KCSE BRAIN-WAVE PREMOCK

JOINT SERIES 1 TRIAL

ALL SUBJECTS

Compilation of First Trial Joint Pre-mock examinations for select National Schools within the cluster of Nairobi, Central, Coast, Nyanza and Western Kenya Regions.

All the Best to All Our KCSE 2024 Candidates.

SUBJECTS COMPILED;

Mathematics, English, Kiswahili, Biology, Chemistry, Physics, CRE, Geography, History, Business Studies, Agriculture Home-science & Computer Studies.

SERIES 1

For Marking Schemes

Mr Isaboke 0746-222-000 / 0742-999-000

MWALIMU CONSULTANCY

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

PHYSICS

232/1
PAPER 1 (THEORY)
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

(a) Write your name, index number in the spaces provided above.
(b) Sign and write the date of the examination in the spaces provided
*(c) This paper consists of **TWO** Sections: **A** and **B**.*
*(d) Answer **ALL** the questions in section **A** and **B** in the spaces provided.*
***(e)** All working **MUST** be clearly shown.*
(f) KNEC mathematical tables and silent non-programmable electronic calculators may be used.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1-13	25	
B	14	9	
	15	12	
	16	12	
	17	12	
	18	10	
	TOTAL SCORE	80	

SECTION A: 25marks

1. A stopwatch is used to time a runner in a race. **Figure 1** show the stopwatch at the start and at the end of a lap of the race.

Fig 1



start of lap



end of lap

State how long (in SI unit) did the runner took to finish the lap of the **race** **(1mark)**

……

2. The front views of two cars are shown in figure 2 , drawn to the same scale.

Fig 2



family car



racing car

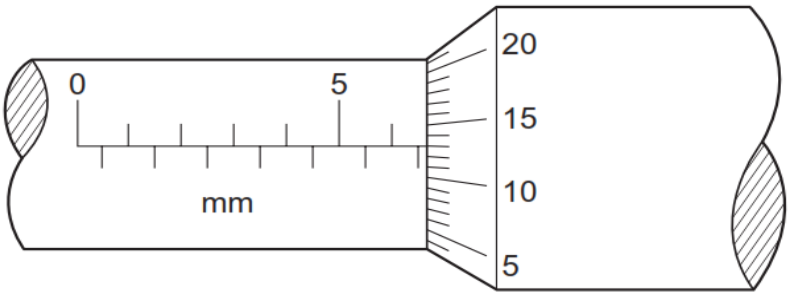
Suggest which car has the greater stability,and give a reason**.** **(2marks)**

……

……

3. Figure 3 below shows a micrometer screw gauge. State the reading **indicated** **(2marks)**

Fig 3



……

4. Figure 4 shows two identical springs of spring constant 3N/cm supporting a load of 30N.

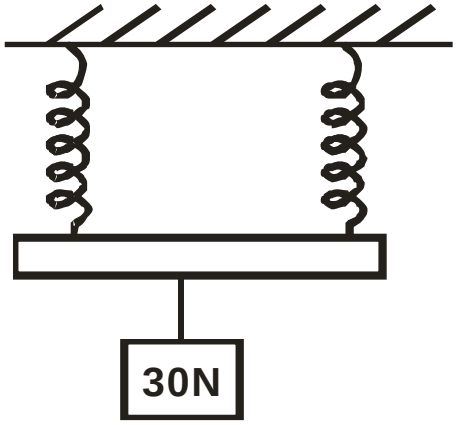


Figure 4

Determine the extension of each spring. **(2 marks)**

……

……

……

5.. Figure 5 shows a system for raising a heavy piece of metal into a vertical position.

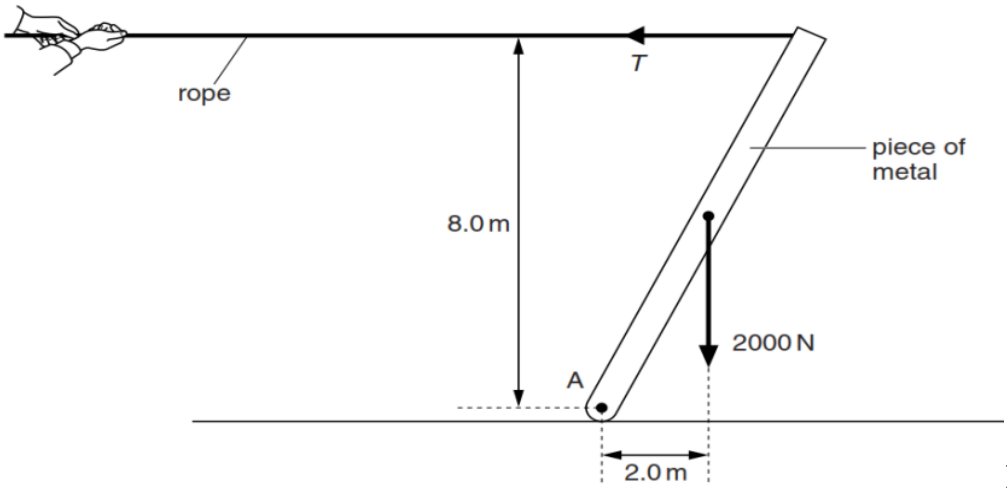


Fig 5

A man pulls on the rope with a horizontal force T. The piece of metal has a weight of 2000 N and is freely pivoted at A. The system is in equilibrium. By taking moments about A, calculate T**.** **(3marks)**

……

……

……

……

……

6. Explain why an aeroplane is likely to take off much earlier than expected when the speed of the wind blowing in the opposite direction to its motion on the runway suddenly increases **(2 marks)**

……

……

……

7.An aircraft 300m from the ground traveling horizontally at 400m/s releases a parcel. Calculate the horizontal distance covered by the parcel from the point of release. (Ignore air resistance)**(3 mks).**

……

……

……

……

……

8.A body of mass 4.0kg held at a vertical height of 500cm is released to travel a long a frictionless curved path as shown in figure 8

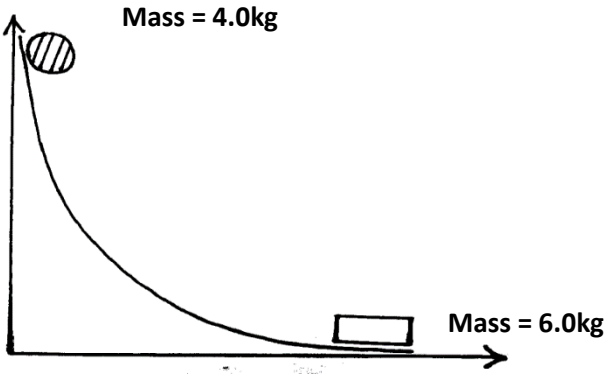


Fig 8

The 4.0kg mass strikes another body of mass 6.0kg at rest immediately it reaches the horizontal the bodies stick together and move in the same direction. Determine the velocity of the bodies immediately after collision. **(3marks)**

……

……

……

……

……

9.A tin with a hole is filled with water to a certain height. Water jets out as shown in figure 9(a) below. A second identical tin is filled with water to the same height and a block of wood floated as shown in figure 9(b).

