provided to determine their identity. Record your procedure, observation and conclusion in the table below.   (6 marks)

Food substance	procedure	observation	conclusion

b. Tie one end of the visking tubing provided tightly. Put solution K in the visking tubing and tie the open end. Imerse the visking tubing in the beaker containing solution L .Let the set up stand for about 30 minutes.
i) Test the contents in the visking tubing with iodine and benedict's solution. Record your procedure,observation and conclusion in the table below.   (3marks)

Test with	procedure	observation	conclusion
Iodine solution			
Benedict's solution			

ii) Test the contents in the beaker with iodine and Benedict's solution. Record your procedure, observation and conclusion in the table below.

Test with	procedure	observation	conclusion
Iodine solution			
Benedict's solution			

c. Account for your observation in b(i) and (ii) above

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PREDICTION 5

Name...………………………………………………….. Index Number...…………………..

Candidate's Signature ………………………… Date…………………………….

233/1
CHEMISTRY (THEORY)
PAPER 1
2 HOURS

KCSE PREDICTION 5

### Kenya Certificate of Secondary Education (KCSE)

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. Answer **ALL** the questions in the spaces provided in the question paper.
4. KNEC Mathematical tables and silent non-programmable electronic calculators may be used.
5. All working **MUST** be clearly shown where necessary
6. This paper consists of **13** printed pages.
7. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.
8. Candidates should answer all the questions in English.

For Examiner's Use Only

Question	Maximum Score	Candidate's Score
1 – 29	80	

1. The electrical conductivity of barium hydroxide solution was measured after each addition of 1.0 cm^3 of dilute sulphuric (VI) acid from a burette. The graph below was obtained.
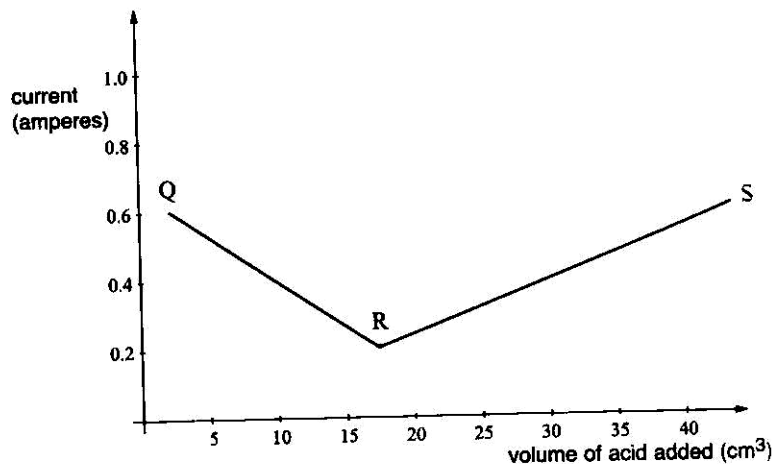
(a) Write the chemical equation of the reaction that took place.   (1 mark)

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(b) Explain the graph between,
   (i) Q and R   (1 mark)

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   (ii) R and S   (1 mark)

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2. A mass of 14.2 g sodium nitrate saturated 32.1 cm^3 of water at 32 ^{o}C. Determine the solubility of sodium nitrate at 32 ^{o}C. (Density of water = 1g/cm^3).   (2 marks)

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3. Explain why sulphur is a solid while oxygen is a gas at room temperature.   (2 marks)

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4. Study the electrode potential in the table below and answer the questions that follow.

$$\begin{array}{ll} & \text{E volts} \\ Cu^{2+}{}_{(aq)} + 2e\text{-} \rightarrow Cu_{(s)} & +0.34 \\ Mg^{2+}{}_{(aq)} + 2e\text{-} \rightarrow Mg_{(s)} & -2.38 \\ Ag^{+}{}_{(aq)} + e\text{-} \rightarrow Ag_{(s)} & +0.80 \\ Ca^{2+}{}_{(aq)} + 2e\text{-} \rightarrow Ca_{(s)} & -2.87 \end{array}$$

   (a) Identify the strongest reducing agent.   (1 mark)

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   (b) What would be observed when magnesium ribbon is dipped in solution of copper (II)
       sulphate. Explain.   (2 marks)

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5. In a reaction, 0.65 g of impure zinc oxide reacted with 100 cm^3 of 0.15 M nitric (V) acid.
(a) Write equation of the reaction.   (1 mark)

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 (b) Calculate percentage purity of the zinc oxide sample.   (2 marks)
    (Zn = 65, O = 16)

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6. The set up below can be used for the laboratory preparation of product **W**.
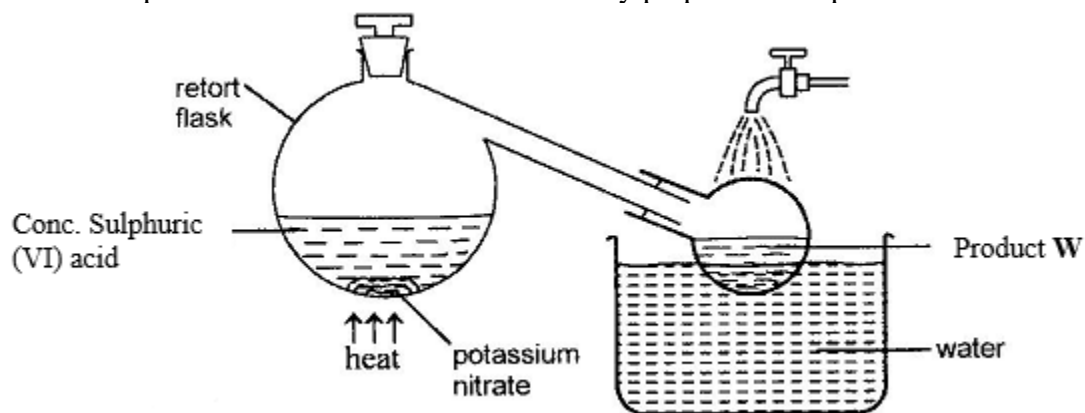
(a) Write chemical equation for the reaction that takes place in the retort flask. (1 mark)

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(b) Explain why product W appears yellow in colour. How is the colour removed?
(2 marks)

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7. The table below shows information of four elements **A**, **B**, **C** and **D**. Study it and answer the questions that follow. The letters do not represent the actual symbols of the elements.

Element	Electronic arrangement	Atomic radius	Ionic radius
A	2.8.2	0.136	0.065
B	2.8.7	0.99	0.181
C	2.8.8.1	0.203	0.133
D	2.8.8.2	0.174	0.099

(a) Which two elements have similar properties?   (1 mark)

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(b) Explain why **B** ionic radius is larger than its atomic radius.   (2 marks)

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8. The production of ammonia gas involves a reversible reaction as shown.

$$N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)} \quad \Delta H = -92 \text{ kJmol}^{-1}$$
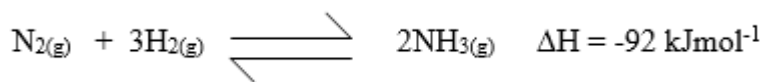
(a) What condition is necessary for the chemical equilibrium to be established? (1 mark)

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(b) Suggest **two** conditions that are likely to shift the equilibrium from right to left.

(2 marks)

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9. Describe how chloride ions are tested in a solution. (2 marks)

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10. The empirical formula of X is CH_2Br. Given that 0.235 g of X occupies a volume of 56 cm^3 at 546 K and 1 atmosphere pressure, determine its molecular formula.
(H = 1.0, C = 12.0, Br = 80.0, molar gas volume at STP = 22.4 dm^3) (3marks)

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11. When a piece of sodium metal is place in cold water in a beaker it melts producing a hissing sound, as it moves on the surface of the water. Explain these observations.   (3 marks)

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12. The set-up below was used to prepare a hydrocarbon. Study it and answer the questions that follow.
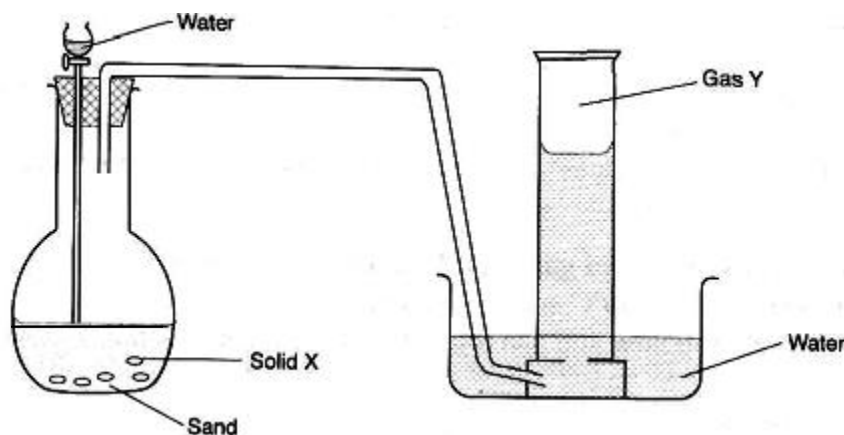
(a) Identify solid X and gas Y.

Solid X………………………………………………………………………….....   (1 mark)

Gas Y………………………………………………………………………….....   (1 mark)
(b) Write a chemical equation for the complete reaction between gas Y and bromine vapour.   (1 mark)

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13. (a) When excess chlorine gas is bubbled through cold, dilute sodium hydroxide solution, the resulting solution acts as a bleaching agent. Using an equation, explain how the resulting solution acts as a bleaching agent.   (1 mark)

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(b). What is observed when chlorine gas is bubbled through a solution of potassium bromide? Explain. (2 marks)

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14. (a) Explain why the pH of 1.0 M hydrochloric acid is 1 while that of 1.0 M ethanoic acid is 5.0. (1 mark)

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(b) How can a precipitate of barium sulphate be distinguished from that of barium sulphite? (2 marks)

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15. **A**, **B**, **C** and **D** are dyes present in a mixture. In a given solvent, **C** is more soluble than **B** and **A** is more soluble than **C**. **D** is the least soluble. Draw an ascending paper chromatogram showing how they would appear when separated using the solvent. (2 marks)

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16. The reaction below refers to the preparation of lead (II) sulphate starting with lead metal.

| Lead metal | Solution A → | Solution X | $Na_2SO_{4(aq)}$ → | Mixture Y | Filtration → | Residue Z |
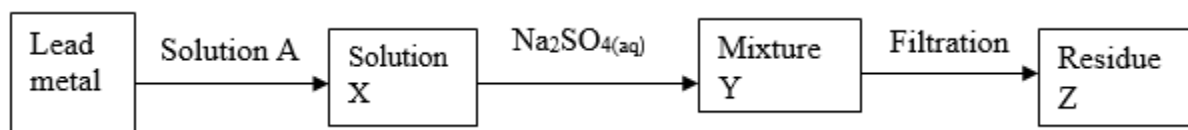
(a) Name solution A.. (1 mark)

(b) Write an ionic equation for the reaction in (a) above. (1 mark)

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(c) Explain why it is not possible to prepare residue Z using lead metal and dilute sulphuric acid. (1 mark)

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17. The diagram below represents a Bunsen burner flame. Study it and answer the questions that follow.
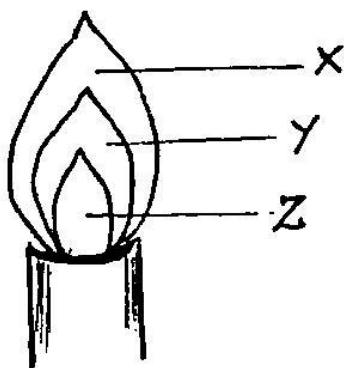
(a) Under what condition is the represented flame produced? (1 mark)

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(b) Which of the regions shown represents the hottest part of the flame? (1 mark)

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(c) Name region Y (1 mark)

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18. A typical electrolysis cell uses a current of 40,000 amperes. Calculate the mass in kilograms of aluminium produced in one hour. (Al = 27, 1 Faraday = 96,500 coulombs) (3 marks)

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19. (a) Distinguish between endothermic and exothermic reaction.   (1 mark)

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   (b) Nitrogen reacts with oxygen to form nitrogen (II) oxide according to the following reaction

   $N_{2(g)} + O_{2(g)} \rightarrow 2NO_{(g)}$ $\Delta H = +180$ kJmol^{-1}
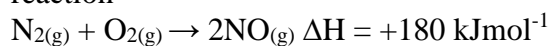
   Draw an energy level diagram for this reaction including the activation energy. (2 marks)

20. (a) When a compound T was heated, a brown gas and a residue which was yellow when hot and white when cold were formed. Identify the:

(i) Brown gas…………………………………………………………….. (1 mark)

(ii) Residue…………………………………………………………… (1 mark)

(b) Name a suitable drying agent for ammonia gas. (1 mark)

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21. Give the structural formula of the following organic compounds.
    (a) 2-Methylbutane

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(b) Pent-2-ene

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(c) Ethylpropanoate

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22. When iron and steam are heated in a closed container, a dynamic equilibrium is reached.

$$3Fe_{(s)} + 4H_2O_{(g)} \rightleftharpoons Fe_3O_{(s)} + 4H_{2(g)}$$
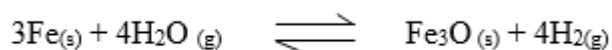
(a) Define the dynamic equilibrium. (1 mark)

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(b) What is the effect on equilibrium if magnesium is added? Explain. (2 marks)

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23. State and explain the observations that would be made when burning magnesium is lowered into a gas jar of sulphur (IV) oxide. (3 marks)

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24. A mixture contains barium sulphate, calcium chloride and dry ice. Describe how the components can be separated. (3 marks)

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25. In the redox reaction below:
$2H^+_{(aq)} + Cr_2O_7^{2-}{}_{(aq)} + 3SO_{2(aq)} \rightarrow 2Cr^{3+}_{(aq)} + 3SO_4^{2-}{}_{(aq)} + H_2O_{(l)}$
Identify the reducing agent. Explain. (2 marks)
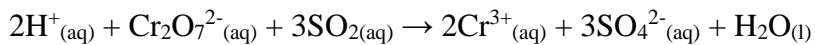
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26 (a) Explain why aluminium utensils do not corrode as easily as iron utensils although aluminium is higher than iron in the reactivity series. (1 mark)

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(b) State **two** uses of aluminium other than utensils making. (2 marks)

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27. The diagram below represents a set up that was used to react lithium with steam. Study and answer the question that follows.

a) Write an equation for the reaction that takes place.   (1 mark)

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b) Why is it not advisable to use potassium metal in place of lithium in the above set-up?
                                                                          (1 mark)
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c) The gas produced above is used for welding. Which other gas is combined with it? (1 mark)

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28. Using dots (.) and crosses (×) to represent valence electrons, show bonding in:

   (a) Nitrogen trifluoride (N = 7, F = 9)   (1 mark)

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   (b) Sodium oxide (Na = 11, O = 8)   (1 mark)

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29. The graphs below were drawn by measuring the volume of hydrogen produced with time when excess zinc metal in different physical states were reacted with 50 cm^3 of 2 M hydrochloric acid.
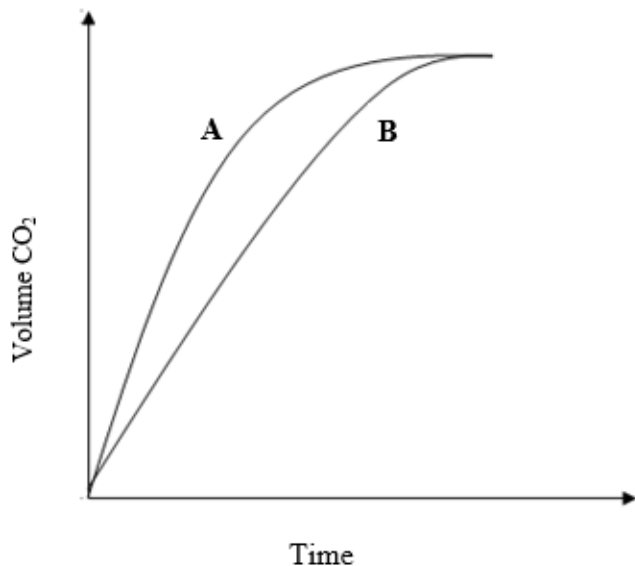
(a) Which curve corresponds to the reactions involving powdered zinc?   (1 mark)

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(b) Both curves eventually flatten out at the same level of hydrogen. Explain. (1 mark)

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PREDICTION 5

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

KCSE PREDICTION 5
Kenya Certificate of Secondary Education (K.C.S.E)

INSTRUCTIONS:

- Write your name and admission number in spaces provided above
- Answer **ALL** the questions in the spaces provided
- Mathematical tables and electronic calculators may be used
- All working must be clearly shown where necessary.

FOR EXAMINERS USE ONLY

Question	Maximum Score	Candidates score
1	12	
2	13	
3	13	
4	10	
5	12	
6	10	
7	10	
TOTAL SCORE	**80**	

This paper consists of 12 printed pages.

1. (a) Use the information below to answer the questions that follow.

$$Ca_{(s)} + \frac{1}{2}O_{2(g)} \rightarrow CaO_{(s)} \qquad \Delta H = \text{-635 KJ mol}^{-1}$$

$$Ca_{(s)} + O_{2(g)} \rightarrow CaO_{2(g)} \qquad \Delta H = \text{-394 KJ mol}^{-1}$$

$$Ca_{(s)} + e_{(s)} + \frac{3}{2}O_{2(g)} \rightarrow CaCO_{3(S)} \qquad \Delta H = \text{-1207 KJ mol}^{-1}$$

Calculate the enthalpy change for the reaction.

$$CaO_{(s)} + CO_{2(g)} \rightarrow CaCO_{3(S)} \qquad\qquad\qquad \textbf{(3 marks)}$$
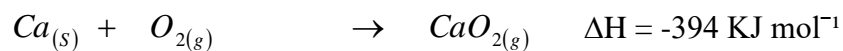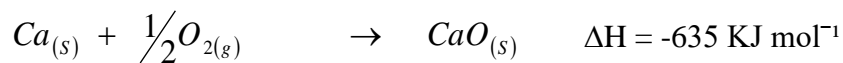
(b) State **one** factor that should be considered when choosing a fuel for cooking. **(1 mark)**

(c) The following data was obtained during an experiment to determine the molar heat of combustion of

ethanol.

Volume of water used	$= 500\text{cm}^3$
Initial temperature of water	$= 25°C$
Final temperature of water	$= 44.5°C$
Mass of ethanol + lamp before burning	$= 121.5\text{g}$
Mass of ethanol + lamp after burning	$= 120.0\text{g}$

Calculate the

(i) Heat evolved during the experiment (density of water = 1g/cm³, specific heat capacity of water = $4.2 Jg^{-1}K^{1}$).

(1 mark)

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

(d) Write the thermo equation for the complete combustion of ethanol.   **(1 mark)**

(e) At 298K and one atmosphere pressure, graphite changes into diamond according to the equation.

$$C_{(graphite)} \rightarrow C_{(diamond)} \qquad \Delta H = +2.9 \text{ KJ/mol}$$
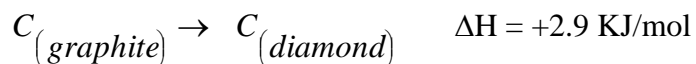
In the space provided, sketch a simple energy level diagram for the above change.   **(2 marks)**

(f). Study the information in the table below then answer the questions that follows.

Bond	Bond energy (kJmol⁻¹)
H – H	435
Cl – Cl	243
H – Cl	431

Calculate the enthalpy change for the reaction.

$$H_{2(g)} + Cl_{2(g)} \rightarrow 2HCl_{(g)}$$
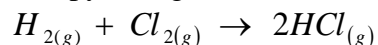
(2 marks)

2. (a) At 25°C 50g of substance X were added to 100g of water to make a saturated solution.

What is meant a saturated solution? **(1 mark)**

(b) The table **below** gives the solubilities of substance X at different temperatures.

Temperature °C	14	24	33	40	46	52
Solubility g/100g H_2O	24	36	50	62	72	90

(i). Plot a graph of the solubility of substance X (vertical axis) against temperature. **(3 marks)**
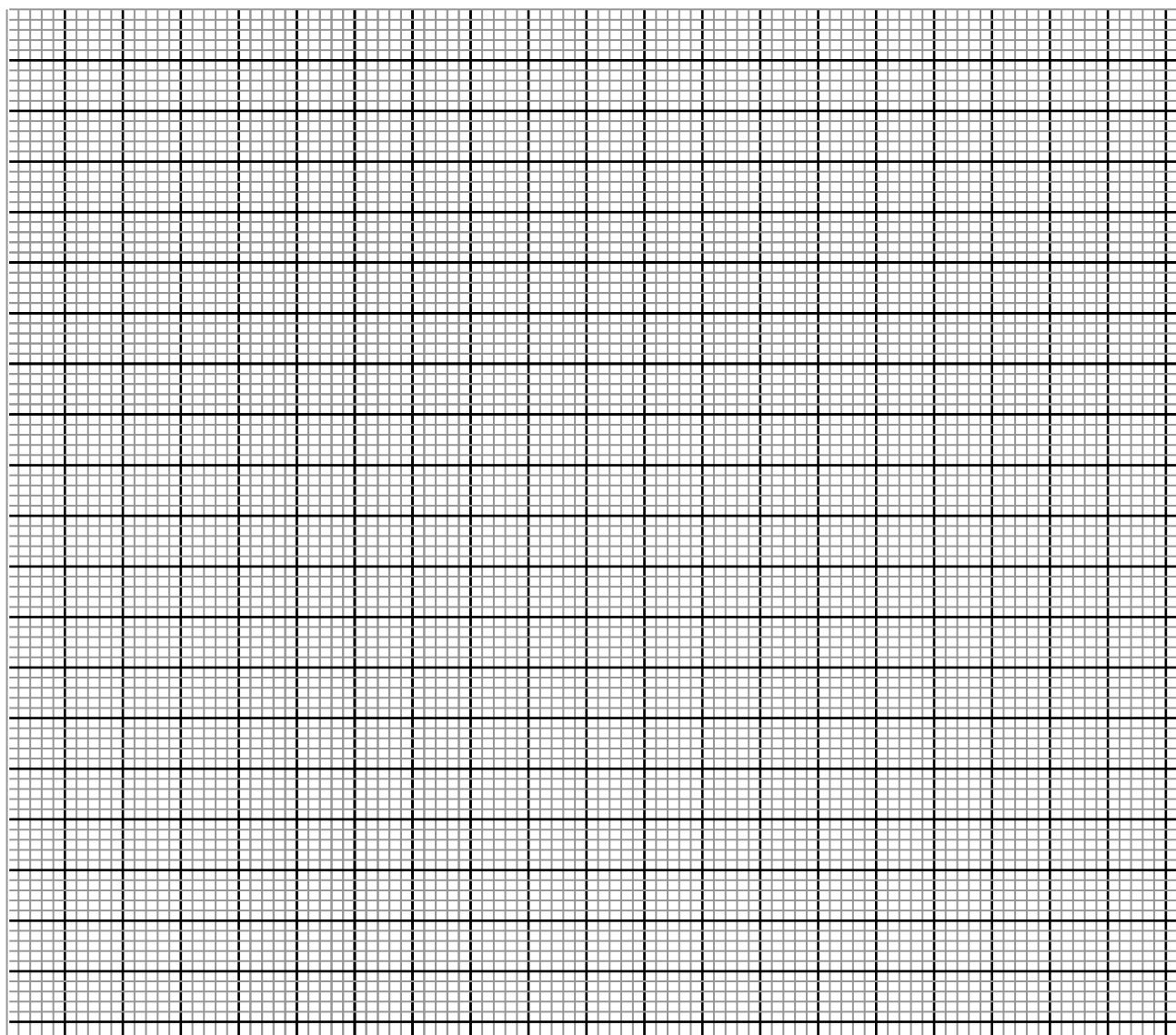
(ii) Using the graph.

I. Determine the solubility of substance X at 20°C. **(1 mark)**

II. Determine the mass of substance X that remained undissolved given that 90g of substance X were added to 100cm³ of water and warmed to 35°C. **(2 marks)**

III. Calculate the molarity of the solution at 30°C. (Relative formula mass of X = 122.5). **(3 marks)**

(c) The figure below shows an ion exchanger used to soften hard water

Hard water containing MgCl₂
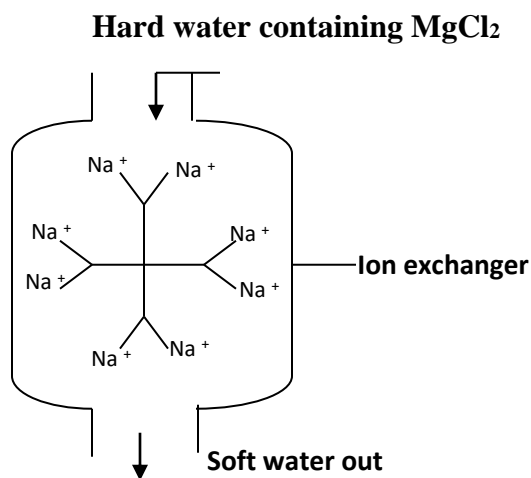
(i) Draw the ion exchanger and show how it will appear at the end of softening process. **(2 marks)**

(ii) How is the ion exchanger recharged after exhaustion **(1 mark)**

3.(a) Below is an incomplete diagram of a set-up of the apparatus used to obtain nitrogen gas from the air.
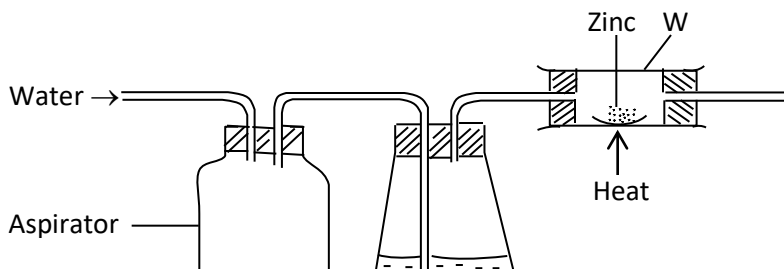
(i) Complete the diagram to show how nitrogen gas is collected.   **(1 mark)**

(ii) State the role of the following:

I Water entering the aspirator.   **(1 mark)**

II Potassium hydroxide solution.   **(1 mark)**

(iii).Write a chemical equation for the reaction that takes place in combustion tube.   **(1 mark)**

(b).The diagram below represents the Haber's process for the manufacture of ammonia. Study it and   answer the questions that follow.
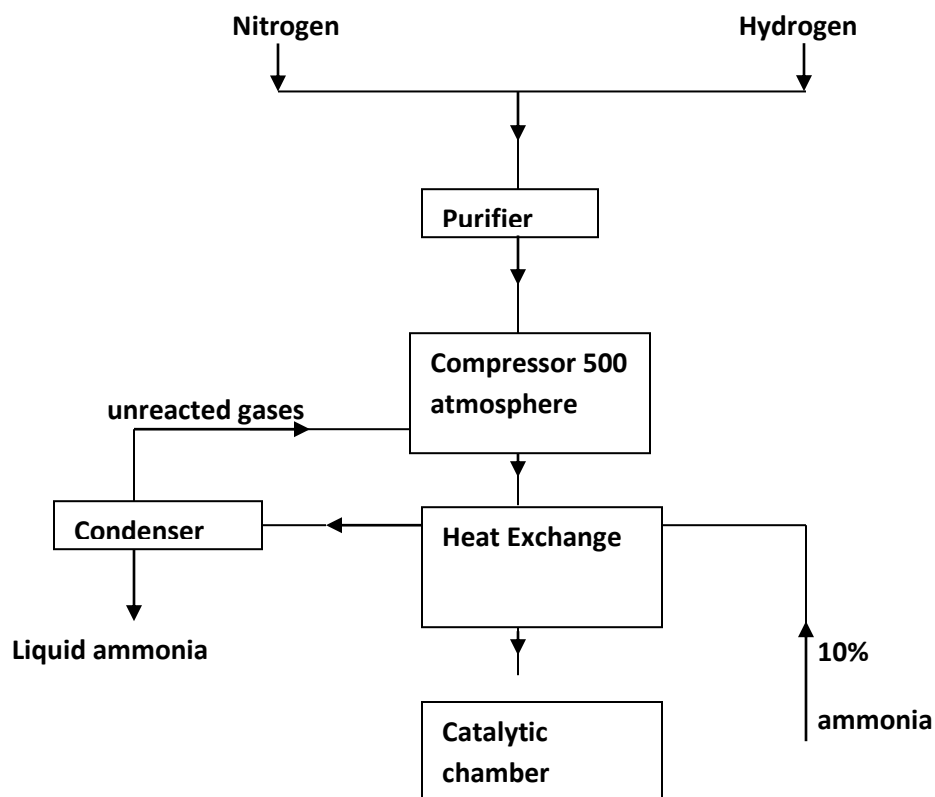
(i) Name any **two** impurities removed by the purifier.   **(2 marks)**

(ii) Name the catalyst used in the process **(1 mark)**

....

(iii) In the Haber's process the conversion of nitrogen and hydrogen into ammonia is only 10%.

The remaining unreacted gases are recycled. What is the advantage of recycling. **(1mark)**

....

iv) A part from the catalyst and pressure of 500 atmospheres, name any other condition required for this process. **(1mark)**

(c) Give any **two** uses of ammonia **(1 mark)**

....

d) In the manufacture of nitric (V) Acid from ammonia and air, ammonia is catalytically oxidized to nitrogen (II) oxide
(i) Name the catalyst used in the reaction. **(1mark)**

....

(ii) Write a balanced chemical equation for the reaction between ammonia and air. **(1mark)**

(iii) State **one** environmental problem likely to be faced in an area where nitric (v) acid manufacturing plant is located. **(1 mark)**

....

4. In an experiment, carbon (IV) Oxide gas was passed over heated charcoal and the gas produced collected as shown in the diagram below.
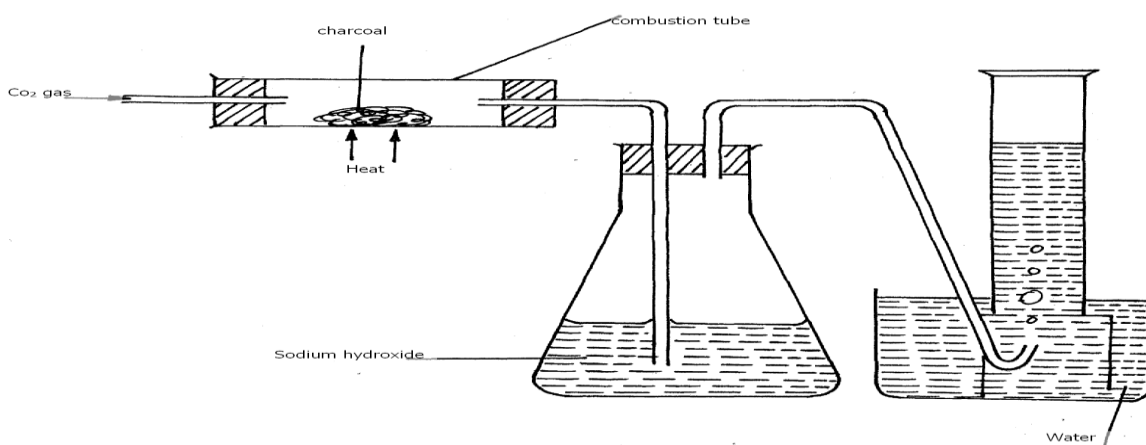
(i) Write an equation for the reaction that took place in the combustion tube . **(1 mark)**

(ii) Name another chemical substance that can be instead of sodium hydroxide .   **(1 mark)**

(iii) Describe a simple chemical test to distinguish between carbon (II) Oxide and carbon (IV) Oxide

(2 marks)

(iv) What is the purpose of sodium hydroxide in the above set-up   **(1 mark)**

(v) What property of the gas makes it possible to be collected ass shown above?   **(1 mark)**

(vi) State one use of carbon (II) oxide   **(1 mark)**

(b) In order to prepare sodium carbonate in the laboratory, students passed carbon (IV) oxide and ammonia gas into brine as shown in the flow diagram below. Use it to answer the questions that follow:
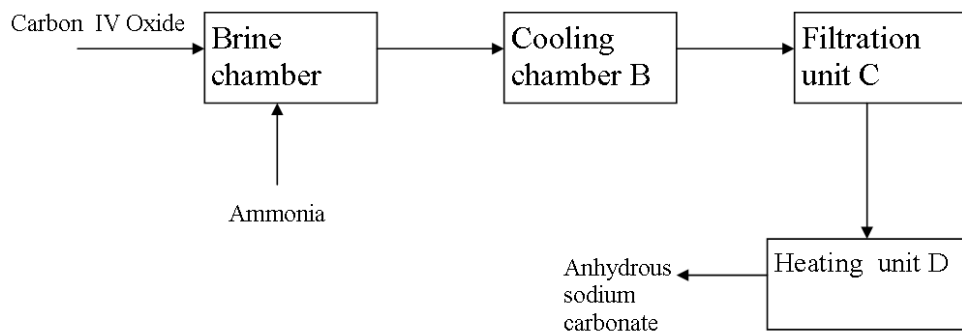
(i) Why is the mixture obtained in chamber A cooled down in chamber B?   **(1 mark)**

(ii) Write an equation for the reaction that recurs in the heating chamber D   **(1 mark)**

(iii) Give a reason why it is difficult to prepare potassium carbonate by the same method.   **(1 mark)**

5. Study the flow diagram below and use it to answer the questions that follow.
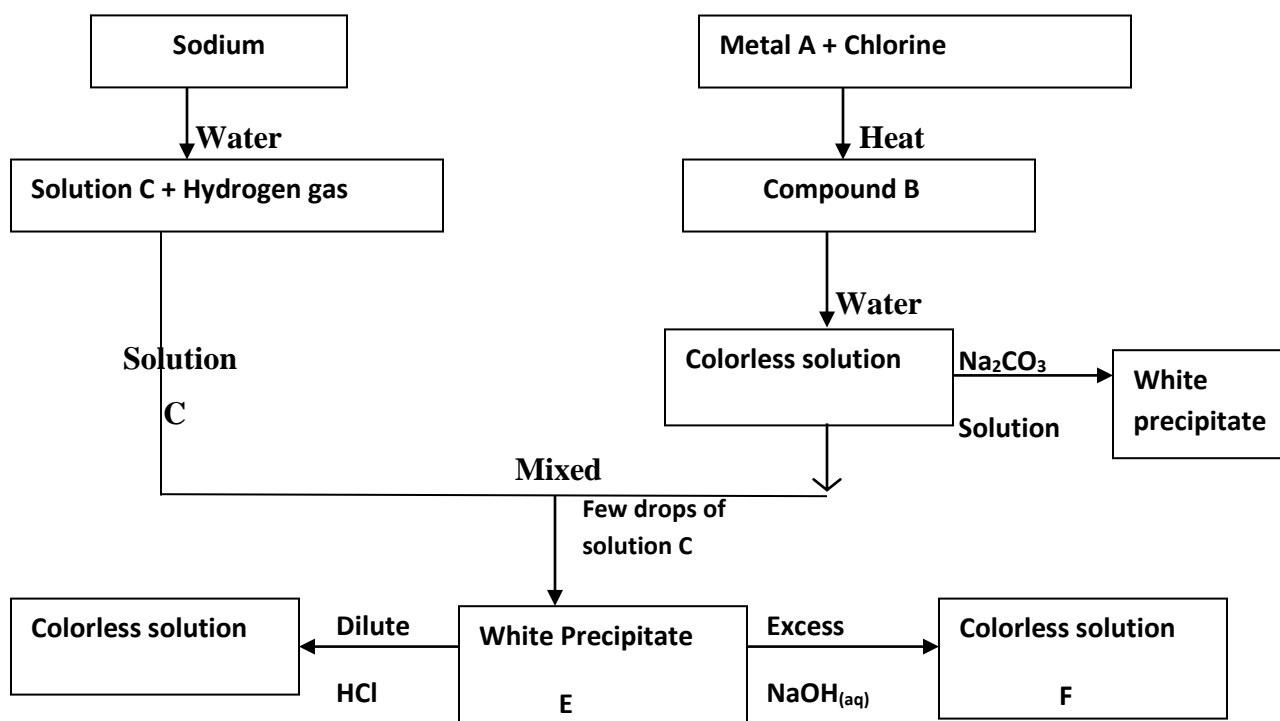
(a) Give the name and formula of the following.