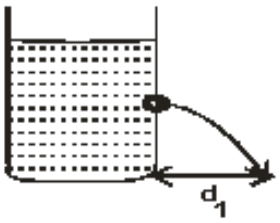


fig 9a

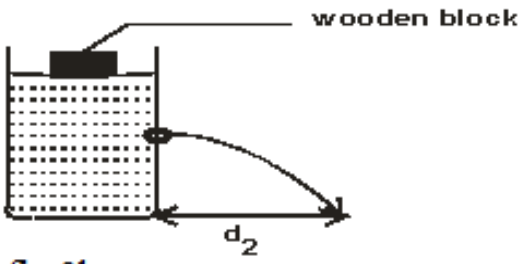


fig 9b

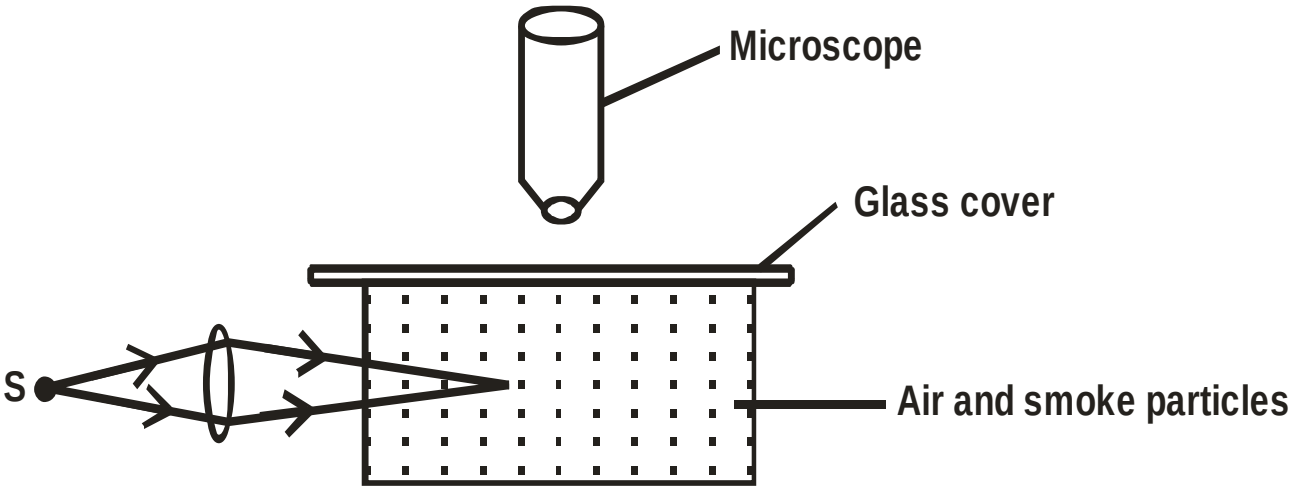
Fig 9

State the reason why the maximum distance of jet d_2 is greater than d_1. **(1 mark)**

……

……

10. The figure 2 below shows the apparatus used to observe Brownian motion using a smoke cell.



i) State the observation made in the smoke cell. **(1 mark)**

……

……

ii) Explain the observation made when the temperature in the smoke cell is increase**d.** **(1 mark)**

……

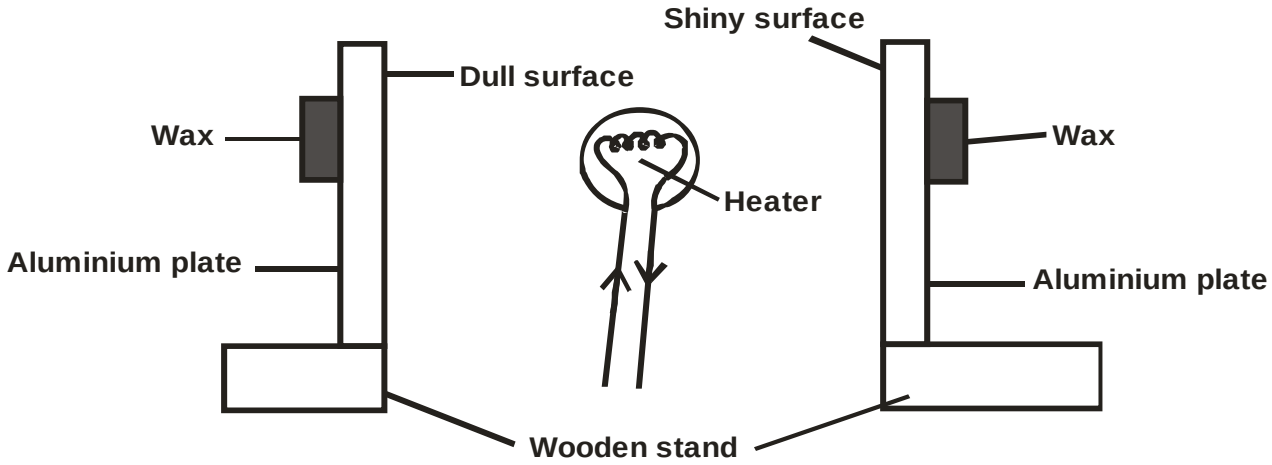
……

11. When a mercury in a glass thermometer is used to measure the temperature of hot water, it is observed that the mercury level first drops before beginning to rise. Explain. **(2 marks)**

……

……

12. Figure 3 shows an arrangement of apparatus to study properties of different surfaces.



The heater is placed equidistance from the two plates. State what happens when the heater is switched on for some time. **(1 mark)**

……

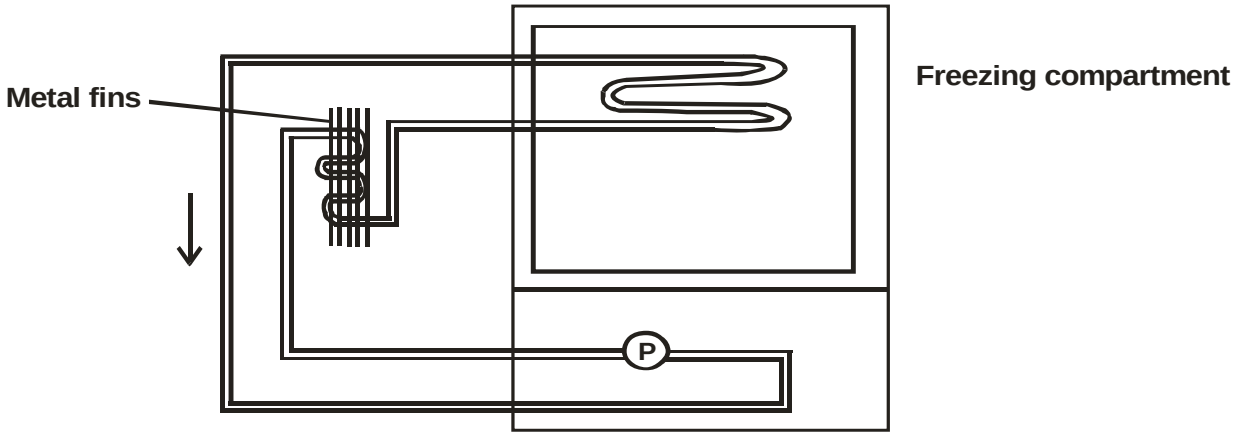
13. Expain your answer in question 12 **above** **(1mark)**

……

……

SECTION B: 55marks

14. **a)** The figure below shows the features of a refrigerator.



i) What is the function of the pump? **(1 mark)**

……

ii) What is the function of the copper fins at the back of the refrigerator? **(1 mark)**

……

iii) Explain briefly how cooling takes place in the refrigerator. **(3 marks)**

……

……

……

……

iv) What is the purpose of the double wall in a refrigerator? **(1 mark)**

……

……

b) i) Define the term latent heat of fusion of a substance. **(1 mark)**

……

……

ii) The figure below shows an apparatus that could be used to determine the specific latent heat of fusion of ice.