(i) White precipitate **E**

Name

(1 mark)

Formula

(1 mark)

(ii) Colourless solution F

Name

(1 mark)

Formula

(1 mark)

(b) What property is exhibited by white precipitate E when it reacts with Sodium hydroxide and HCl acid.

(1mark)

(c) Write an ionic equation for the reaction between white precipitate E and excess sodium hydroxide solution.

(1 mark)

(d) You are provided with.

      i)   Potassium carbonate solid

      ii)   Zinc hydroxide

      iii)   Nitric (v) acid

      iv)   Distilled water

State briefly how you would prepare solid zinc carbonate using the reagents given.   **(3 marks)**

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(e) Distinguish between a weak acid and a strong acid giving an example of each.   **(1 mark)**

(f).   Identify an acid in the forward reaction given by the equation below:
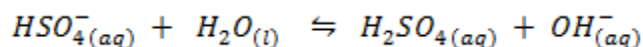
$$HSO_{4\,(aq)}^{-} + H_2O_{(l)} \leftrightharpoons H_2SO_{4\,(aq)} + OH_{(aq)}^{-}$$ **(1 mark)**

6. The grid below shows part of the periodic table. Use it to answer the questions that follow. The letters do not represent actual symbols.

						S	U	V
P	R					T	X	W
Q								

(a) Which of the elements has the largest atomic radius? Explain. **(2 marks)**

(b) Identify the most reactive non-metal. Explain. **(2 marks)**

(c) Compare the atomic radius of P and R. **(1 mark)**

(d) Give the formula of one stable ion with an electron arrangement of 2.8 which is:

   (i) Negativity charged divalent ion. **(2 marks)**

   (ii) Positively charged monovalent.

(e) Given that the mass number of W is 40. Write down the composition of its nucleus. **(1 mark)**

(f) Write the formula of the compounds formed between.
   (i) Element R and X. **(1 mark)**

   (ii) Give **one** property of the structure formed when R and X bond. **(1 mark)**

7. Study the diagram below and answer the questions that follow.
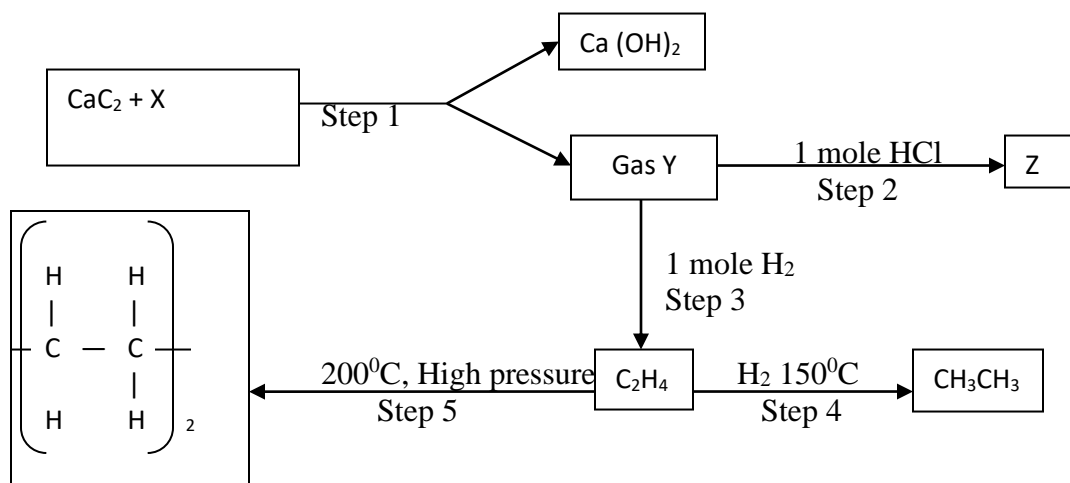
(i) Identify reagent X. **(1 mark)**

(ii) Draw the structural formula of gas Y. **(1 mark)**

(iii) What name is given to the process that takes place in step 5? **(1 mark)**

(b) An organic compound T reacts with chlorine gas in the presence of u.v light to form compound U. The structural formula of compound U is shown below.

$$H - \underset{\underset{H}{|}}{\overset{\overset{H}{|}}{C}} - \underset{\underset{Cl}{|}}{\overset{\overset{H}{|}}{C}} - \underset{\underset{Cl}{|}}{\overset{\overset{H}{|}}{C}} - \underset{\underset{H}{|}}{\overset{\overset{H}{|}}{C}} - H$$
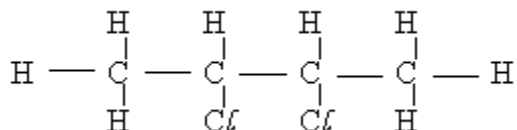
Name the organic compound T and draw its structural formula. **(2marks)**

(c).The structure below represents two cleansing agents, L_1 and L_2.

$L_1 \rightarrow R - CH_2 - CH_3$

$|$

OSO_3Na^+

$L_2 \rightarrow R - COONa^+$
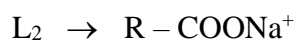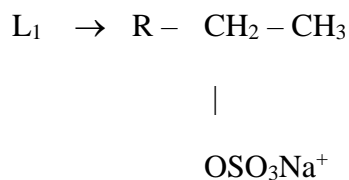
(i) Identify each of the two cleansing agents, L_1 and L_2.
L_1

(½mark)

L_2

(½mark)

(ii). State a disadvantage of each of the above cleansing agents.
L_1

(½mark)

L_2

(½mark)

(d) In an experiment an organic compound was reacted with absolute ethanol in the presence of concentrated sulphuric (VI) acid to form a compound whose formula is $CH_3 \, CH_2 \, CH_2 \, COOCH_2 \, CH_3.$ Name

 I. The type of reaction that took place. **(1 mark)**

II. The name of the organic compound to which the compound belonged. **(1 mark)**

(e) Write the structural formula and give the systematic name of the acid used in the above experiment.

(1 mark)

PREDICTION 5

CHEMISTRY 233/3 PRACTICAL

Each candidate will require
1. Solution A 100cm^3
2. Solution B 150 cm^3
3. Solution C 100cm^3
4. Burette
5. 25ml pipette
6. 2 conical flasks
7. Retort stand
8. Filter funnel
9. Pipette filler
10. 100ml of distilled water
11. Thermometer
12. 1 Spatula – full of solid D
13. About 10ml liquid E
14. 4g solid F (weighed exactly)
15. 2 boiling tubes
16. Six test tubes in a rack
17. Test tube holder
18. Metallic spatula

ACCESS TO
- 1M NaOH
- 1M NH$_4$OH
- 0.1M NaCl
  Acidified K$_2$Cr$_2$O$_7$
- KMnO$_4$- use some amount of solution B
- Source of heating

NOTES
1. **Solid A**
   Dissolve 7.0g Ferrous Sulphate (FeSO$_4$.7H$_2$O) in 50ml of 1MH$_2$SO$_4$, dilute to 1dm^3 with water. (Should be prepared in the morning of the exam day)

2. **Solution B**
   Dissolve 0.8g of KMnO$_4$ in 50cm^3 of 1MH$_2$SO$_4$. Dilute to 1 dm^3 with water.

3. **Solution C**
   Measure 3cm^3 of 20vol. H$_2$O$_2$
   Dissolve in 1dm^3 of solution.

4. **1M H$_2$SO$_4$**
   Measure 55cm^3 of conc. H$_2$SO$_4$ add to about 200cm^3 of water, stir, dilute to 1 dm^3

5. **Solid D**
   Aluminium Nitrate

6. **Solid F**
   Potassium Chlorate (KClO$_3$)

7. **Acidified K$_2$Cr$_2$O$_7$**
   Dissolve 0.3g of K$_2$Cr$_2$O$_7$ in 50cm^3 of 1MH$_2$SO$_4$. Dilute to 1 dm^3 with water.

8. **Liquid E**
   Ethanol.

PREDICTION 5

NAME   ……………………..……………..   DATE   …………………………

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

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

KCSE PREDICTION 5

Kenya Certificate of Secondary Education.

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

INSTRUCTIONS TO CANDIDATES.
o   Write your name and index number in the spaces provided above.
o   Sign and write the date of exam in the spaces above.
o   Answer **ALL** the questions in the spaces provided.
o   You are not allowed to start working with the apparatus for the first 15 minutes of the 2¼ hours allowed time for the paper.
o   Use the 15 minutes to read through the question paper and not the chemicals you require
o   Mathematical tables and electronic calculators may be used.
o   All working **MUST** be clearly shown where necessary.
o   This paper consists of 6 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

FOR EXAMINER'S USE ONLY.

Question	Maximum score	Candidate's score
1	13	
2	14	
3	13	
Total score	40	

1. You are provided with;
- Solution A containing 6.95g of Iron II Sulphate heptahydrate R.F.M = 278 in 250cm^3 of solution
- Solution B of potassium manganate (VII)
- Solution C of hydrogen peroxide.

   You are required to

   (a) Standardize the potassium manganate (VII) solution C

   (b) Determine the concentration of hydrogen peroxide solution C.

   PROCEDURE I

   Pipette 25cm^3 of solution A into a conical flask.

   Fill the burette with solution B. Titrate this solution against solution A until the first permanent pink colour appears. Record your results in table I and repeat the procedure to fill the table 1 below.

   Table 1

II	I	II	III
Final burette reading (cm^3)			
Initial burette reading (cm^3)			
Volume of solution B used (cm^3)			

   (4 marks)

   (i) Calculate the average volume of solution B used   (1 marks)

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   (ii) Given that the equation for the reaction is

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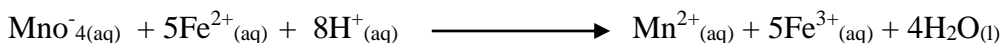
   Calculate

   a) The number of moles of Iron II sulphate solution A used   (1mark)

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

   b) The number of moles of solution B that reacted.   (1mark)

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c) The concentration of the potassium manganate (VII) solution B in moles per litre. (1mark)

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PROCEDURE II

Pipette 25cm^3 of hydrogen peroxide, solution C into a conical flask. Fill the burette with solution B.

Titrate this solution against solution C until the first permanent pink colour appears. Record results in

table II.

TABLE II

Titre number	I	II	III
Final burette reading cm^3			
Initial burette reading cm^3			
Volume solution B used cm^3			

(4marks)

(i) Work out average volume of potassium manganate (VII) solution B used. (1mark)

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(ii) Given that the equation for the reaction is

$2MnO^-_{4\ (aq)} + 5H_2O_{(aq)} + 6H^+_{(aq)} \longrightarrow 2Mn^{2+}_{(aq)} + 8H_2O_{(l)\ (aq)} + 5O_{2(aq)}$
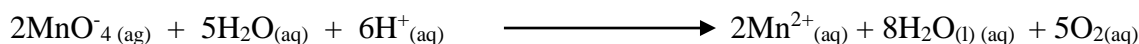
Calculate

a) The number of moles of Potassium Manganate (VII) solution B that reacted. (1mark)

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b) The number of moles of hydrogen peroxide solution C that reacted. (1mark)

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c) The concentration of hydrogen peroxide solution C in moles per dm^3(mol dm^{-3}) (1mk)

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2. You are provided with 4g of Solid F.
   You are required to determine the solubility of solid F at different temperatures.
   PROCEDURE

a) Carefully transfer all solid F in a clean boiling test tube and using a burette, add 15cm^3 of distilled water. Heat the mixture while stirring with a thermometer to about 85^{0}C. when all the solid has dissolved, allow the solution to cool while stirring with the thermometer. Note the temperature at which the crystals of solid F first appear. Record this temperature in Table III.

b) Transfer 5cm^3 of distilled water to the contents in the boiling tube. Warm the mixture while stirring with the thermometer until the solid dissolve. Allow the mixture to cool while stirring. Note and record the temperature at which crystals first appear.

c) Repeat procedure (b) two or more times and record the temperatures in table III.

d) Complete table III by calculating the solubility of solid F at the different temperatures.

TABLE III

Volume of water in the boiling tube (cm^3)	Temperature at which crystals of solid F first appear.	Solubility of solid F in g / 100g of water.
15		
20		
25		
35		
40		

(6marks)

(i) On the grid provided plot a graph of solubility of solid F (vertical axis) against temperature (horizontal axis). (3marks)
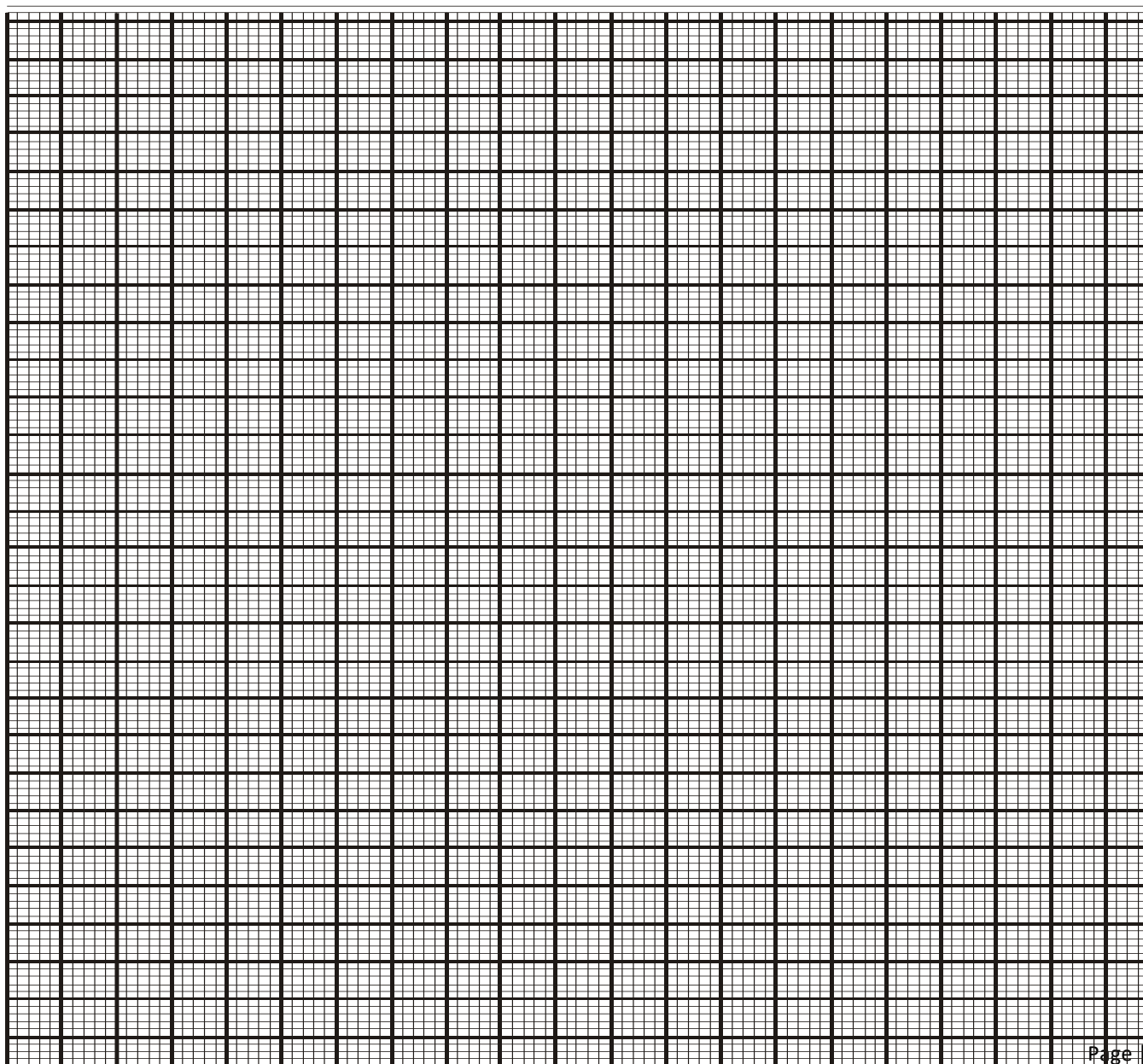
(ii) Using your graph, determine the temperature at which 15g of solid F, would dissolve in 100cm^3 of water. (1mark)

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3. **You are provided with solid D. carry out the following tests and write down all the observations and inferences.**

a) Place half spatula end full of solid D in a dry test tube. Heat gently then strongly until there is no further change.

Observations	inferences
(1mark)	(1mark)

b) Place the remaining solid D in a test tube, add about 10cm^3 of distilled water and shake vigorously. Divide the mixture into four portions.

i. To the 1st portion, add 2M sodium hydroxide solution drop wise until in excess.

Observations	inferences
(1mark)	(1mark)

ii. To the 2nd portion, add ammonia solution drop wise till in excess.

Observations	inferences
(1mark)	(1mark)

iii. To the fourth portion add 4 drops of sodium chloride.

Observations	inferences
(1mark)	(1mark)

II. **You are provided with liquid E, Carry out the following tests on it.**

a) Place about one spatula end full of liquid E on a metallic spatula and ignite it in a Bunsen burner flame.

Observations	inferences
(1mark)	(1mark)

b) To $2cm^3$ of liquid E add 3 drops of acidified $KMnO_4$. Solution B.

Observations	inferences
(1mark)	(1mark)

c) To $2cm^3$ of liquid E add 3 drops of acidified $K_2Cr_2O_7$.

Observations	References
(1mark)	(1mark)

PREDICTION 5

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

SCHOOL: ………………………………………   Candidate's signature: ………………..

Date: …………………………………………

<u>KCSE PREDICTION 5</u>

232/1

PHYSICS

PAPER 1

TIME: 2 HRS

<u>INSTRUCTIONS</u>

1. Write your name and your index number in the spaces provided.
2. This paper consists of two sections, Section **A** and **B**. Answer **ALL** the questions in both section in the spaces provided in this paper.
3. **ALL** working must be clearly shown.
4. Mathematical tables and electronic calculators **may be** used.

<u>FOR EXAMINER'S USE:</u>

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-12	25	
B	13	11	
	14	12	
	15	11	
	16	8	
	17	13	
	TOTAL	**80**	

SECTION A (25 MARKS)

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

1. Figure 1. shows a micrometer screw gauge being used to measure the diameter of a ball bearing.
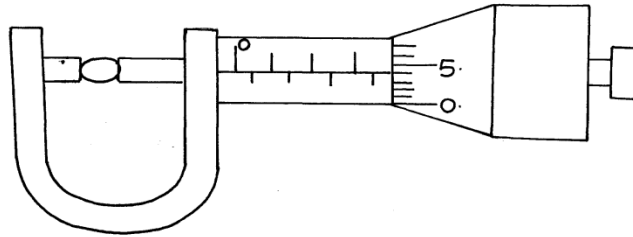
If the instrument has a negative zero error of 0.01mm, record the actual diameter of the ball bearing.   (1mk)

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2. Figure 2. shows drops of mercury and water on a glass surface,

Mercury drop

Water drop

— **Glass**
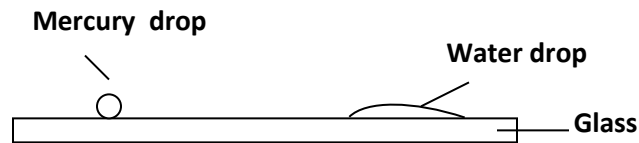
Explain the difference in the shapes of the drops.   (2mks)

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3. Explain why fish can survive under water when the surface is already frozen.   (1 mk)

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4. Figure 3 shows three identical springs each of spring constant 4.5N/m and negligible weight are used to support a load as shown. Determine the total extension of the system.   (2mks)

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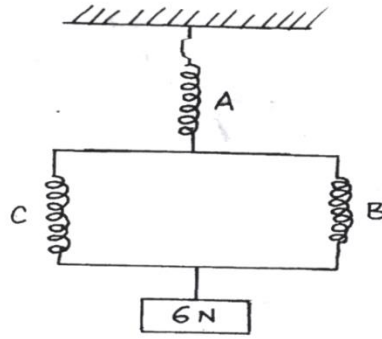
5. Figure 4   shows a uniform rod **AB** of negligible weight pivoted at **A**.
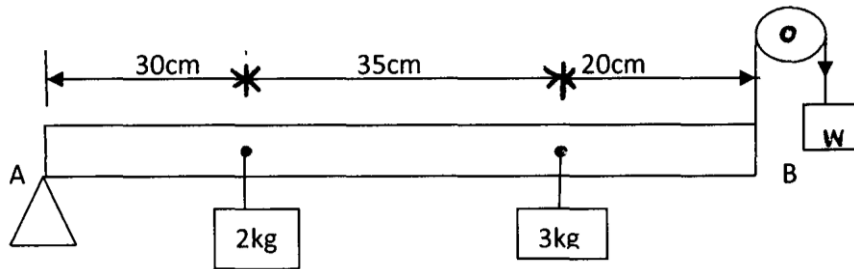
   If the system is in equilibrium, determine the weight **W** shown in the diagram.   (3mks)

6.   A ball is thrown from the top of a cliff 20m high with a horizontal velocity of 10ms^{-1}. Calculate the distance from the foot of the cliff to where the ball strikes the ground. (3 marks)

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7.The height of mercury column in a barometer density 13600kg/ m^{-3}, at a place is 64cm. What would be the height of a column of paraffin in barometer at the same place. (Density of paraffin = 8.0 x 10^2 kg /m^3).   (3mks)

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 8. Explain o**n**e advantage of mercury over alcohol as a thermometric liquid.   (1mk)

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9.A body of mass **M** is allowed to slide down an inclined plane. State **two** factors that affect its final velocity at the bottom of the inclined plane. (2mks)

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10. A car of mass 1 tone moving at a velocity of 108km/hr is brought to rest in 5 seconds. Calculate the retarding force.(2mks)

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11. Explain why a gas cylinder in a house containing cooking fire explodes.(2mks)

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12.Oil is leaking from a car as it travels along a straight road. One drop falls on the ground every fifty seconds. Figure 5 below shows the pattern of the drop on the ground.

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│      1        2           3           4             │
│            •        •            •              •   │
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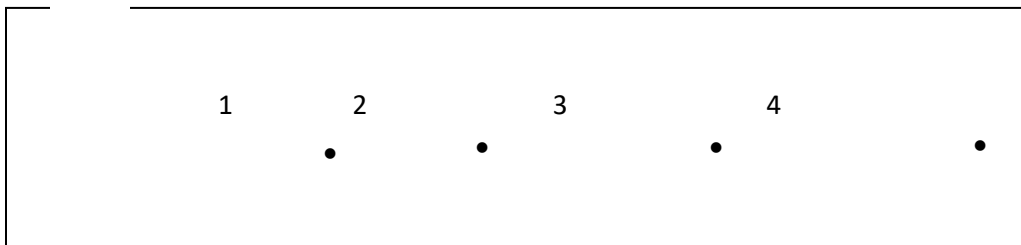
(i) Describe the motion of the car.   (1mk)

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(ii) Determine the acceleration of the car if the distance between drop 1 & 2 is 20 meters and the distance between drop 3 & 4 is 40 meters   (2mks)

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SECTION B - 55 MARKS

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

13. a) State Pressure Law .   (2mk)

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    b)   Figure 6 shows a set up that may be used to verify Pressure law.
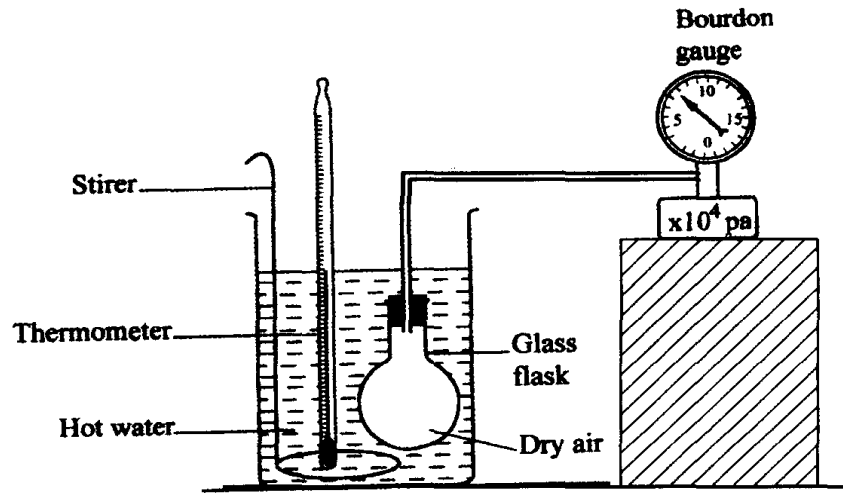
    i)   State the measurements that may be taken in the experiment.   (2mks)

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    ii) Explain how the measurement in (i) above may be used to verify Pressure law .   (4mks)

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iii) A car tyre is at an air pressure of 4.0 x 10^5 Pa at a temperature of 27 °C. While it is running the temperature rises to 75 °C. What is the new pressure in the tyre?(Assume the tyre does not expand)

(3mks)

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14.   (a) Define specific latent heat of fusion of a substance.   (1mk)

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(b) Figure 7 below shows a block of ice with two heavy weights hanging such that the copper wire connecting them passes over the block.

Ice block

Wooden support

weights
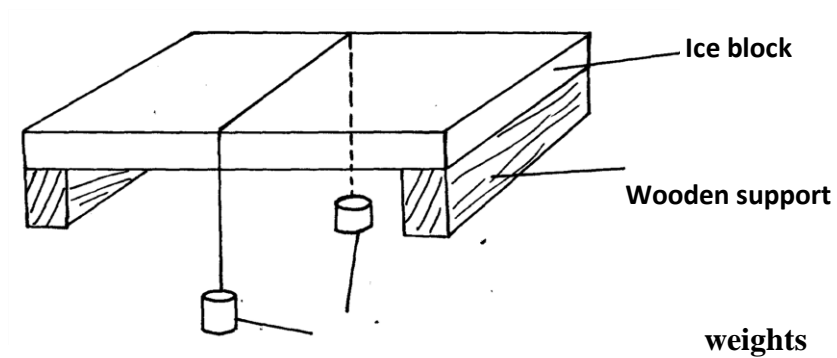
(i) It is observed that the wire gradually cuts through the ice block, but leaves it as one piece. Explain   (3mks)

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(ii) What change would be observed if the copper wire used in the experiment was placed by a cotton thread.   (1mk)

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(c) A block of ice of mass 40g at 0ºC is placed in a calorimeter containing 400g of water at 20ºC. The heat absorbed by the calorimeter is negligible. The final temperature of the mixture after all the ice has melted is T. (specific latent heat of fusion of ice=340,000 J/kg, specific heat capacity of water=4200JKg^{-1}k^{-1})

(i) Derive an expression for the heat gained by the ice as it melts to water at temperature **T**. (2mks)

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(ii) Derive an expression for the heat lost by the water.   (1mk)

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(iii) Determine the value of **T**.   (2mks)

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(d) State **two** differences between boiling and evaporation.   (2mks)

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15.(a) State the law of floatation.   (1mk)

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(b) Figure 8 shows a piece of cork held with a light thread attached to the bottom of a beaker. The beaker if filled with water.
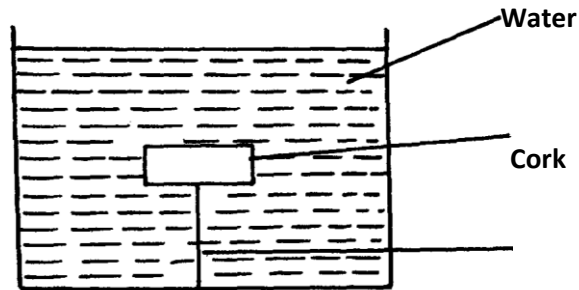
(i) Indicate and label on the diagram the forces acting on the cork.   (3mks)

(ii) Write an expression showing the relationship between the forces.
(1mk)

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(c) A solid displaces 8.5cm^3 of liquid when floating on a certain liquid and 11.5 cm^3 when fully submerged in the liquid. The density of the solid if 0.8g/cm3. determine:
(i) Up thrust on the solid when floating.   (3mks)

(ii) Density of the liquid.   (3mks)

16.   (a) Name a device that is used to convert sound energy to electrical energy.   (1mk)

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(b) Define the term efficiency of a machine.   (1mk)

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(c) A pulley system having a velocity ratio of 4 is used to raise a load of 100N through a height of 0.6m at a constant speed using an effort of 60N in a time of 15 seconds.

(i) Calculate the efficiency of the system.   (2mks)

(ii) How far does the effort end move in order to raise the load by 0.6m.   (2mks)

(iii) Determine the power developed by the effort.   (2 mks)

17. (a) Define the following terms:

(i) Instantaneous velocity.(1mk)

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 (ii) Uniform acceleration (1mk)

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(b) A car moves with a constant velocity of 15m/s for 300s and is then accelerated uniformly to a velocity of 25m/s in the next 20s. this velocity is maintained for the next 300s. the car is then brought to rest in 30s with uniform deceleration.

(i) Sketch a velocity-time graph for this journey.(2mks)

.From the graph determine;

(ii) The acceleration while the velocity is changing from 15m/s to 25m/s.(2mks)

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(iii) The total distance traveled from the time the car reached maximum velocity of the car during this period.(2mks)

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(c) A ball is thrown horizontally at V=8m/s from a tower. It reaches the ground after 4s. Find:

(i) The horizontal distance d it travels before hitting the ground.(1mk)

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(ii) The height of the tower (2mks)

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(iii) The velocity on impact with the ground.(2mks)

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PREDICTION 5

Name:……………………………………….. …..   **Index No.** ……………………….

School: ………………………………… ………   **Date:** …………… **Sign**…………

<u>KCSE PREDICTION 5</u>

232/2
PHYSICS
PAPER 2
TIME: 2 HOURS

Instructions to candidates;

- ❖ Write your name, index number and name of your school in the spaces provided.
- ❖ This paper consists of two parts **A** and **B.**
- ❖ Answer all questions in section **A** and **B** in the spaces provided.
- ❖ All working **MUST** be shown in the spaces provided after questions.
- ❖ Mathematical tables and electronic calculators may be used.
- ❖ Candidates should check the question paper to ascertain that ascertain that all the pages are printed as indicated and that no questions are missing.

For examiners use only

Section	Question	Maximum score	Candidates score
A	1-12	25	
B	13	12	
	14	14	
	15	14	
	16	15	
	Total score	80	

SECTION A (25mks)

Answer <u>ALL</u> questions in this section in the spaces provided after each question.

1. What is the purpose of a fuse in domestic wiring system?   (1mrk)

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2. Use the domain theory to explain briefly why a ferromagnetic material gets saturated when magnetized. (2mks)

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3. The **figure 1** below shows an object placed some distance from a biconcave lens.
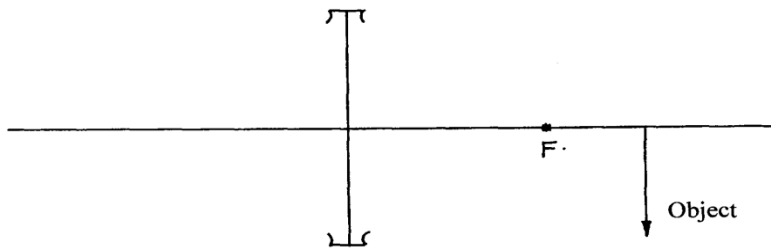
Figure 1

Construct the image on the diagram. (2mks)

4. What determines the hardness of X-rays? (1mk)

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5. Distinguish between the terms 'photoelectric' and 'thermionic' effect. (2mks)

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6. The **figure 2** below shows a light rod balanced due to the action of the forces shown. Q is a magnet of weight 4N and R is a permanent magnet which is fixed. Determine the force between Q and R and state whether it is attractive or repulsive. (3mks)
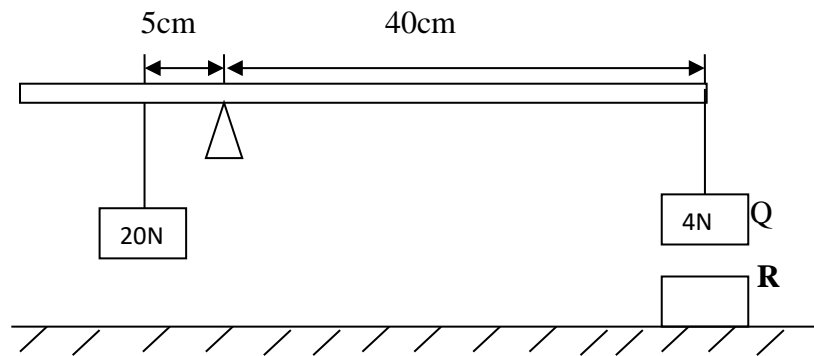
Figure 2

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7. Determine the ammeter reading when the potential difference of 3.0 volts is supplied across PQ in figure 3. (3mks)
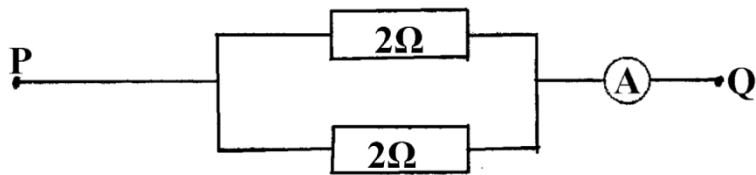
Figure 3

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8. The chart below shows an arrangement of different parts of the electromagnetic spectrum.

Radio	A	Visible	B	X – Rays	Gamma Rays

   Name the possible radiations represented by letter **B**.   (1mk)

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9. A student stands at a distance 400m from a wall and claps two pieces of wood. After the first clap the student claps whenever an echo is heard from the wall. Another student starts a stopwatch at the first clap and stops it after the twentieth clap. The stopwatch records a time of 50 seconds. Find the speed of sound.   (3maks)

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10. The **figure 4** below shows a plane mirror KL and an object B.
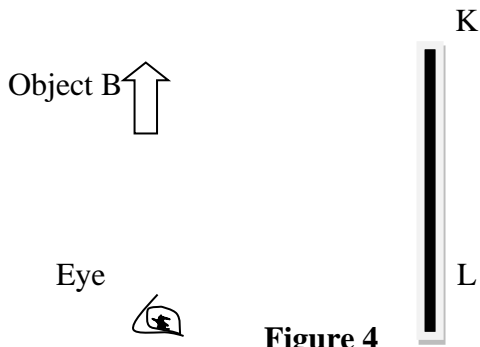
Figure 4

   a) Complete the ray diagram to show how the person sees the image. (2mks)

   b) State the nature of the image formed. (2mks)

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………

11. The following equation represents a decay series.

$$\begin{array}{ccc} 210 & \xrightarrow{\quad x \quad} & 210 \\ 83 & & 84 \end{array} \xrightarrow{\quad \alpha \quad} \begin{array}{c} a \\ b \end{array} Q$$
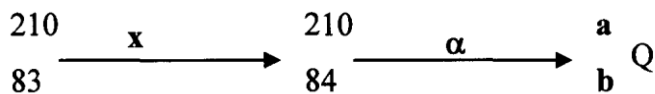
Identify the radiation **x** and determine the values of **a** and **b**. (2mks)

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12. A gold leaf electroscope is positively charged as shown in the diagram below where **C** is the cap and **L** is the gold leaf. State and explain what happens to **L** when a positively charged rod is brought near **C** without touching it.   (2mks)
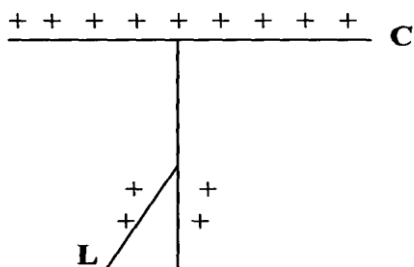
+ + + + + + + + + **C**

L

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SECTION B (55 MARKS)

Answer <u>ALL</u> questions in this section in the spaces provided after each question.