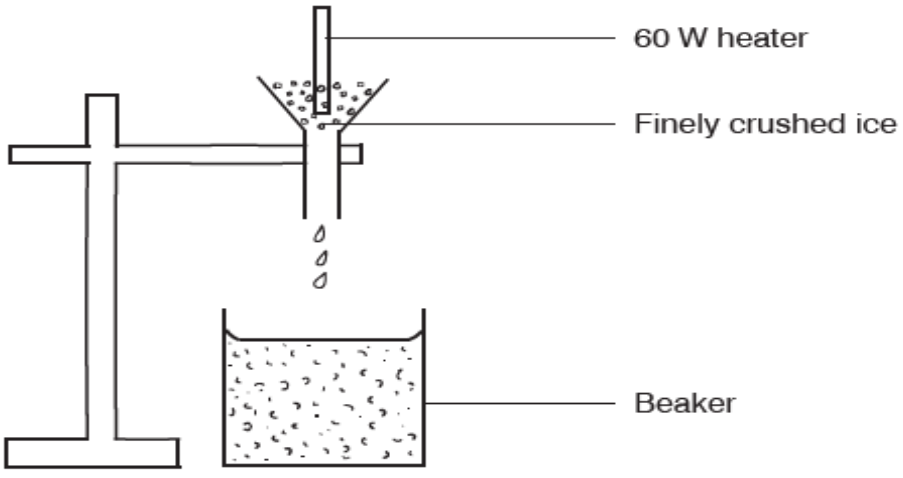


Fig 12

In order to obtain results that are as accurate as possible, state why it is important to:

I. wait until water is dripping into the beaker at constant rate before taking readings**.** **(1 mark)**

……

……

II. Use finely crushed ice rather than larger ones**.** **(1 mark)**

……

……

15. (a) State the law of flotation. **(1 mark)**

……

……

(b) Figure 13 below shows a uniform rod of height 8cm floating vertically in a beaker containing two immiscible liquids P and Q. The densities of the liquids are 800kg/m³ and 1200kg/m³ respectively the cross-sectional area of the rod is 2cm².

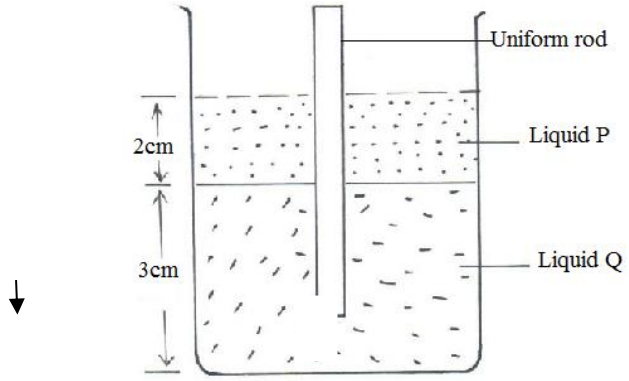


Fig 13

Determine

(i).the weight of liquid P displaced by the rod. **(3 marks)**

……

……

……

……

……

(ii) The weight of liquid Q displaced by the rod. **(2 marks)**

……

……

……

(iii) The mass of the rod. **(1 mark)**

……

……

(iv) The density of the rod. **(2 mks)**

……

……

……

(c). Figure 14 below shows a block of volume 50 cm^3 and density 2 000 kg/m^3 submerged in a liquid and suspended from a uniform horizontal beam by means of a thread. The beam is balanced by a spherical mass of 40 g, which is suspended from it on the other side of the pivot as shown

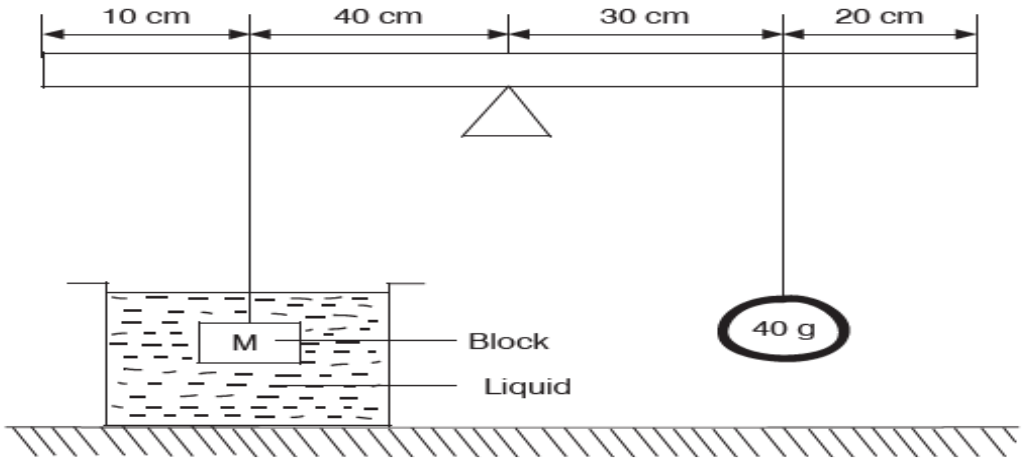


Fig 14

Determine the upthrust force acting on the block**.** **(3 marks)**

……

……

……

……

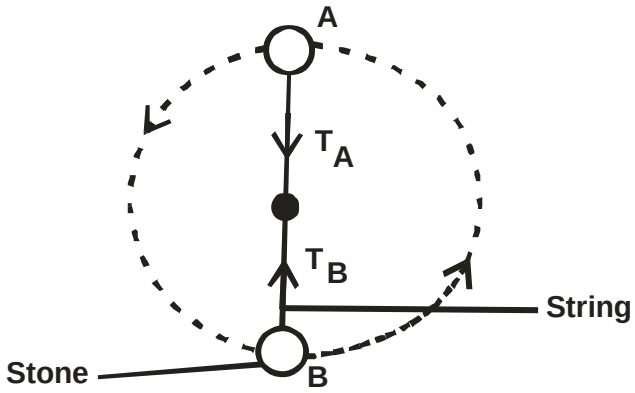
……

16. a) State two condition necessary for a driver to negotiate a bend on a banked bend at a relatively high speed **(2 marks)**

……

……

(b). The figure shows stone of mass 100g whirled in a vertical circle using a thread of length 56cm. (Take g 10N/Kg)



If the stone is whirled at a speed of 8m/s. Calculate;

i) The centripetal force experienced by the stone. **(3 marks)**

……

……

……

……

……

ii) Tension force on the string:

I) T_A **(2 marks)**

……

……

……

II) T_B **(2 marks)**

……

……

……

iii) calculate the angular velocity of the stone**.** **(1mark)**

……

……

……

(d)Figure 15 shows a centrifuge that is used to separate particles suspended in a liquid.