13. a) Differentiate between transverse and longitudinal waves. (2mks)
    b) **Figure 5** shows a transverse stationary wave along a string
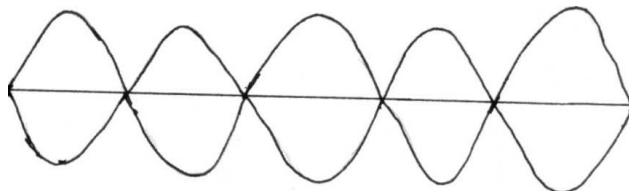
i). Label the no
ii). If the distance between an anti-node and consecutive node is 1.0×10^{-3}m, determine the wavelength of the stationary wave.   (2mks)

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c). Five successive wave frequency in a ripple tank are observed to spread a distance of 6.4cm. If the vibrator has a frequency of 8 Hz, determine the speed of the wave.   (3mks)

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d). The **figure 6** below shows a displacement-time graph for a wave motion
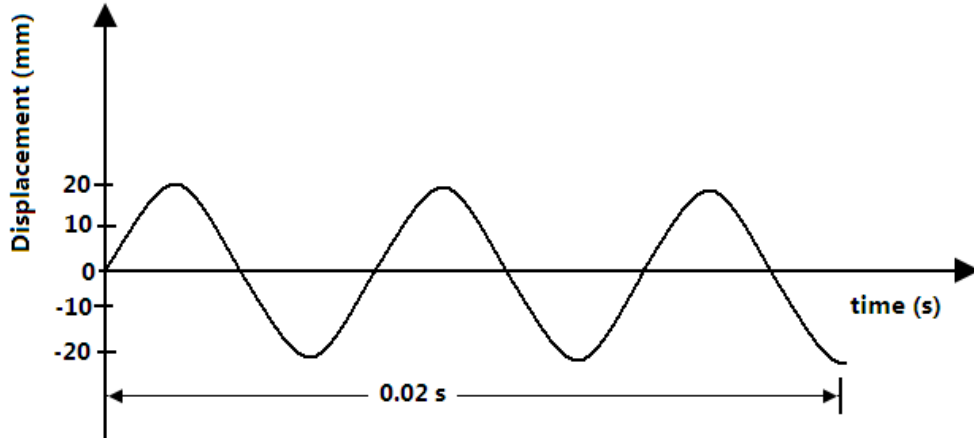
Figure 6

What is the frequency of the wave?   (3marks)

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14. (a) What do you understand by the term **e.m.f** of a cell?.   (1mk)

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(b) A cell of e.m.f **E** and internal resistance **r** is used to pass a current through various resistors R Ohms and the values of current recorded in the table below.

R(Ohms)	1.6	2.1	2.5	3.6	5.0	8.0
I(A)	1.0	0.8	0.7	0.5	0.37	0.34
1/i(A^{-1})						

i. Complete the table for the values of **1/i** giving your answer to 3d.p.   (3mks)

ii. Plot a graph of **1/i** versus **R.** (5mks)
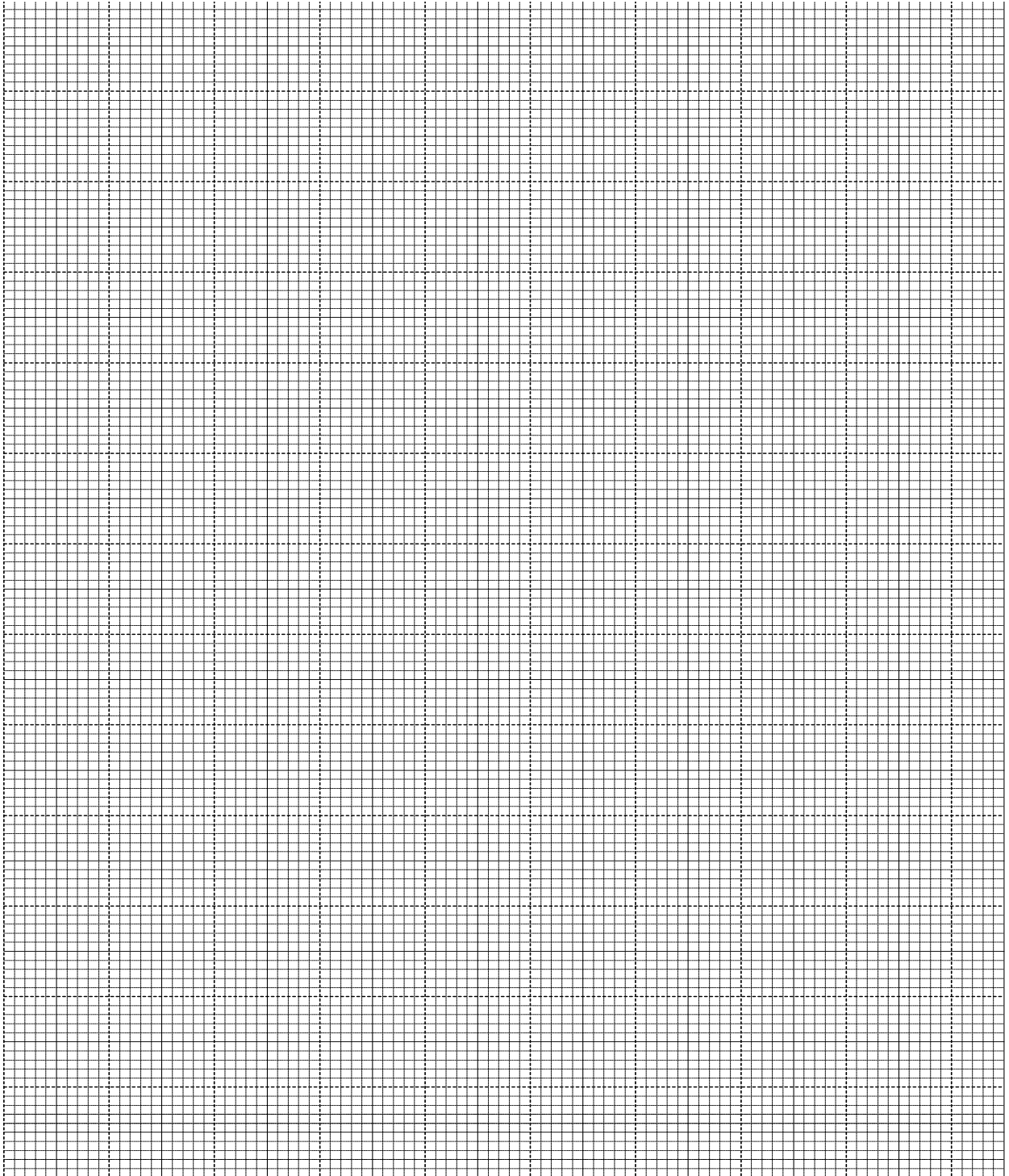
iii. Given that the equation **E =I(R +r),** use your graph to determine the values of **E** and **r.** (5mks)

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15. a) State **three** factors that determine the capacitance of a parallel plate capacitor.   (3marks)

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b) Three capacitors of capacitance 200μf, 300μF and 600μf are connected together in a circuit.
   i.   Draw a circuit diagram to show the arrangement of the capacitors which gives an effective
         capacitance of 100μf. (2marks)

c) The figure 6 below shows a circuit where a battery of e.m.f 6V , switches X and
   Y, two capacitors of capacitance 2 μF and 4 μFare connected.

6V

2μF
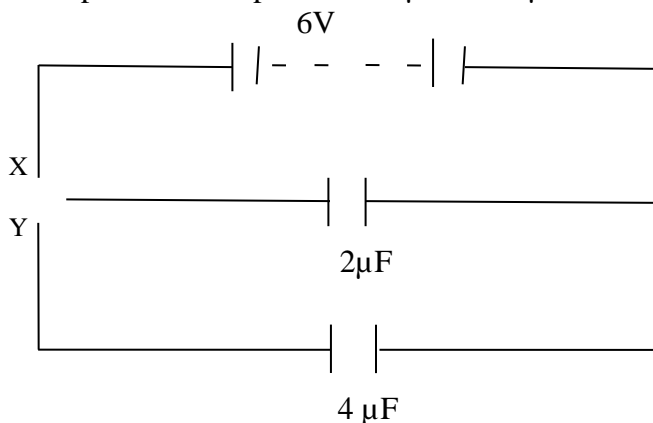
4 μF
Figure 6

i.   Determine the charge stored in the 2 μF capacitor when switch X is closed and switch Y is open.
      (3marks)

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ii.   When switch Y is finally closed and switch X is open, determine the potential difference across
        each capacitor.   (3marks)
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d) Briefly explain how the lightening arrester works. (3mks)

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16. (a) Define the term 'work function'. (1mk)

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(b) List three factors which affect photoelectric effects. (3mks)

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 (c) The table below shows the stopping potential and the corresponding frequencies for a certain
photocell.

Stopping potential V_s (V)	0.2	0.6	1.10	1.42	1.83
Frequency f ($\times 10^{14}$ Hz)	4.0	5.0	6.0	7.0	8.0

Plot a graph of stopping potential against frequency. (5mks)
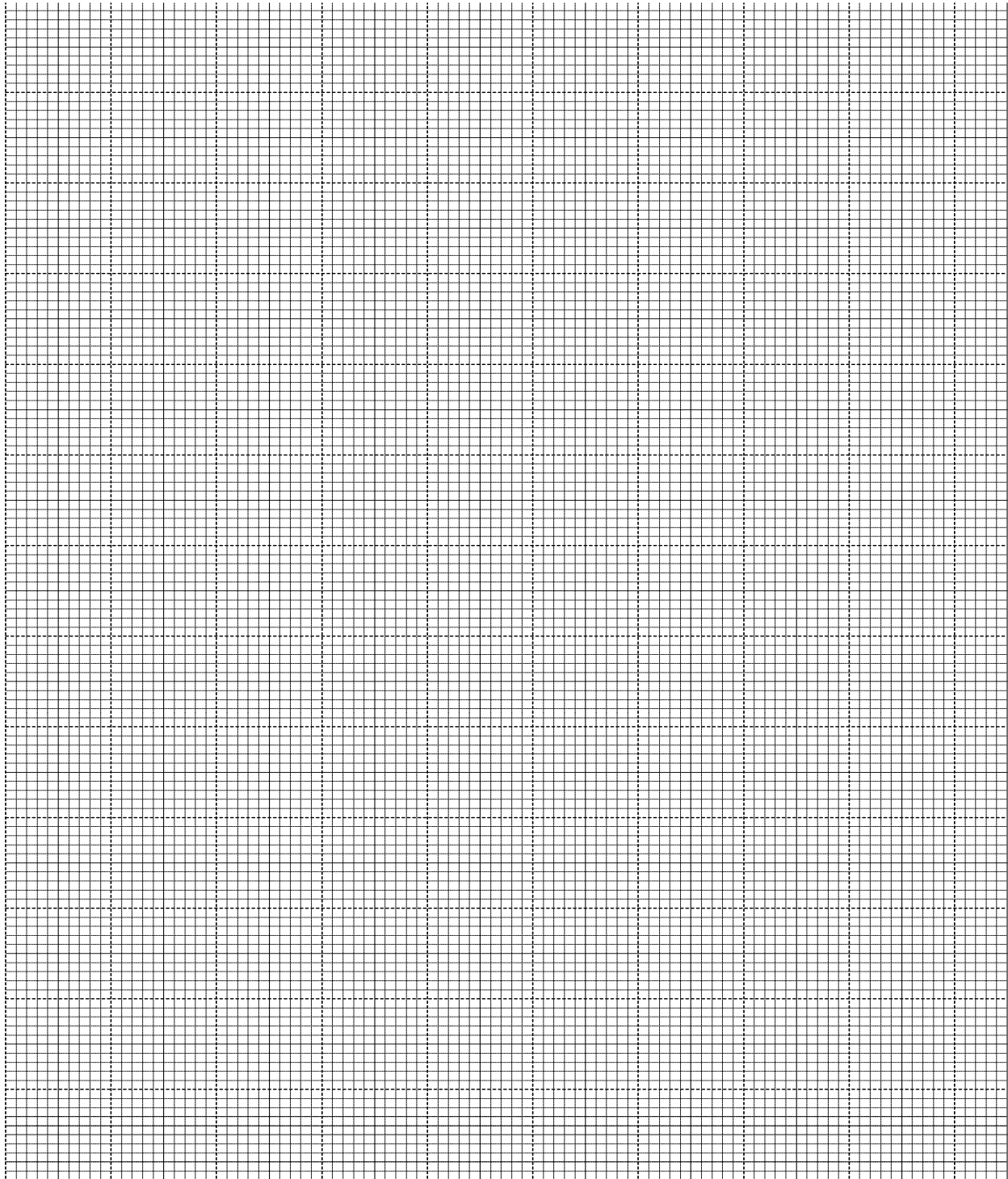
Use your graph to determine;

i) The threshold frequency.(2mks)

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ii) Plank's constant. (Take **e** to be 1.6×10^{-19}C) (2mks)

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iii) Work function. (2mk)

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PREDICTION 5
PHYSICS 232/3
CONFIDENTIAL

Question 1
EACH STUDENT REQUIRES
- ✓ Micrometer screw gauge (shared between 4 students)
- ✓ Vernier callipers
- ✓ Masses
    - ♦ 10g
    - ♦ 2 – 20g
    - ♦ 50g
    - ♦ 100g
- ✓ Helical spring (K = 0.08N/cm)
- ✓ Metre rule or half metre rule
- ✓ Complete retort stand

Question 2
- ✓ 2 plain papers (photocopy papers)
- ✓ 5 optical pins
- ✓ Glass block
- ✓ Softboard
- ✓ 4 thumb pins
- ✓ Triangular prism (60^0 x 60^0 x 60^0)

PREDICTION 5

NAME   …………………………..……   **DATE**   …………………………

INDEX NO.   …………….……………….…..…..   **SIGNATURE**   ….………...….………..

232/3
PHYSICS
PAPER 3
PRACTICAL
TIME: 2 ¹/₄ HOURS

KCSE PREDICTION 5

Kenya Certificate of Secondary Education

232/3
PHYSICS
PAPER 3
PRACTICAL
TIME: 2 ½ HOURS

INSTRUCTIONS TO CANDIDATES

o Write **your name** and **index number** in the spaces provided
o Answer **ALL** the questions in the spaces provided in the question paper.
o You are supposed to spend the first 15 minutes of the 2 ¹/₄ hours allowed for this paper reading the whole paper carefully before commencing your work.
o Marks are given for clear record of observations made, their suitability, accuracy and the use made of them.
o Candidates are advised to record their observations as soon as they are made.
o **Non-programmable** silent electronic calculators and KNEC mathematical table may be used.
o This paper consists of 6 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

FOR EXAMINER'S USE ONLY

Question 1

	a	b	c	d	f	g	h	i
maxmum score	1	1	1	2	6	4	2	3
Candidate's scores								

Question 2

	b(i)	b(ii)	e	f	g	h
maxmum score	2	2	6	5	2	3
Candidate's scores						

Question 1

You are provided with the following:-

- Vernier callipers
- Micrometer screw gauge
- Masses; 10g, 20g, 50g and 100g
- A helical spring
- Metre rule or half metre rule

Proceed as follows

(a) Determine the number of complete turns of the helical spring.

N = _____   (1 Mark)

(b) Measure the external diameter of the spring using the vernier callipers

D = _____ m   (1 Mark)

(c) Use the micrometer screw gauge to determine the diameter of the wire of the spring.

d = _____ m   (1 Mark)

(d) Determine the value of m   (2 Marks)

$N = \dfrac{0.4D}{dm}$

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(e) Suspend the helical spring vertically alongside the clamped half metre rule as shown in figure 1 below.

Determine the length L_0, of the spring before loading it.

$L_0 =$ _____ cm
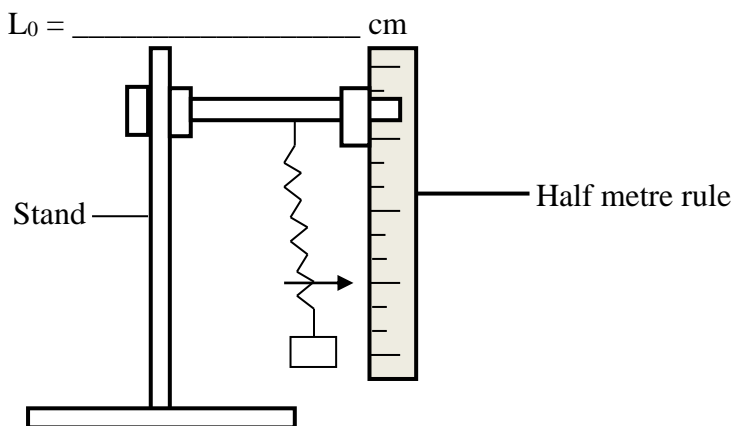
Figure 1

(f) Load the spring with a mass of 20g and determine the new reading on the metre rule. (L) Record this in the table below.

Calculate the extension $e = L - L_0$ due to the mass of 20g and record the value in the table given below.

Repeat step f for other masses and complete the table.