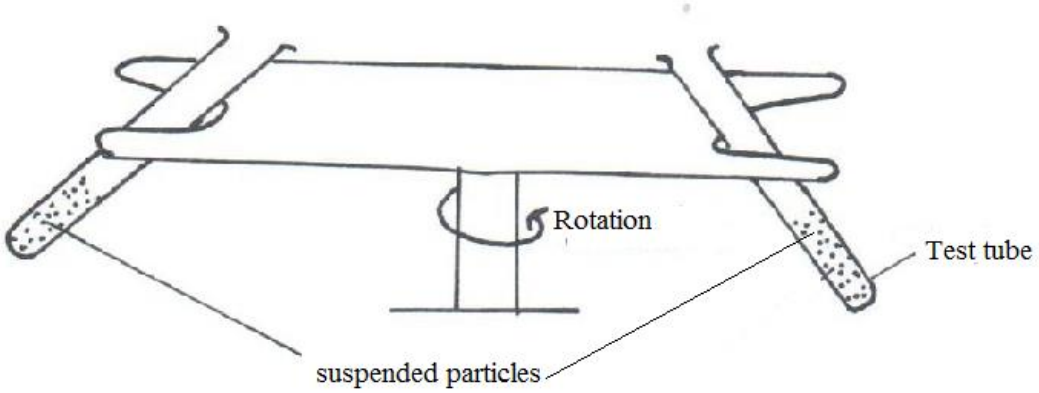


Fig 15

Particle of different mass M_1, M_2 and M_3 are suspended in a liquid which they do not dissolve. The system is then rotated in the direction shown.

(i). Explain why the particles of different masses will acquire different radii as the system is rotated.

(1 mark)

……

……

(ii). If M_3, $>M_2>$ M_1, arrange the particle in increasing radii when the centrifuge is rotated for some time. **(1 mark)**

……

17.a) State the one condition necessary for pressure law to hold**.** **(1 mark)**

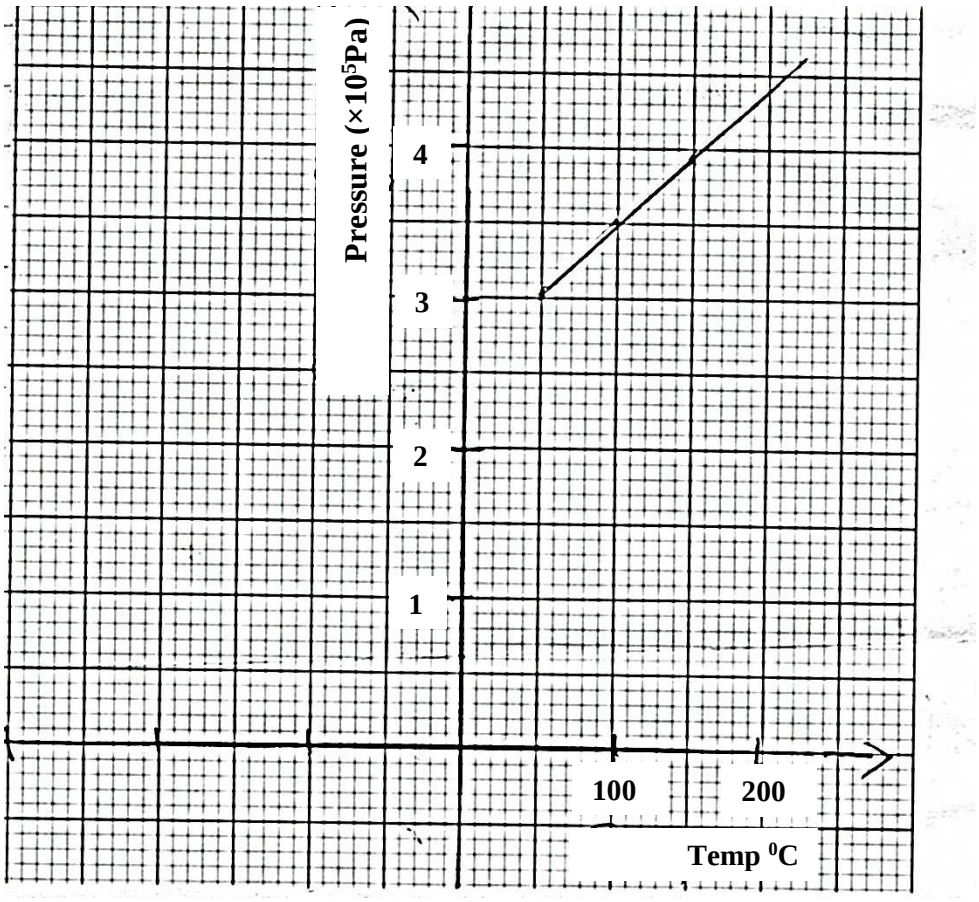
……

b) A bubble at the bottom of a pond expands as it rises to the top of the liquid. Explain. (**1 mark)**

……

……

c) The graph below represents a graph of pressure against temperature, ^oC.



From the graph, determine;

i)The absolute temperature. **(1 mark)**

……

Ii) The pressure at 373K **(1 mark)**

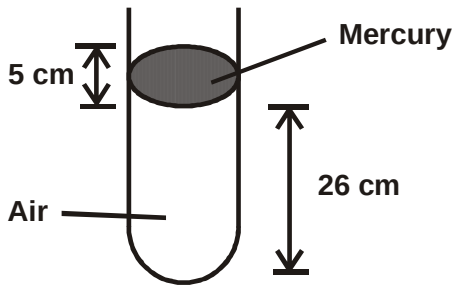
……

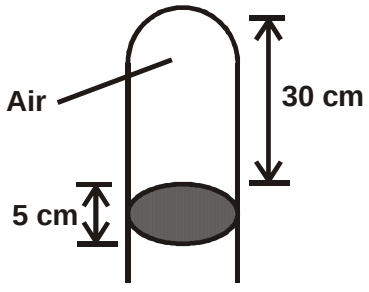
Explain why temperature in (i) above can not be achieved **(2 marks)**

……

……

d) A column of air 26cm long is trapped by mercury thread 5cm long. When the tube is inverted, the air column becomes 30cm long.What is the value of atmospheric pressure? **(3 marks)**





……

……

……

……

……

Explain using kinetic theory of gases why pressure of gases increases as temperature of the gas is increased. **(3 marks)**

……

……

……

……

……

18.a) Differentiate between work and energy. **(2 marks)**

……

……

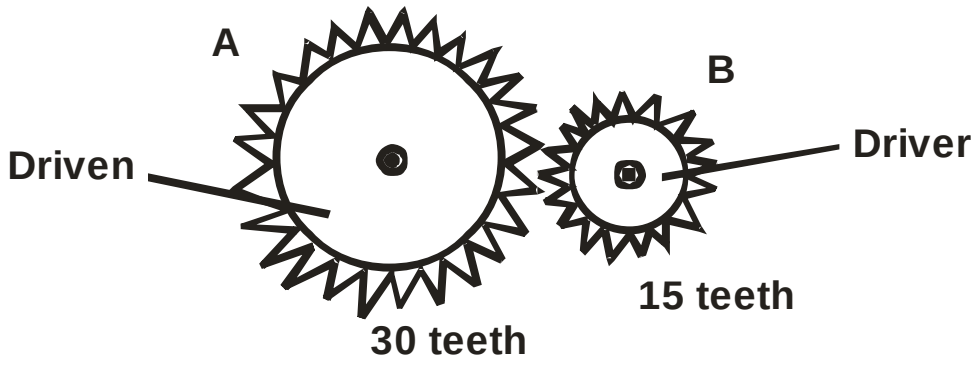
……

b) Describe the energy transformation that takes place when a car battery is used to light a bulb. **(1 mark)**

……

……

c) The figure shows a machine.