Mass (g)	0	10	20	30	40	50	60	70	80	90	100
Weight (N)											
Reading (L) (cm)											
Extension e (cm)											
$\frac{1}{e}$ (cm^{-1})											

(6 Marks)

(g) Plot a graph of weight (N) against $\frac{1}{e}$ (cm^{-1}) (4 Marks)
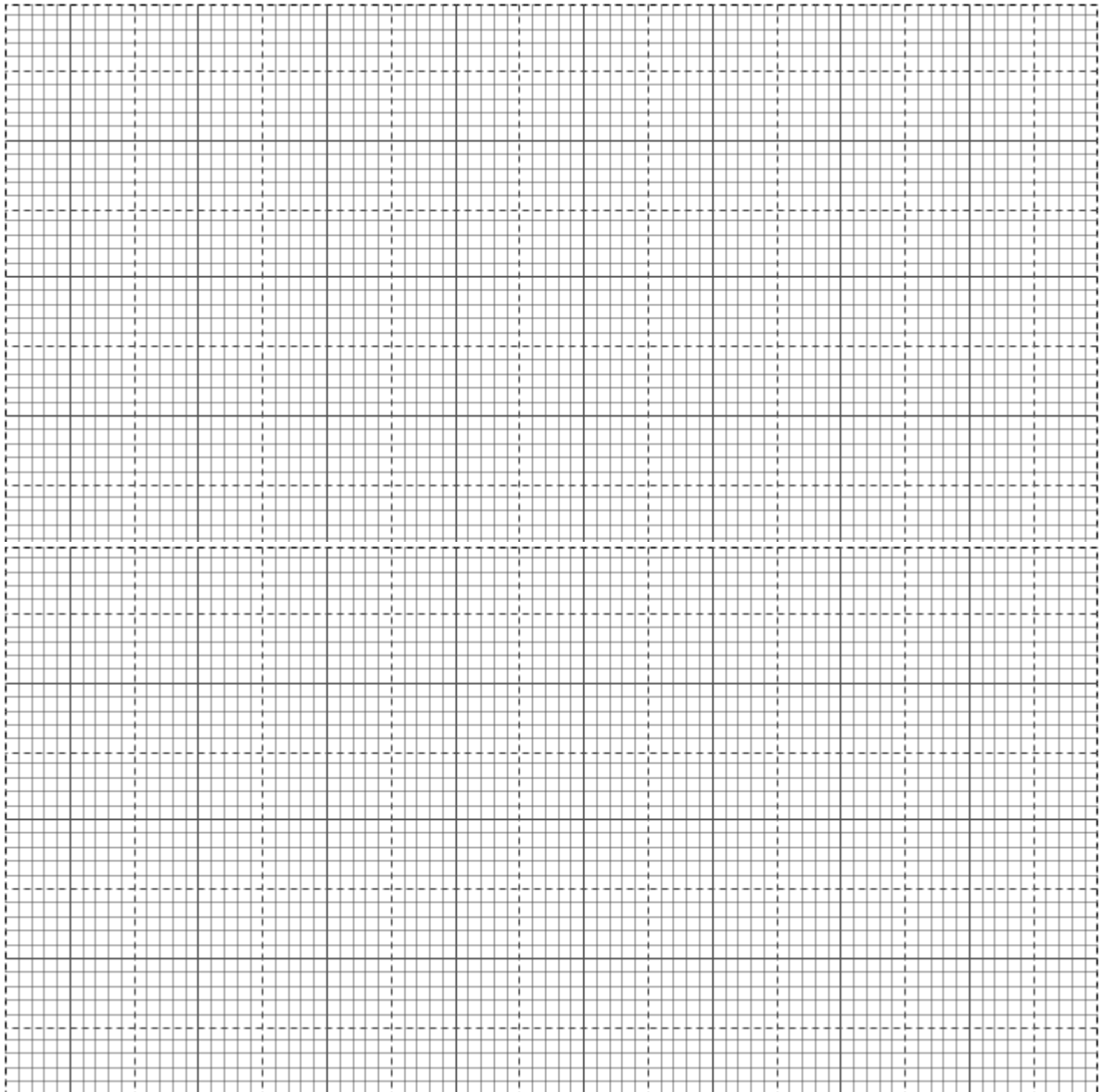
(h) Determine the slope (s) of the graph at a mass of 45g (2 Marks)

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(i) Given that m $= \frac{-255T}{(S+60)^2}$

Determine the value of T where (S) is the slope at 45g (3 Marks)

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2. This question consists of two parts A and B attempt both parts.
   PART A
   You are provided with the following:
   - 5 optical pins
   - A glass block
   - A plain paper
   - A soft board
   - 4 thumb pins

   Proceed as follows:

   (a) Fix the white piece of paper on softboard using the thumb pins provided. Place the glass slab on the white paper and draw the outline of the block on the paper. Remove the block and indicate the sides ABC and D as shown. On side BC determine the centres of side BC using your ruler and fix pin P_0 as shown. Looking from one side at the opposite end of the slab fix pin P_1, P_2 so that they are in with the image I of P_0. On the other side locate the same image using pins P_3 and P_4 as shown in figure 2. Remove the glass block and produce lines P_1, P_2 and P_3, P_4 to their points of intersection which is the position of the image I.
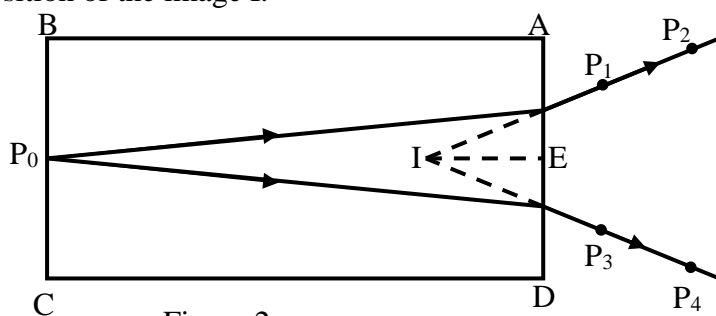
   Figure 2

   (b) (i) Using the half metre rule measure the lengths

   EP0 = _____ cm   (1 Mark)

   EI = _____ cm   (1 Mark)

   (ii) Work out the ratio n = $\frac{EP_O}{EI}$ (2 d.p)   (1 Mark)

   ……

   ……

   (iii) What does n represent?   (1 Mark)

   ……

   ……

   Part B
   You are provided with the following.
   - A plain sheet of paper
   - A soft board
   - 4 optical pins
   - 4 thumb pins
   - A triangular prism

   Proceed as follows

   (c) (i) Firmly fix the plain sheet of paper on the softboard using the thumb pins and place the prism near the centre of the paper. Trace the outline of the prism using a pencil.

(ii) Remove the prism from the outline and label the vertices of the outline PQ and R.

On the side QR mark a point and draw a normal OZ at this point. Measure an angle of 200 from the normal and draw a line along this angle as shown in figure 3.
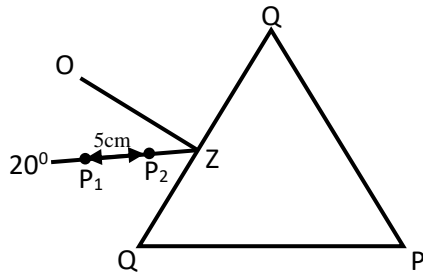
Figure 3

(d) Replace the prism on the outline and fix pins P_1 and P_2 on the 20^0 line at a distance of 3cm from each other.

View the images of the pins P_1 and P_2 through side PR and fix other pins P_3 and P_4 so that all the pins appear on one line. Remove the prism and draw a line to pass through the holes made by pins P_3 and P_4 extend the line into the outline as shown in figure 3. Also extend the 20^0 line so that the two lines cross each other. Determine angle θ and record in the table below.
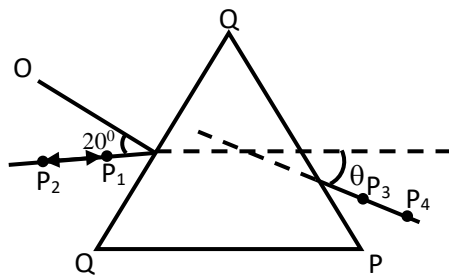
Figure 4

(e) Repeat the procedure and complete the table below.

Angle I $(^{0})$	20	30	40	50	60	70
Angle θ						

(f) On the grid provided plot a graph of angle θ against angle i (5 Marks)
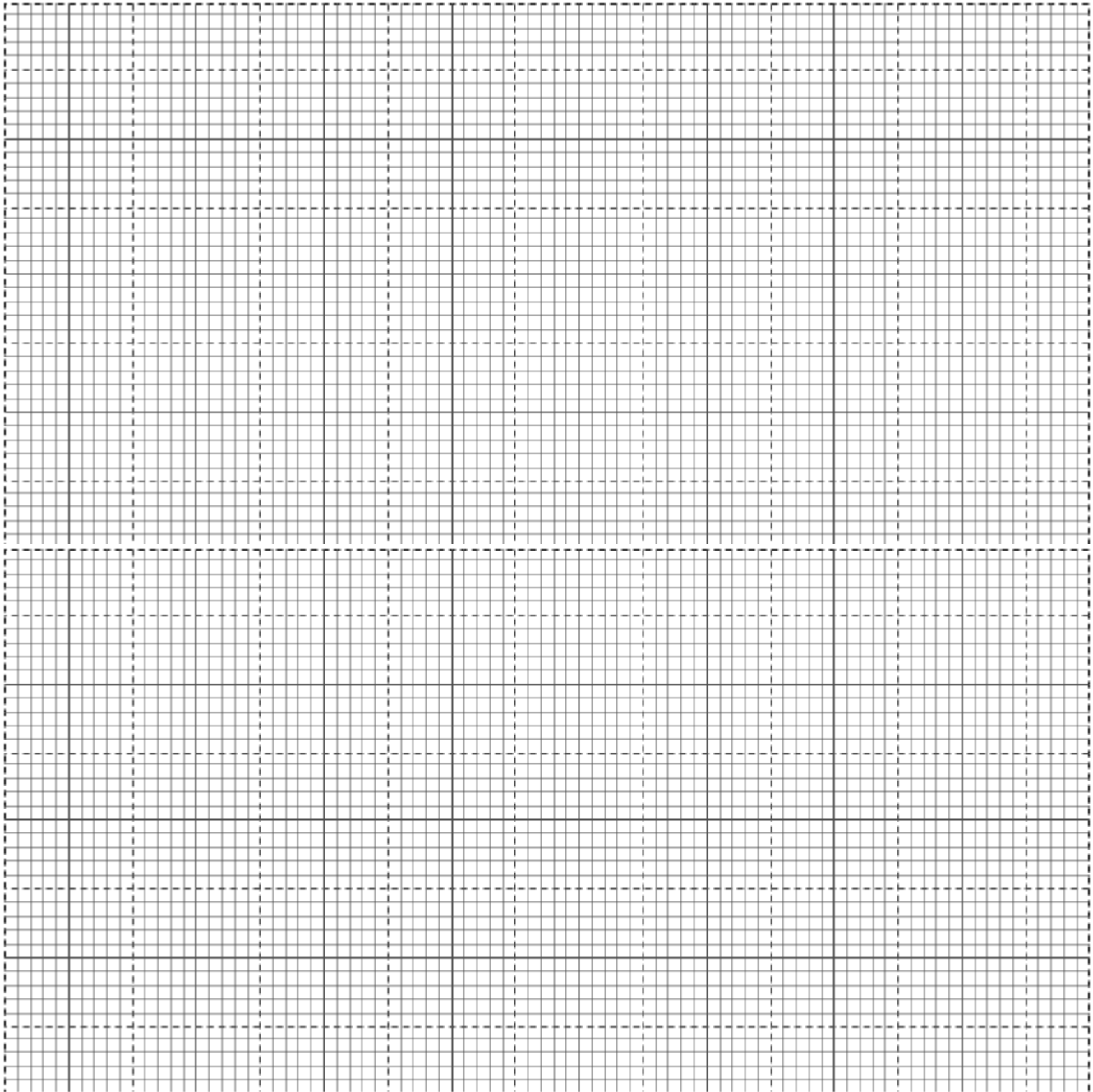
(g) Use your graph to determine the highest value H_{max} of angle θ H_{max} = (2 Marks)

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(h) Determine the constant R for the glass prism from the formula. (3 Marks)

$$R = \frac{Cos\ 40}{Sin^2\ (16+\frac{H_{max}}{3})}$$

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PREDICTION 5

NAME: …………………………………………………..CLASS:…………………..

INDEX NO…………………………………………………………………………

312/1

GEOGRAPHY

PAPER 1

TIME: 2 ¾ HOURS

<u>KCSE PREDICTION 5</u>

INSTRUCTIONS:

1. The paper comprises of 2 sections A and B.

2. Attempt **all** question in section A.

3. In section B, answer question 6 and choose any other two questions.

4. Use separate answer sheets for section A and each question in section B.

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

Answer all questions in this section

1. a) Identify **Two** forces responsible for the spherical shape of the earth.   **(2 marks)**

b) Give **Three** reasons why the interior of the earth is still hot.   **(3 marks)**

2. a) Outline **Two** characteristics of the troposphere.   **(3 marks)**

b) Apart from cloud cover, identify **Two** other factors which influence the amount of solar radiation received on the earth's surface.   **(2 marks)**

3. a) What is river rejuvenation.   **(2 marks)**

b) The diagram below represents a river capture,
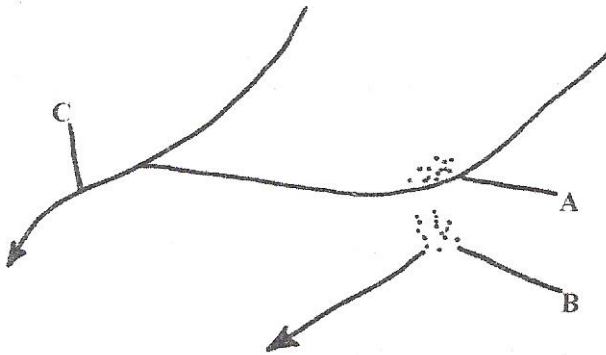
Name the features marked A, B, C.   **(3 marks)**

4. a) Name a place in Kenya where tarns are found.   **(1 mark)**

b) Describe how a tarn is formed.   **(4 marks)**

5. (a) Give **two** main zones of the atmosphere.   **(2 marks)**

(b)   What is?

(i) Zero lapse rate.   **(2 marks)**

(ii) Negative lapse rate.   **(2 marks)**

SECTION B:

Answer question 6 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)   What is the altitude of the lowest contour shown on the map?   **(1 mark)**

Give the **six-figure** grid reference of Mboni dam.   **(2 marks)**

(iii)   What is the length in Kilometres of the All Weather Road Bound Surface C94 from the junction with the Dry Weather Road D502 to Northing 84?   **(2 marks)**

b) Draw a rectangle measuring 10 cm by 8 cm to represent the area enclosed by Eastings 90 and 00 and Northings 62 and 70. **(1 mark)**

On the rectangle, mark and name the following features:

    (i)   Musengo school

    (ii)   Road E742

    (iii)   Kitui Hills   **(3 marks)**

(c) (i) Citing evidence from the map, identify **four** social services offered in Mutitu (Ndooa) township.

                                                                       (4 marks)

    (ii) Describe the relief of the area covered by the map.   **(6 marks)**

(d) Describe the characteristics of the long profile of river Ikoo.   **(6 marks)**

7. a) State **three** characteristics of the inter-tropical convergence zone (ITCZ).   **(3 marks)**

   b) With the aid of a well labeled diagram describe how relief rainfall is formed.   **(6 marks)**

   c) State **five** characteristics of the hot desert climate.   **(5 marks)**

   d) You are required to carry out a field study to determine the relationship between climate and vegetation in your district.

     i) Give **three** reasons why you would need the map of the district.   **(3 marks)**

     ii) Name **two** sampling techniques you are likely to use during the field study.   **(2 marks)**

     iii) Give **two** reasons why sampling would be appropriate for this field study.   **(2 marks)**

     iv) State **four** methods you would use to record data during the field study.   **(4 marks)**

8. a) (i) What is a lake?   **(2 marks)**

    (ii) State **three** factors that determine the permanency of a lake.   **(3 marks)**

   b) Describe how Lake Kanyaboli was formed.   **(6 marks)**

   c) Explain **four** causes of salinity of lake Magadi.   **(8 marks)**

   d) Explain **three** negative effects of lakes on human activities.   **(6 marks)**

9. (a) State **four** causes of mechanical weathering.   **(4 marks)**

   (b) (i) Describe the carbonation process of chemical weathering.   **(3 marks)**

    (ii) Name **two** rocks that can be weathered through the carbonation process.   **(2 marks)**

    (iii) Name **two** features that can be formed on the earth's surface as the carbonation process of weathering takes place.   **2 marks)**

   (c) (i) What is an exfoliation dome?   **(1 mark)**

    (ii) Describe how an exfoliation dome is formed.   **(3 marks)**

   (d) Explain **three** ways in which weathering positively influence man's activities and **two** negative effects of weathering.   **(10 marks)**

10. (a) What is the difference between faulting and folding?   **(2 marks)**

(b) Name

    (i)   **Two** types of faults.   **(2 marks)**

    (ii)   **Three** types of folds.   **(3 marks)**

On the outline map of Africa provided name the fold mountains marked X,Y, Z   **(3 marks)**
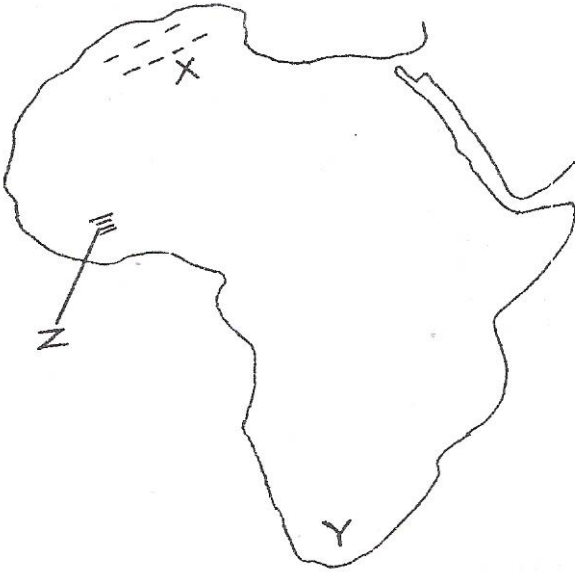
(c) With the aid of well labeled diagrams, **describe** the formation of Fold Mountains.   **(10 marks)**

(d) **(i)** What is the name given to the period of mountain building?   **(1 mark)**

    (ii) Identify **four** main mountain buildings periods ever known in history**.**   **(4 marks)**

PREDICTION 5

312/2
GEOGRAPHY
PAPER 2

TIME: 2 ¾ HOURS

KCSE PREDICTION 5

Kenya Certificate of Secondary Education (KCSE)

INSTRUCTIONS TO CANDIDATES:
- *This paper consists of **two** sections A and **B**.*
- *Answer **all** questions in section **A**.*
- *In section **B** answer question **6** and any other **TWO** questions.*
- *All answers **must** be written in the answer booklet provided.*

*This paper consists of **3** printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.*

SECTION A: Answer all questions

1. (a) Differentiate between horticulture and market gardening. (2 marks)

   (b) State **three** characteristics of horticulture farming. (3 marks)

2. (a) Explain **two** problems caused by floods. (4 marks)

   (b) Name **one** major environmental hazard. (1 mark)

3. (a) What is a polder? (2 marks)

   (b) Give **three** factors that limits Perkerra irrigation scheme. (3 marks)

4. (a) Name **two** indigenous softwood trees in Kenya. (2 marks)

   9b) Give **three** protective roles of forests in a country. (3 marks)

5. (a) Give an example of a mineral found in each of the following occurrence.

   (i) Veins and lodes. (1 mark)

   (ii) Alluvial/placer deposits. (1 mark)

   (b) Highlight **three** uses of soda ash. (3 marks)

SECTION B: Answer question 6 and any other two questions.

6. The table below shows the passengers (in millions) coming from other countries to Kenya between 1994 and 2004. Use it to answer the questions that follow.

COUNTRY	PASSENGERS IN MILLIONS	
	1994	2004
CANADA	12.2	13.0
USA	27.7	16.6
ARGENTINA	14.1	12.0
INDIA	96.8	163.8
JAPAN	258.4	311.9

   (a) Using a scale of 1cm represents 20 million passengers, draw a comparative bar graph to represent the information above. (9 marks)

   (b) (i) Calculate the percentage increase in number of passengers from India. (2 marks)

   (ii) Give the **three** advantages of using comparative bar graphs to represent statistical data. (3 marks)

   (c) (i) Give the **four** important canals of the St. Lawrence sea way. (4 marks)

   (ii) Give **three** ways in which the great Lake St. Lawrence Sea way has contributed to the economy of Canada and USA. (3 marks)

   (d) Explain **two** ways in which communication contributes to economic development in Kenya. (4 marks)

7. (a) Explain **three** problems arising from industrialization in Kenya. (6 marks)

   (b) State **two** non-food agricultural industries in Thika. (2 marks)

   (c) Name a town in Kenya where each of the following industries are located.

   (i) Oil refinery. (1 mark)

   (ii) Paper manufacturing (1 mark)

   (iii) Motor vehicle assembly (1 mark)

   (d) Explain **three** factors that influenced the location of iron and steel industry in the Ruhr

region in Germany in the 19th century. (6 marks)
- (e) You intend to carry out a field study on furniture making industry in the local market centre.
  - (i) State **two** reasons why it would be necessary to carry out a reconnaissance. (2 marks)
  - (ii) State **two** advantages of studying furniture making through field study. (2 marks)
  - (iii) Highlight **four** factors which have favoured the development of the electronics industry in Japan. (4 marks)
8. (a) (i) What is ecotourism? (2 marks)
  - (ii) Give **four** tourist attraction found at the coast of Kenya. (4 marks)
  - (b) Use the map of the East Africa below to answer the questions that follow.

  - (i) Name the national parks marked P, Q and R. (3 marks)
  - (ii) State **four** steps taken by Kenyan government to promote wildlife. (4 marks)
  - (c) Explain similarities between tourism in Kenya and Switzerland. (8 marks)
  - (d) State **four** problems that are associated with low tourism in Kenya. (4 marks)
9. (a) (i) Outline **three** physical factors that have favoured the development of the seven folks hydroelectric power scheme. (3 marks)
  - (ii) State **two** problems facing hydro-electric power projects in Kenya. (2 marks)
  - (b) (i) Apart from oil, name **two** other non-renewable sources of energy. (2 marks)
  - (ii) What is energy crisis? (2 marks)
  - (iii) Explain **four** ways in which Kenya has benefited from the development of geothermal power. (8 marks)
  - (iv) What are the consequences which will result due to oil discovery in Kenya? (3 marks)
  - (c) (i) Name **three** main dams in Africa. (3 marks)
  - (ii) State **two** effects of power rationing in Kenya. (2 marks)
10. (a) State **four** characteristics of shifting cultivation. (4 marks)
  - (b) (i) State **two** counties where tea is grown. (2 marks)
  - (ii) Explain **four** ways in which KTDA (Kenya Tea Development Agency) promotes tea cultivation. (8 marks)
  - (c) (i) State **five** counties in Kenya where beef ranching is done. (5 marks)
  - (ii) Outline **two** major problems facing beef farming in Kenya. (2 marks)
  - (iii) Give **four** economic and human factors that favour beef production in Argentina.

(4 marks)

311/1

HISTORY AND GOVERNMENT

PAPER 1

TIME: 2½ hours

KCSE PREDICTION 5

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

Instructions to Candidates

- **(a)** This paper consists of **three** sections **A, B** and **C.**
- **(b)** Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C.**
- **(c)** Answers to all the questions must be written legibly in the answer booklet provided.

This paper consists of 2 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.

1. Name **one** area in Kenya where the remains of Australopithecus were found.   **(1 mark)**

2. State **one** way in which the Abagusi and Kipsigis interacted during the pre colonial.   **(1 mark)**

3. Give **one** religious function of the Oloibon among the Maasai in the 19th Century.   **(2 marks)**

4. State **two** factors that led to the decline of Kilwa by 1490 AD.   **(2 marks)**

5. Give **one** evidence that shows that Chinese Traders reached the Kenyan Coast before 1500 AD**.**

         (1 mark)

6. State **two** reasons which led to the decline of the long distance trade.   **(2 marks)**

7. What is dual citizenship?   **(1 mark)**

8. Give the **main** reason why the Colonial Government introduced pool tax in Kenya.   **(1 mark)**

9. State **two** terms of the Heligoland treaty of 1890.   **(2 marks)**

10. State the **main** role of the Executive arm of the government in Kenya.   **(1 mark)**

11. Give **two** functions of the County Assembly in the County Government.   **(2 marks)**

12. Identify **two** sources of Nyayo philosophy.   **(2 marks)**

13. Name **two** education commissions that were established by the Kenyan Government after

    independence.   **(2 marks)**

14. State the **main** reason why the Second Lancaster House Conference was held in London in 1962.

         (1 mark)

15. What is the **main** role of the opposition party in Kenya?   **(1 mark)**

16. Name the first African to be nominated to the Legislative Council. **(1 mark)**

17. State **one** role played by the Public Service Commission in Kenya. **(1 mark)**

SECTION B: (45 MARKS)

ANSWER ANY THREE QUESTIONS IN THIS SECTION

18. a) Give **three** reasons for the migration and settlement of the Somali into Kenya. **(3 marks)**

  b) Explain **six** results of the migration and settlement of the Cushites into Kenya. **(12 marks)**

19. a) State **three** reasons which made the British Government encourage white settlement in

   Kenya during the colonial period. **(3 marks)**

  b) Explain **six** terms of the Devonshire White Paper of 1923. **(12 marks)**

20. a) Give **three** characteristic of independent schools and churches. **(3 marks)**

  b) Explain **six** factors that led to the rise of independent churches and schools in Kenya.

(12 marks)

21. a) State **five** factors that led to the introduction of multi-party democracy in Kenya in 1992.

(5 marks)

  b) Explain **five** roles played by political parties in governance and nation building. **(10 marks)**

SECTION C: (30 MARKS)

ANSWER ANY TWO QUESTIONS IN THIS SECTION

22. a) Give **three** circumstances under which the freedom of movement can be restricted in Kenya**.**

(3 marks)

  b) Explain **six** principles of democracy as practiced in Kenya. **(12 marks)**

23. a) Give **three** functions of the Supreme Court in Kenya. **(3 marks)**

  b) Explain **six** factors that may undermine the administration of justice in Kenya. **(12 marks)**

24. a) State **three** components of the National Budget. **(3 marks)**

  b) Explain **six** challenges faced by the national government in the implementation of a national

   budget. **(12 marks)**

PREDICTION 5

311/2

HISTORY AND GOVERNMENT

PAPER 2

TIME: 2½ hours

KCSE PREDICTION 5

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

Instructions to Candidates

- *(a)* *This paper consists of **three** sections **A, B** and **C**.*
- *(b)* *Answer **all** questions in section **A, three** from Section **B** and **two** from Section **C**.*
- *(c)* *Answers to all the questions must be written legibly in the answer booklet provided.*

Section A: (25 marks)

Answer all the questions in this section

1. State **two** archaeological sources of information on History and Government. **(2 marks)**

2. State **two** ways in which early man obtained food. **(2 marks)**

3. State **one** theory explaining the origin of agriculture. **(1 mark)**

4. Explain **two** roles of Tourages in Trans-Saharan Trade. **(2 marks)**

5. Identify **two** improvements which were made on Macadamized roads in the 19th Century. **(2 marks)**

6. Give **two** principal organs of the United Nations. **(2 marks)**

7. State **two** disadvantages of using wind as a source of energy. **(2 marks)**

8. State the main reason that led to the decline of Meroe. **(1 mark)**

9. Give **two** functions of the Kabaka in the Buganda Kingdom. **(2 marks)**

10. What is direct democracy? **(1 mark)**

11. Identify **one** African country that was not colonized. **(1 mark)**

12. Identify **one** super power that was involved in cold war. **(1 mark)**

13. Give **one** method used by the French to administer their colonies in Africa. **(1 mark)**

14. State **two** objectives of the African National Congress. **(2 marks)**

15. Give the **main** reason for the failure of the League of Nations. **(1 mark)**

16. Name on treaty signed between Lobengula and the British during the colonization. **(1 mark)**

17. Name **one** political party in India. **(1 mark)**

Answer any three questions in this section

18. a) State **five** reasons why early people domesticated crops and animals during the Neolithic period.

(5 marks)

(b) Explain **five** causes of food shortages in Africa today. **(10 marks**

19. (a) Identify **three** methods used by nationalists in Ghana during their struggle for independence.

(3 marks)

(b) Describe **six** factors that contributed to the struggle for independence in South Africa.

(12 marks)

20. (a) State **five** factors that contributed to the rise and expansion of the Asante Kingdom by the 19th

century. **(5 marks)**

(b) Describe the political organization of the Asante Empire in the pre-colonial period.

(10 marks)

21. a) Identified **three** chartered companies which were used European powers to acquire colonies in

Africa. **(3 marks)**

(b) Discuss **six** political impacts of partition of Africa by European powers. **(12 marks)**

Section C:

Answer any two questions in this section (30 marks)

22. a) State any **two** major organs of the United Nations organization. **(3 marks)**

b) Explain any **six** reasons why it has become difficult for the United Nations to successfully

achieve her goals in the world today. **(12 marks)**

23. **a)** State **three** reasons for the collapse of the league of nations **(3 marks)**

b) Explain **six** political results of the Second World War. **(12 marks)**

24. **a)** State **five** constitutional powers of the president of India. **(5 marks)**

b) Explain **five** advantages of the federal system of Government in the United States of

America (USA).   **(10 marks)**

PREDICTION 5

313/1

C.R.E

PAPER 1

TIME 2 ½ HOURS

KCSE PREDICTION 5

Kenya Certificate of Secondary Education

313/1

C.R.E

PAPER 1

2 ½ HOURS

INSTRUCTION TO CANDIDATES

❖ *Answer any **FIVE** questions only in this paper in the answer booklet provided.*

1. **(a)** Describe the second account of creation in Genesis 2:4b-25.   **(7 marks)**

   (b) Outline **four** differences between the biblical view of sin and the African concept of evil.

                                                                                        (8 marks)

   (c) Identify **five** ways in which Christians can avoid sin.   **(5 marks)**

2. **(a)** Describe the making of the Sinai covenant.   **(8 marks)**

   (b) State **seven** reasons why presidential oathing is an example of a modern covenant.

                                                                                        (7 marks)

   (c) What do we learn from the breaking of the Sinai covenant.   **(5 marks)**

3. **(a)** Outline **seven** duties of Samuel in Israel.   **(7 marks)**

   (b) How did Prophet Elijah fight against corruption and injustice in Israel.   **(7 marks)**

   (c) Why should Christians fight against the spread of devil worship today.   **(6 marks)**

4. **(a)** Identify **six** methods used by the Old Testament prophets to pass on their messages.

                                                                                        (6 marks)

   (b) What were the teachings of Amos on social justice and responsibility.   **(7 marks)**

   (c) How is prophecy practiced in the church today.   **(7 marks)**

5. **(a)** Identify **six** symbolism used during the call of Jeremiah.   **(7 marks)**

   (b) State ways through which king Josiah brought the people of Judah back to the covenant
   way of life.   **(8 marks)**

   (c) What can Christians learn from the call of Jeremiah?   **(6 marks)**

6. **(a)** Identify and explain elements of worship in traditional African society.   **(6 marks)**

   (b) Outline **seven** roles of the priests in traditional African society.   **(7 marks)**

   (c) Show how marriage in traditional African society has faced transition in the modern
   society.   **(7 marks)**

PREDICTION 5

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

SCHOOL: .... CANDIDATE'S SIGN..................

DATE: ....

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

2½ HRS

KCSE PREDICTION 5

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

➢ Answer any five (5) of the given questions in the material provided.
➢ Each question carries equal (20) marks.

Question	1	2	3	4	5	6	TOTAL
Score							

1. **a)** Outline the message of Zachariah in the Benedictus Lk 1:67-80.　　　　**(7 marks)**

　　b) State **six** teachings of Jesus about John the Baptist.　　　　**(6 marks)**

　　c) In what ways does the church win people to the kingdom of God?　　　　**(7 marks)**

2. **a)** Outline the teaching about Jesus from the cure of the paralytic Lk 5:17-24.　　**(7 marks)**

　　b) Give **six** incidents when Jesus changed the traditional Jewish attitude towards the poor and despised.　　　　**(6 marks)**

　　c) Give reasons why the poor may not accept the word of God.　　　　**(7 marks)**

3. **a)** Relate the healing of the blind man in Jericho Lk 18:35-43.　　　　**(8 marks)**

　　b) Give **six** reasons why some people did not recognise the authority of Jesus during his ministry.　　　　**(6 marks)**

　　c) Identify ways through which the church is helping the sick in the community. **(6 marks)**

4. **a)** Explain the New Testament teaching on the unity of believers.　　　　**(8 marks)**

　　b) State the reaction of the people who were present during the Pentecost.　　**(6 marks)**

　　c) In what ways can the gift of prophecy strengthen the church today.　　　**(6 marks)**

5. **a)** Give reasons why employment of minors is rampant in Kenya.　　　　**(6 marks)**

　　b) Identify the consequences of denial of rest to employees.　　　　**(8 marks)**

　　c) State **six** measures the government is taking to narrow down the gap between the rich and the poor.　　　　**(6 marks)**

6. **a)** Explain the Christian understanding of the use of science and technology.　　**(6 marks)**

　　b) Identify **seven** benefits of genetic engineering to man.　　　　**(7 marks)**

　　c) Give reasons why Christians should participate in blood donation.　　　**(7 marks)**

PREDICTION 5

Name……………………………………………Index number……………………

Candidate's signature……………………….   Date…………………………………

565/1
BUSINESS STUDIES
Paper 1
2 Hours

KCSE PREDICTION 5

Kenya Certificate of Secondary Education (KCSE)

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination.
- Answer all the questions in the spaces provided.

For examiners use only

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
MARKS																	

QUESTION	18	19	20	21	22	23	24	25
MARKS								

TOTAL MARKS

*This paper consists of **11** printed pages. Candidates should check the question paper to ensure that all the pages are printed as indicated and no questions are missing.*

Answer ALL questions in the spaces provided.

1. Identify **four** difficulties that may make an individual not to satisfy most of his needs.

(4 marks)

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

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

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

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

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

……………………………………………………………………………………………

2.   Highlight **four** characteristics of free resources.   (4 marks)

a)..

 b)...

c)..

d)..

3. Outline **four** measures that can be taken to improve the efficiency of parastatals in Kenya.

(4 marks)

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

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

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

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

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

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

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

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

4. State **four** factors that would influence the amount of money held by an individual for

    transaction purposes.   (4 marks)

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

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

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

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

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

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

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

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

5. State **four** measures that the government may employ to regulate and control business

activities.   (4 marks)

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

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

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

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

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

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

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

……………………………………………………………………………………...

6. Given below are books of original entry, state the source document used to prepare each

of the books.   (4 marks)

Books	Source document
(i) Cash book	....
(ii) Sales journal	....
(iii) Purchase journal	....
(iv) Sales return journal	....

7. Post the following transactions to the relevant ledger accounts.

a)   Started business by depositing in the bank a cheque of shs. 100,000.

b)   Withdrew Kshs. 20,000 cash from the bank for business use.

c)   Tumanka a debtor paid shs. 40,000 cash.

d)   Took shs.10, 000. from cash till for personal use.

(4mks)

8.   Identify **four** ways through which manufacturers protect the consumers against

exploitation.   (4 marks)

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

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

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

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

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

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

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

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

9. List **four** sources of monopoly power for a firm in a market.   (4 marks)

(i)…………………………………………………………………………………..............

(ii)…………………………………………………………………………………………................

(iii)…………………………………………………………………………………………..............

(iv)…………………………………………………………………………………………….........

10. Outline any **four** benefits of "pooling of risks" to insurance company. (4 marks)

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

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

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

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

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

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

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

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

11. The diagram below shows a supply curve S_oS_o and S_IS_I.
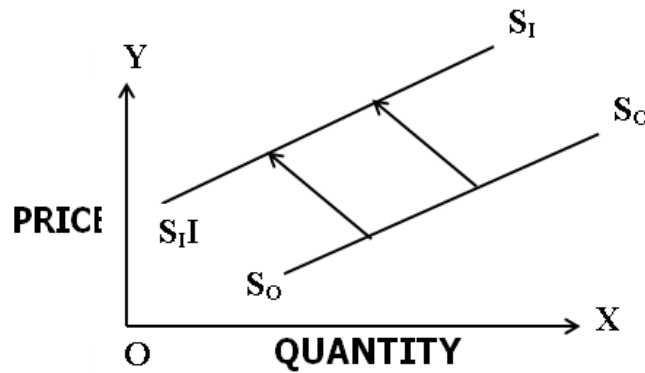
Highlight **four** factors that account for the above phenomena.   (4 marks)

a)……………………………………………………………………………………………

…………………………………………………………………………………………………

b)……………………………………………………………………………………………

…………………………………………………………………………………………………

c)……………………………………………………………………………………………

…………………………………………………………………………………………………

d)……………………………………………………………………………………………

…………………………………………………………………………………………………

12.   Highlight **four** roles played by inter-mediaries in the chain of distribution. (4 marks)

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

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

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

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

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

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

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

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

13. Outline **four** uses of national income statistics   (4 marks)

i)..

ii)..

iii)..

iv)..

14. Highlight **four** methods that can be used by a country to solve the problem of deficit
    balance of payment.   (4 marks)

i)..

ii)..

iii)..

iv)..