Gear wheel A with 30 teeth is driven by gear wheel B with 15 teeth.

i) Determine the velocity ratio of the machine. **(2 marks)**

……

……

……

ii) If the machine has a mechanical advantage of 0.375, determine the efficiency of the machine. **(2 marks)**

……

……

……

d) A cart of mass 30kg is pushed along horizontal path by a horizontal force of 8N and moves with a constant velocity. The force is then increased to 14N.

Determine:;

i) The resistance to the motion of the cart. **(1 mark)**

……

……

……

ii) The acceleration of the cart. **(2 marks)**

……

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

PHYSICS

232/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- ***a)*** *Write your name and index number in the spaces provided.*
- ***b)*** *Mathematical tables and non-programmable calculators may be used.*
- ***c)*** *This paper consists of section A and section B.*
- ***d)*** *Attempt all the questions in the spaces provided.*
- ***e)*** *ALL working MUST be clearly shown.*

FOR EXAMINERS USE

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 12	25	
B	13	13	
	14	15	
	15	15	
	16	12	
	TOTAL	**80**	

SECTION A (25 MARKS)

1. An object pin is placed in front of a plane mirror. The image of the pin is viewed from position A. Draw array diagram to show this image**.** **(2 marks)**

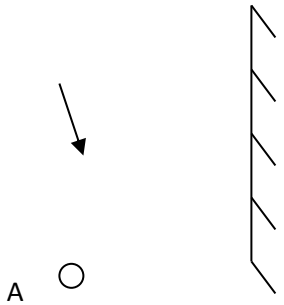


Figure 1

2. You are provided with two rods, a conductor and an insulator. Describe how you would use a charged gold-leaf electroscope to distinguish between the insulator and a conductor. **(2 marks)**

……

……

……

……

3. A pin-hole camera of length 10 cm is placed 0.5 m away from a goalpost. A sharp image of the goalpost 15 cm high is formed on the screen. Determine the height of the goalpost**. (2 marks)**

4. The figure 2 below shows a displacement- time graph of a particular progressive wave.

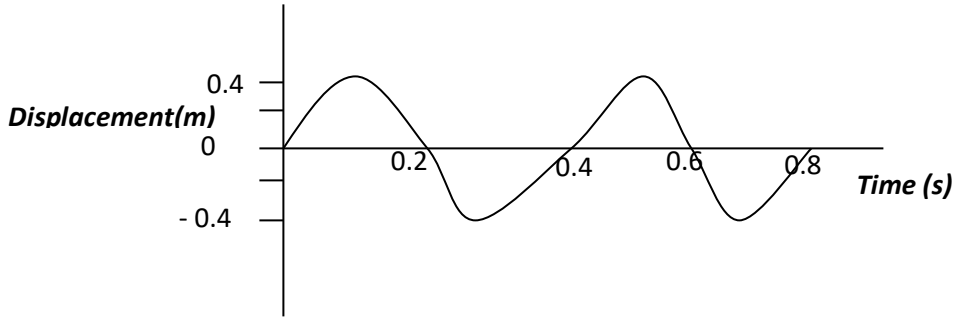


Figure 2

Draw on the same diagram, a wave which passes through the points with double frequency and half amplitude of the first wave**.** **(2 marks)**

5. Explain how temperature affects the speed of sound is gases **(1 mark)**

……

……

6. A polythene charged strip is brought near two spheres A and B that are in contact as shown in **figure 3**

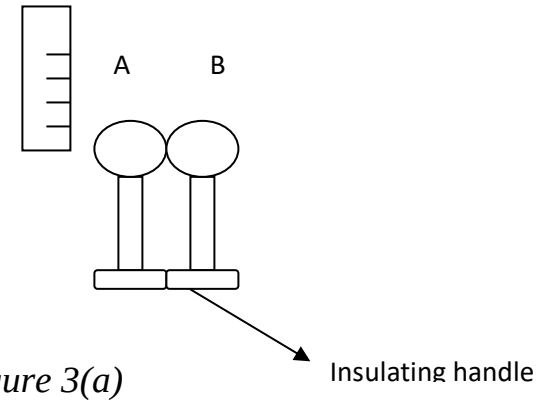


Figure 3(a)

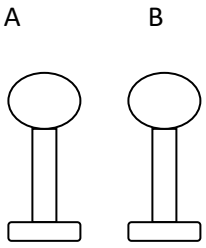


Figure 3(b)

(i) indicate the charge distribution the spheres when negatively charged polythene is brought near A. **(1 mark)**

(ii) draw the charge distribution on A and B shown in (b) when the spheres are separated and immediately polythene **withdrawn.** **(2 marks)**

7. Three identical lamps X, Y, Z are connected as in figure 4. The E.m.f applied in the circuit 3.0 volts

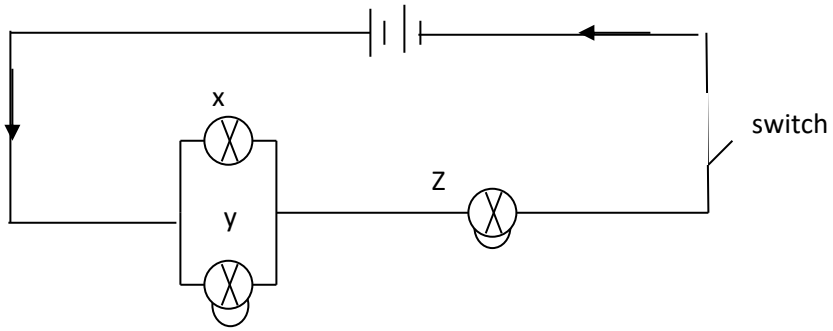


Figure 4.

(i) State which lamp is brightest when circuit is **closed?** **(1 mark)**

……

(ii) Explain your answer in part **(i) above.** **(2mrks)**

……

……

……

8. Figure 5 shows an iron rod on which a wire is to be wound to make an electromagnet.

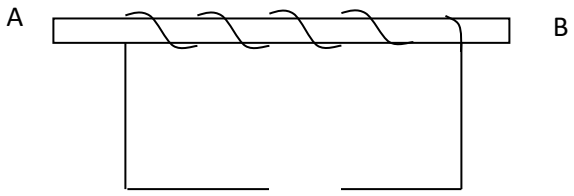


Figure 5

By drawing, show how two cells are connected so that end A becomes North pole and end B south pole. **(2marks)**

9. The force on a conductor carrying current in a magnetic field can be varied by changing, among others, the magnitude of the current and magnetic field strength. State two other factors that can be changed to vary the force**.** **(2marks)**

……

……

10. Using domain theory explain the differences between a magnetic material and a magnet**(2marks)**

……

……

……

……

11. Figure 6 shows water waves traveling from deep into shallow water.

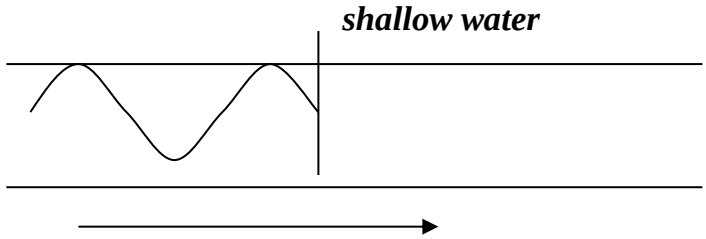


Figure 6

Complete the wave front to show how it travels in shallow **water** **(1 mark)**

12. Figure 7. Shows two rays incident on a converging lens

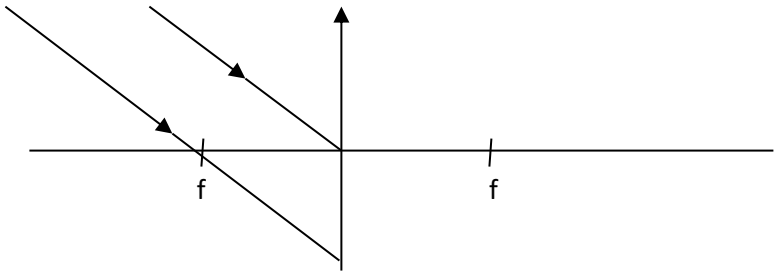


Figure 7.

(i) Draw the ray after refraction to show positions of the image**.** **(2marks/)**

(ii) State the application of this arrangement in (i) **above** **(1 mk).**

……

……

SECTION B(55 MARKS)

13. (a) Define refractive index of a material in terms of velocity of **light.** **(1mark/)**

……

……

(b) state the conditions necessary for a total internal refraction to **occur** **(2marks)**

……

……

(c) Figure 8 shows light ray traveling from air to glass and from glass to air. Ray of Light AO is incident normally on the semicircular glass,

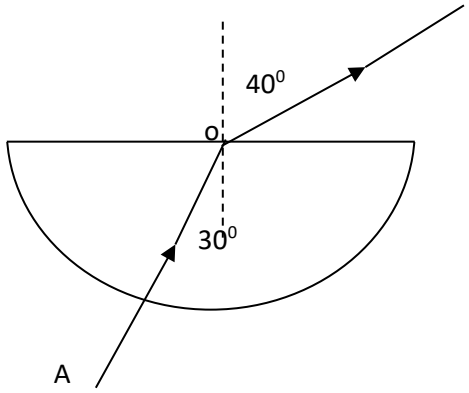


Figure 8

(i) Determine the refractive index of glass with respect to air. **(3 marks)**

(ii) In addition to the circular glass, you are provided with; a ray box (source of light ray), four office pins, soft board, white paper and a protractor, describe how this apparatus may be used to determine the critical angle of the glass. **(4marks)**

(iii) Determine the critical angle of this semicircular **glass.** **(3 marks)**

14.(a) you are provided with three resistors 1 Ω, 3 Ω and 6 Ω.

(i) Draw a circuit diagram to show 6Ω and 3Ω resistors in parallel and this combination in series with 2Ω resistor and the 6 V battery**.** **(2marks).**

(ii) Determine the total effective resistance in the circuit drawn in (i) above **(2 marks)**

(iii) Calculate the p.d across a 2 Ω **resistor** **(2 marks)**

(iv) Determine the value of current through the 6 Ω **resistor** **(3marks)**

(b) Figure 9, shows a graph of potential difference (V) against current (I A) through a filament lamp (bulb)

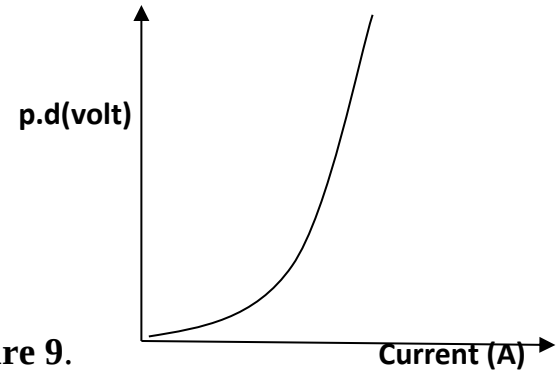


Figure 9.

(i) Draw a well labeled working circuit diagram showing the apparatus that can be used to obtain a set of readings used to draw the graph in (figure9**).** **(2marks)**

(ii) explain why the filament lamp does not obey ohm's **law** **(2 marks)**

……

……

(iii) Explain how resistance of the filament lamp varies as current increases. **(1 mark).**

……

……

(iv) State the characteristics of material wire used in the filament lamp. **(1 mark).**

……

……

15. (a)define capacitance of a capacitor. **(1 mark)**

……

……

(b) (i) Describe the essential features in the construction of a parallel plate capacitor. **(3 marks)**

……

……

……

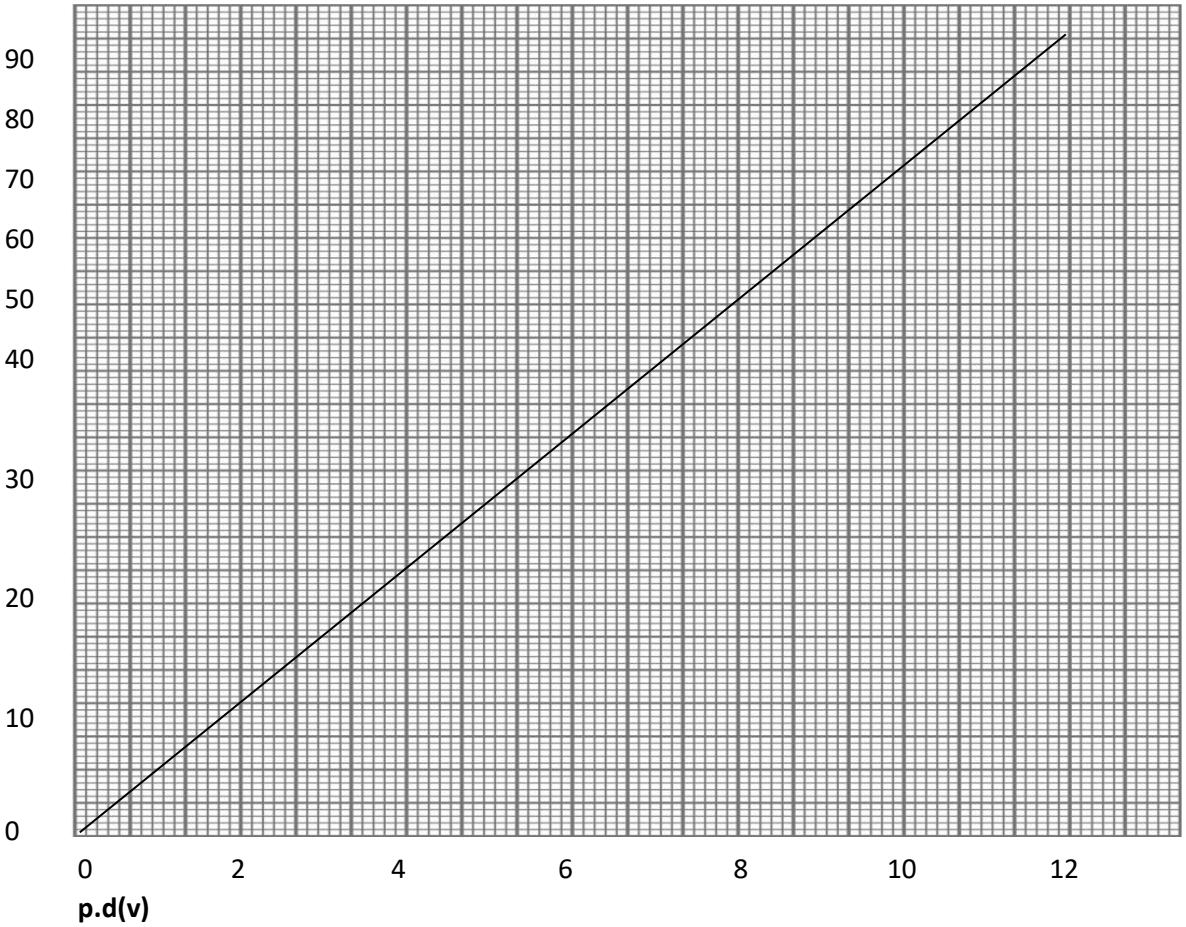
……

(iii) Explain how charge is distributed in such parallel capacitor in b(i) above. **(2marks)**

……

……

(c) In an experiment to charge a capacitor, the charge stored was measured for different values of charging potential difference. A graph of charge stored Q (μc) (y-axis) against potential difference p.d (v) was plotted as shown graph 1.