15. Outline **four** positive implications of high population growth rate in a country.(4 marks)

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

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

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

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

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

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

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

…………………………………………………………………………………………

16. Highlight **four** reasons why hypermarkets are increasingly becoming popular in Kenya.

(4 marks)

i)…………………………………………………………………………………………………..

ii)…………………………………………………………………………………………………

iii)…………………………………………………………………………………………………

iv)…………………………………………………………………………………………………

17. For each of the following transactions, indicate with a tick (√) whether it will increase, decrease or have no effect on the balance sheet totals. (4 marks)

Transaction	Effect on the balance total		
	Increase	Decrease	No effect
(i) Borrowing sh 20,000 from bank for paying creditors			
(ii) Used sh 10,000 cash pay for loan arrears			
(iii) Sale of part of business premises			
(iv) Sale of goods worth sh 5,000 for sh 4,500			

18. Outline **four** circumstances under which personal selling is appropriate. (4 marks)

i)…………………………………………………………………………………………………

ii)…………………………………………………………………………………………………

iii)…………………………………………………………………………………………………..

iv)…………………………………………………………………………………………………..

19. State **four** disadvantages of localization to a developing country (4 marks)

a) ………………………………………………………………………………………………

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

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

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

20. The following information relates to NtutuTraders
        Purchases   sh 2,700,000
        Return outwards   sh 600,000

Closing stock   sh 500,000
Opening stock   sh 1,200,000
Margin $^2/_9$
Calculate (i) Cost of sales   (2 marks)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

              (ii) Gross profit   (2 marks)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

21. State the meaning and significance of the following terms used in international trade.

  (i) Depreciation of the currency of

country..

  (ii) Determination of the terms of trade of a

country..

   (iii)

Traderestrictions..

  (iv) Common market...

22. Outline **four** advantages of a business using E-mail in communication.   (4 marks)
a) …………………………………………………………………………………………………
b) …………………………………………………………………………………………………
c) …………………………………………………………………………………………………
d) …………………………………………………………………………………………………

23. Outline **four** economic conditions that would prevail in a country undergoing inflation.
                                                               (4 marks)
a) …………………………………………………………………………………………………

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

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

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

24. Indicate in the spaces provided whether the following taxes are either direct taxes or indirect taxes. (4 marks)

Tax   Types of tax

Corporation tax   _____

Capital gain tax   _____

Value added tax   _____

Income tax   _____

25. Indicate in the spaces provided, the account to be debited and account to be credited. (4 marks)

Transaction	Account Debited	Account Credited
(a) Started business by depositing sh 80,000 in the bank account of the business		
(b) Bought stock of goods worth sh 20,000 from XYZ retailers on credit.		
(c) Returned goods worth sh 4,000 to XYZ retailers		
(d) Paid XYZ retailers' sh 15,000 cheque		

PREDICTION 5

NAME_____ADM NO_____

CLASS_____

565/2

BUSINESS STUDIES

PAPER 2

2 ½ HOURS

<u>KCSE PREDICTION 5</u>

INSTRUCTIONS
a. This paper consist of six questions
b. Answer any Five questions
c. All questions carry equal marks
For examiner's use only

Question		Maximum score	Candidates score
1	a		
	b		
2	a		
	b		
3	a		
	b		
4	a		
	b		
5	a		
	b		
6	a		
	b		
	Total Score		

1. **(a)** Explain **five** reasons for trade restriction by a country.   **(10 marks)**

    (b) With the help of a diagram explain the circular flow of income in a two sector economy.

                                                                                                            (10 marks)

2. **(a)** Explain **five** principles of public expenditure that must be considered before any

    expenditure can be incurred by the government.   **(10 marks)**

    (b) The following balances relate to Kilindini traders as at 31st July 2014.

                                                    Shs.

Stock 1/8/2013	60,000
Salaries	140,000
Creditors	70,000
Capital	1,400,000
Purchases	300,000
Rent	20,000
Insurance	80,000
Debtors	120,000
Sales	700,000
Stock (31/7/2014)	40,000
5 year bank loan	400,000
Returns inwards	30,000

    Required:-

    (i) Prepare a trading and profit and loss account for the year ending 31st July 2014.

                                                                                                            (5 marks)

    (ii) Calculate the following ratios
         Margin   **(1 mark)**
         Rate of stock turn over   **(2 marks)**
         Return on capital   **(2 marks)**

3. **(a)** Explain **five** causes of unemployment.   **(10 marks)**

(b) Explain **five** circumstances under which a pro-forma invoice may be used. **(10 marks)**

4. **(a)** Explain **five** measures that can be used by an office to safeguard the property of the

   organization. **(10 marks)**

   (b) Explain **five** ways in which the government may promote local trade. **(10 marks)**

5. **(a)** Explain **four** ethical issues in product promotion. **(8 marks)**

   (b) On 1ˢᵗ September 2013 Thika Traders had cash in hand sh. 560,000 and a following

   transaction took place during the month.

Sept. 8 Paid the following creditors by cheque after deducting 10% discount in each case:-

   Benson sh. 140,000

   Martha sh. 98,000

Sept 13 Settled Kimani's account sh. 70,000 by cheque after deducting 10% cash discount.

Sept 17 Received cheques from the following debtors after deducting 10% discount in each case:-

   Mwanaisha s   h. 350,000

   Fatma   sh. 105,000

Sept 24 Received the following cheques from debtor after having deducted cash discount of 2% in each case:-

Josephine sh. 411,600

Damaris   sh. 123,480

Sept 28received the following amounts in cash from debtors handing deducted cash discount of 2%

James   sh. 82,320

Faith   sh. 246,960

Required:-

Record the above transactions in a **three** column cashbook and balance it off at the end of the month. **(12 marks)**

6.   **(a)** Explain **f**ive fiscal policy measures that can be used to control inflation.   **(10 marks)**

   (b) Explain **five** circumstances under which face to face communication would be preferable

   to a firm.   **(10 marks)**

PREDICTION 5

NAME ....INDEX Number……….....….……………

Candidate Sign…………………………………………………………………… Date………………………………………….....…

443/1

AGRICULTURE

PAPER1

2HOURS

KCSE PREDICTION 5

Instruction to candidates

➢ Write your name and index number in the space provided at the top of this page .
➢ Sign and write the date of the examination in the space provided above
➢ This paper consist of three section A, B, and C
➢ Answer all questions in section A and B
➢ Answer any two questions in section C
➢ All answers should be written in the spaces provided
➢ Candidate should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing .
➢ Candidate should answer the question in English

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
A	1-16	30	
B	17-20	20	
C		20	
		20	
	TOTAL SCORE	90	

SECTION A (30 MRKS)

Answer all question in this section in the space provided

1. Differentiate between olericulture and pomoculture as used in crop production .(1mrk)

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

2. List the physical weathering agents in soil formation process (1 ½ mrks)

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

3. Give four method of farming (2mrks)

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

4. Give two examples for each of the following types of cost incurred in broiler production .
   a) Variable cost (2 marks)

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

   b) fixed cost (2 marks)

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

5. Give four advantages of crop rotation .(2mrk)

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

6. State four factors that that should be considered when classifying crop pest (2mrks)

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

7. Give three reasons why a water logged soil is unsuitable for most crops(1 ½)

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

8. Give four advantages of tissue culture (2mrks)

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....
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....

9. Outline four observable indictors of economic development of a nation (2mrks)

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

10. Outline four indicators of well decomposed manure (1 ½)

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....

11. Give two conditions where opportunity cost does not exist (2mrks)

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

12. Give four management practice that promote high herbage yields in pasture production (2mrks)

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

13. Give three reasons why primary cultivation should be done early before the onset of the rains(1 ½)

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

14. Give two examples of farm records that are general in nature .(1mrk)

....

....

....

15. Give four role of nitrogen in plants (2mrks)

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....

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....

....

16. Give four benefits of possessing a land title deed (2mrks)

....

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SECTION B (20 MRKS)

Answer all the questions in this section in the spaces provided

17. The diagram below illustrates a feature observed after digging the soil several metres deep Study the diagram carefully and answer the question that follow
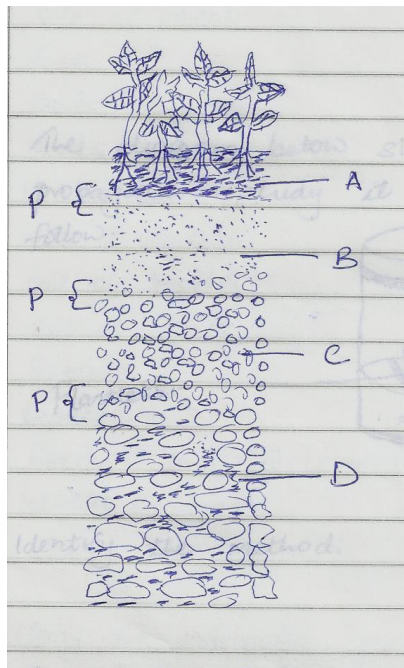
a) Identify the feature that the diagram above represents in the study of soil (1mrk)

....

....

....

b) What is the name given to the part labeled p(1mrk)

....

....

....

c) Give a reason why part b is also reffered to as layer of accumulation (1mrk)

....

....

....

....

d) State two ways in which the knowledge of the above feature would be of benefit to farmer (2mrks)

....

....

....

....

....

....

18The diagram below shows a method of crop propagation .Study it and answer the questions that follow

a) Identify the method (1mrk)

....

....

....

b Name two crops that can be propagated using this method.(1mrk)

....

....

....

c. Give three ingredients used when preparing the tissue culture.(1 ½)

....

....

....

19. The following information was obtained from the records of Mr Juma's farm for the year ended on 31st march 2011

Particulars	kshs
Opening Valuation	100,000
Calves	72,000
Hired Labour	21,000
Sales of milk	13,000
Sales of cereals	33,000
Rent	9,000
Feed	5,300
Seed	1,700
Fertilizers	4,700
Sales of Vegetables	9,300
Sales of poultry	1,800
Sales of fruits	700
Pesticides	1,250
Depreciation	650
Repair and Maintenance	950
Interest on loans	200
Closing Valuation	9,0000

a) using the information given above , prepare a profit and loss account for Mr Juma's farm for the year ended 31st March (7mrks)

b) Giving a reason, State whether Mr. Juma's farm made a profit or loss (½ mark)

....

....

....

20) The diagram below shows a maize stalk infected by a certain pest .Study it and answer the questions that follow .
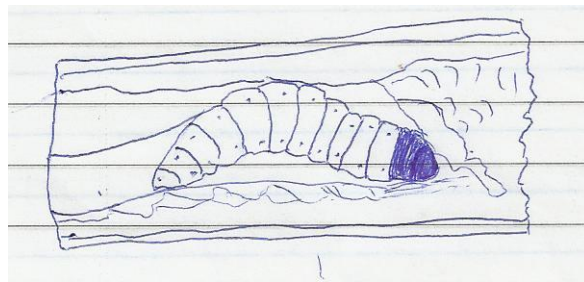
a) Indentify the pest (1/2)

....

....

b) Apart from maize, name another crop attacked by the pest named above (½ mark)

....

....

c) Give three cultural measures that can be applied to control the pest (3mrks)

....

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SECTION C (40MARKS)

Answer any two questions in this section in the spaces provided

21a) Describe six advantages of rotational grazing (6mrks)

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c) Explain eight ways in which soil fertility can be maintained (8mrks)

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d) Explain six factors considered when drawing a farm plan (6mrks)

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22a) Explain the factors that influence the type of irrigation to be used in a farm (8mrks)

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d) Explain six reasons for pruning coffee.(6mrks)

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e) Describe 6 ways in which lab our productivity can be improved on a farm (6mrks)

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23a) Describe five importance of agro -forestry   in soil and water conservation (6mrks)

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b) Describe the procedure of silage making (10mrks)

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c) Describe five effect of over application of nitrogenous fertilizer(5mrks)

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PREDICTION 5

NAME-- Dates-------------------------

INDEX--- Candidate Sign -------------------------------

443/2

AGRICULTURE

PAPER2

2HOURS

KCSE PREDICTION 5

Instruction to Candidates

- ➢ Write your name and index number in the space provided at the top of this page.
- ➢ Sign and write the date of the examination in the space provided above.
- ➢ C) This paper consist of three section A, B. and c .
- ➢ Answer all questions in section A and B.
- ➢ Answer any two questions in section c.
- ➢ Answers should be written in the space provided.
- ➢ Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.
- ➢ Candidates should answer the question in English.

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1-16	30	30
B	17-20	20	20
C		20	20
		20	20
	TOTAL SCORE	90	

SECTION A 30MRKS

Answer all the questions in this sections in the spaces provided

1. Name the most appropriate tools used in the following operations

a) Removing metal chippings in file (1mrk)

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b) Cutting wood along grains (1mrk)

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c) Branding (1mrks)

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2. State four characteristic of Boran cattle (2mrks)

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3. State two functions of a useful bacteria in livestock production (1mrk)

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4. Name four function of lipid in an animal body (2mrks)

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5. State two ways of reducing friction in moving part of farm tool (1mrk)

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6. Outline four types of fence that can be used in mixed farm (2mrks)

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7. Name three methods of out breeding in livestock production ((1 ½ marks)

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8. Give two reasons for tailing in sheep production (1mrk)

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9. Name any five internal parts of cow's udder (2 ½ marks)

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10. Give five ways of transmitting livestock diseases (2 ½ marks)

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11. Give four features of improved grain bin (2mrks)

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12. Give three types of calving complications (1 ½ mrks)

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13. State four advantages of zero grazing as a grazing system (2mrks)

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14. State two functions of a queen bee in a colony (1mrk)

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15. Name four symptoms of anaplasmasis in livestock(2mrks

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16 .What do you understand by the following terms as used I animal production .

a) Coponisation(1mrk)

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b) Bullock (1mrk)

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c. Epistasis(1mrk)

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SECTION B (20Mrks)

Answer all the questions in the spaces provided

17. Below is a diagram of a cooling system .Study it and answer the questions that follow
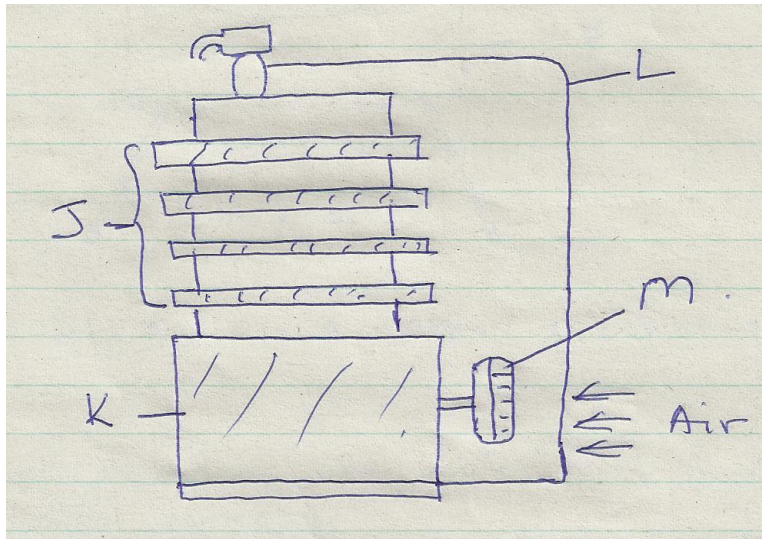
a) Identify the type of cooling system illustrated (1mrk

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b . Name parts labelled J, K , L and M (2mrks)

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c. Name two problems associated with the type of cooling system illustrated above(2mrks)

    (i)

    (ii)

18. Below is an illustration of a method of extracting honey from combs .Study the diagram and answer the question that follow .
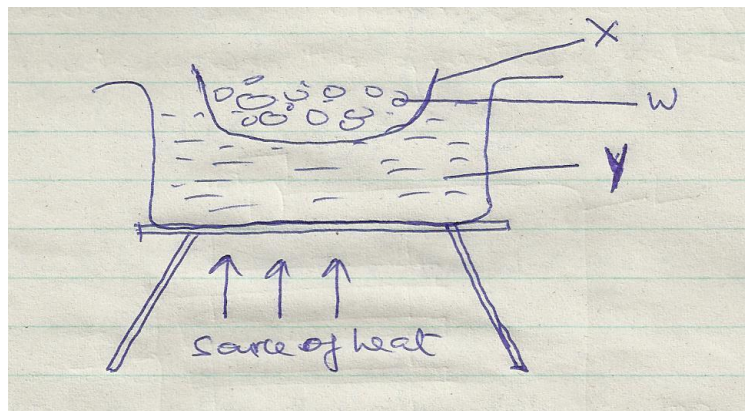
a) Indentify the above method of extracting honey (1mrk)

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b) Give a reason why container x should not be heated directly (1mrk

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c) Name the parts labeled w and y(2mrks)

    w

y

d) Besides the above method ,State one other method of extracting honey (1mrk)

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19The diagram below shows a certain practice carried out on pig
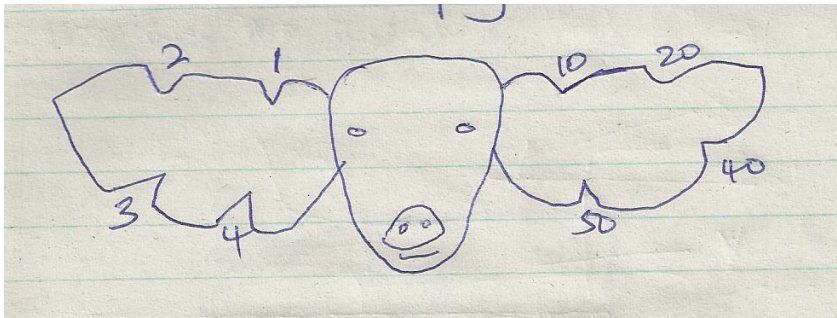
a) Identify the practice illustrated above (1mrk)

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b) Draw another illustration depicting pig number 37(1mrk)

c) Name the tool used to carry out the practice illustrated above (1mrk)

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d) State two other method of indentifying piglet (2mrks)

i)

ii)

20 .Below an illustration of a farm operation .Study it carefully and answer the question that follow.

a) Identify the activity being carried out (1mrk)

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b) Give one other activity carried on the animal before the above operation is carried out (1mrk)

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c) Outline the procedure of carrying out the above operation (3mrks)

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SECTION C

Answer any two questions in the space provided

21. Outline management practice carried out in a fish pond to ensure maximum harvest of fish (7mrlk)

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b) Discuss the importance of farm mechanization (6mrks

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c) Discuss the short term maintenance practices carried out on a tractor (7 marks)

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22. (a) Explain the feature of a piggery unit (10mrks)

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b) Explain the factor that influence the work output of a draught animal(10mrks)

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23. a)Outline various method of controlling ticks(10 mrks)

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b) Describe the management of growers up to the point of lay (10mrks)

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