(i) list down the apparatus used to perform this experiment **(1 mark)**

……

(ii) draw a circuit diagram showing all connections of the listed apparatus in (i) above to perform the experiment of charging a capacitor**.** **(2 marks)**

From the graph

(ii) determine the capacitance of the capacitor used in this experiment. **(3 marks)**

(iii)Calculate the energy stored in this capacitor**.** **(2 marks)**

(d) Three capacitors are connected a shown in figure 10.

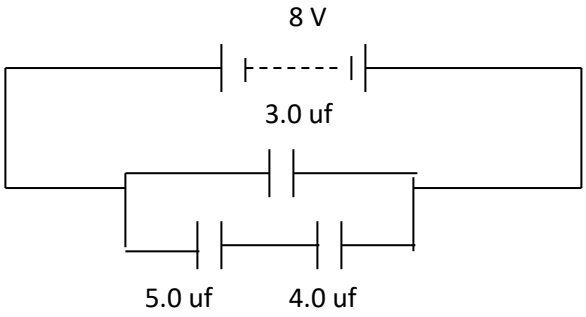


Figure 10

Calculate:

(i) total effective capacitance in the circuit**.** **(2 marks)**

(ii) The charge on a 4.0 μF capacitor**.** **(2 marks)**

16. (a) Complete figure 11 by drawing two rays to show the final image formed by convex lens of the object O, shown **(2 marks)**

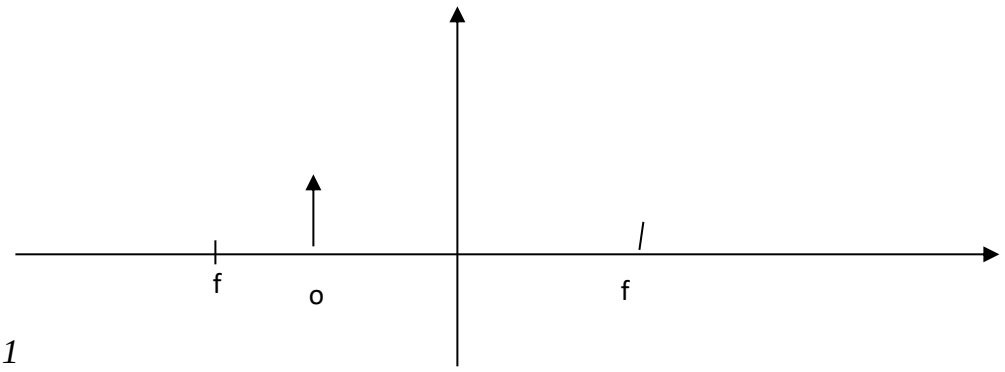


Figure 11

(b) Describe the characteristics of the image formed in 16 (a) **above** **(3 marks)**

……

……

……

……

(c) State the optical device that uses the arrangement in (**a) above.** **(1 mark)**

……

(d) A person viewing a near object switches attention to look at an aero-plane far away.

(i) State the change that occurs in his eye in order to see the aero-plane clearly. **(2 marks)**

……

……

……

(ii) If this person fails to see the aero-plane clearly, what defect is he suffering from? **(1 mark)**

……

……

(iii) Explain with a diagram how the defect can be corrected. **(3 marks)**

……

……

……

……

……

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

PHYSICS

232/3
PAPER 3 (PRACTICAL)
TIME: 2½ HOURS

CONFIDENTIAL

Each candidate requires

Question 1

- Metre rule.
- Knife edge raised 20cm above the bench.
- 50g mass.
- 100g mass.
- 4 pieces of thread length -about 30cm
- Water in a beaker.
- Liquid L in a beaker (Glycerine).
- Two dry cells.
- Ammeter (0 – 2.5A) or (0 – 1A
- Voltmeter (0 – 5V) or (0 – 3V).
- 6 connecting wires.
- 4 crocodile clips.
- Nichrome wire on a metre rule (28 SWG).
- Cell holder.
- Switch.
- Micrometer screw gauge (to be shared).
- Tissue paper (Piece)

Question 2

- Plane Mirror
- Metre rule
- Lens of focal length 15cm
- Lens holder
- Card board with crossed wire at its centre
- Screen
- Candle
- A piece of Cellotape

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

PHYSICS

232/3

PAPER 3 (PRACTICAL)

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

1. *Write your name and Adm number in the spaces provided above.*
2. *Sign and write the date of the examination in the spaces provided above.*
3. ***All** working must be clearly shown.*
4. *You are not allowed to start working with the apparatus for the first ¼ hours of the **2½** hours allowed for this paper. This time is to enable you read the question paper and make sure you have all the apparatus you may need.*
5. *Marks are given for a clear record of the observations actually made, for their suitability and accuracy and the use made of them.*
6. *Candidates are advised to record their observations as soon as they are made.*
7. *Mathematical tables and electronic calculators **may be** used in calculations.*

FOR OFFICIAL USE ONLY

Question 1		Total
Maximum score		20
Candidate's score		

Question 2		Total
Maximum score		20
Candidate's score		

GRAND TOTAL		

QUESTION 1

PART A

You are provided with the following:

- A metre rule.
- Knife edge raised 20cm above the bench.
- One 50g mass and 100g mass.
- Some thread.
- Some water in a beaker.
- Tissue paper.
- Liquid L in a beaker.

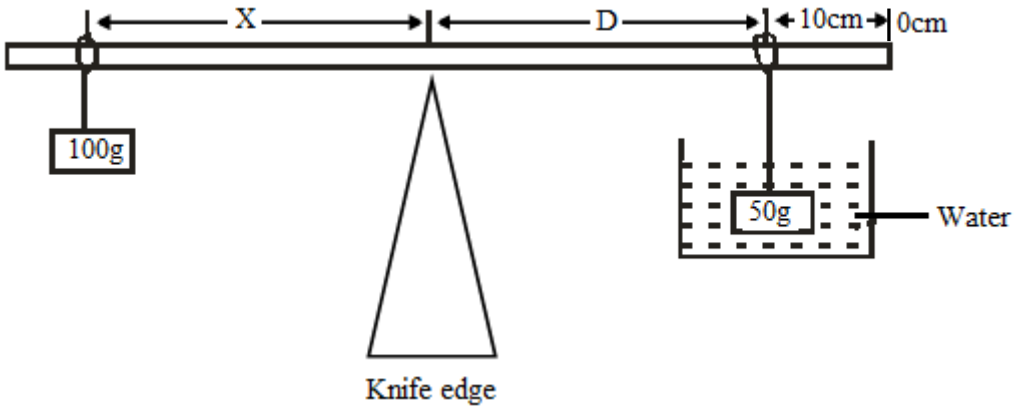
Proceed as follows

a) Balance the metre rule on the knife edge and record the readings at this point.

Balance point …….. cm **(1 mark)**

For the rest of the experiment, the knife edge must be placed at this point.

b) Set up the apparatus as shown in figure below. Use the threads to hung the masses such that the positions of support can be adjusted.



The balance is attained by adjusting the position of the 100g mass. Note the distance X cm and D cm are measured from the knife edge and 50g mass is fully immersed in water. Record the values **of X and D.**

X = …… cm **(1mark)**

D = ……..…… cm **(1 mark)**

Apply the principle of moments to determine the weight W_1 of the 50g mass in water and hence determine the upthrust U_W in water.

W_1 =……N **(2 marks)**

U_W =……... N **(1 mark)**

Remove the 50g mass from the water and dry it using tissue paper.

c) Now balance the metre rule when the 50g mass is fully submerged in liquid L. Record value of the distance X.

X = ……..…..cm **(1 mark)**

Apply the principle of moments to determine the weight W_2 of the 50g mass in the liquid L and hence determine the upthrust U_L in the liquid

W_2 =……. **(2 marks)**

U_L = ……..….. **(1 mark)**

d) Determine the relative density R_D of the liquid L given that:

$R_D = \frac{U_L}{U_W}$ **(2 marks)**

……
……
……
……
……

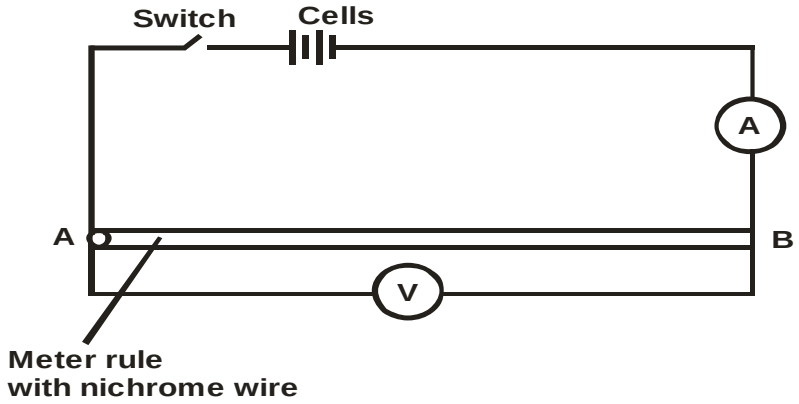
PART B

You are provided with the following.

- One ammeter (0 – 2.5A) or (0 – 1A).
- One voltmeter (0 – 5V) or (0 – 3V).
- 6 connecting wires, each at least 50cm long and at least four crocodile clips.
- Nichrome wire AB fixed on a meter rule.
- One cell holder.
- One switch.
- One micrometer screw gauge (to be shared).
- Two new dry cells

Proceed as follows

a) Connect the circuit as shown below.



Close the switch and read the current (I) and the p.d across AB (V).

(i) V = ……V **(1mark)**

(ii) I = ……A **(1 mark)**

(iii) Calculate the resistance R of the wire using the values V and I.

R …… **(1 mark)**

(iv) Measure the diameter of the wire using a micrometer screw gauge and calculate its cross sectional area.(A)

d……..**mm** **(1 mrk)**

d……..m **(1 mark)**

Area (in m^2) **(2marks)**

……

……

……

v) Determine the quantity φ given that;

$R = \frac{\varphi}{A}$ **(1 mark)**

……

……

……

QUESTION 2

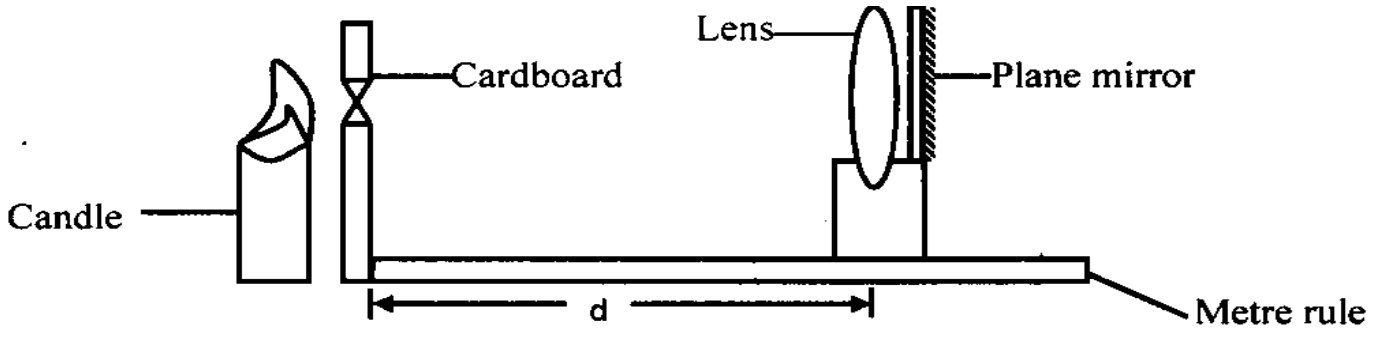
You are provided with the following;

- Candle
- Plane mirror
- Metre rule
- Lens
- Lens holder
- A cardboard with cross-wire at its centre
- Screen
- A piece of Cellotape

Proceed as follows;

a) Attach the plane mirror to the lens using cellotape.

b) Set up the apparatus as shown below.



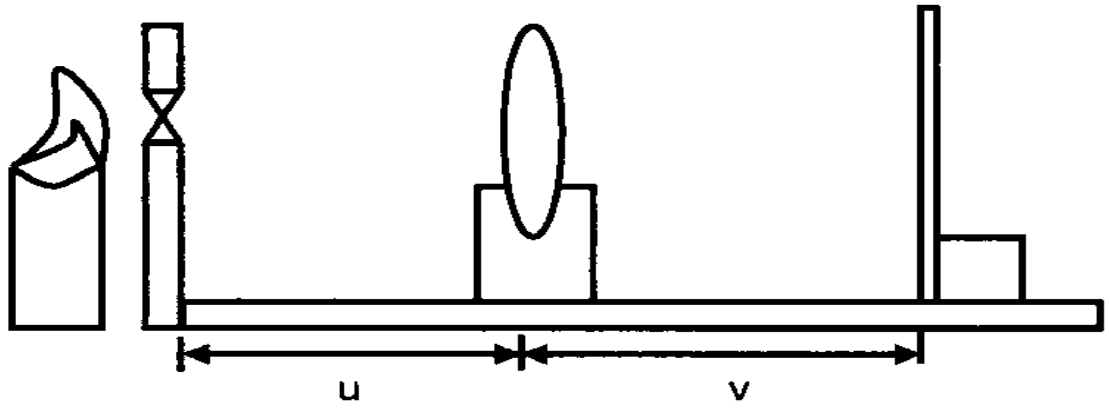
Ensure that the candle flame is at the same level as the cross wire.

c) Place the cardboard with cross wires at the 0cm mark

d) Move the lens along the metre rule until a sharp image of cross-wire is formed alongside the object cross wire. Measure the length d.

e) d = ……cm **(1 mark)**

Now set up the apparatus as shown below.

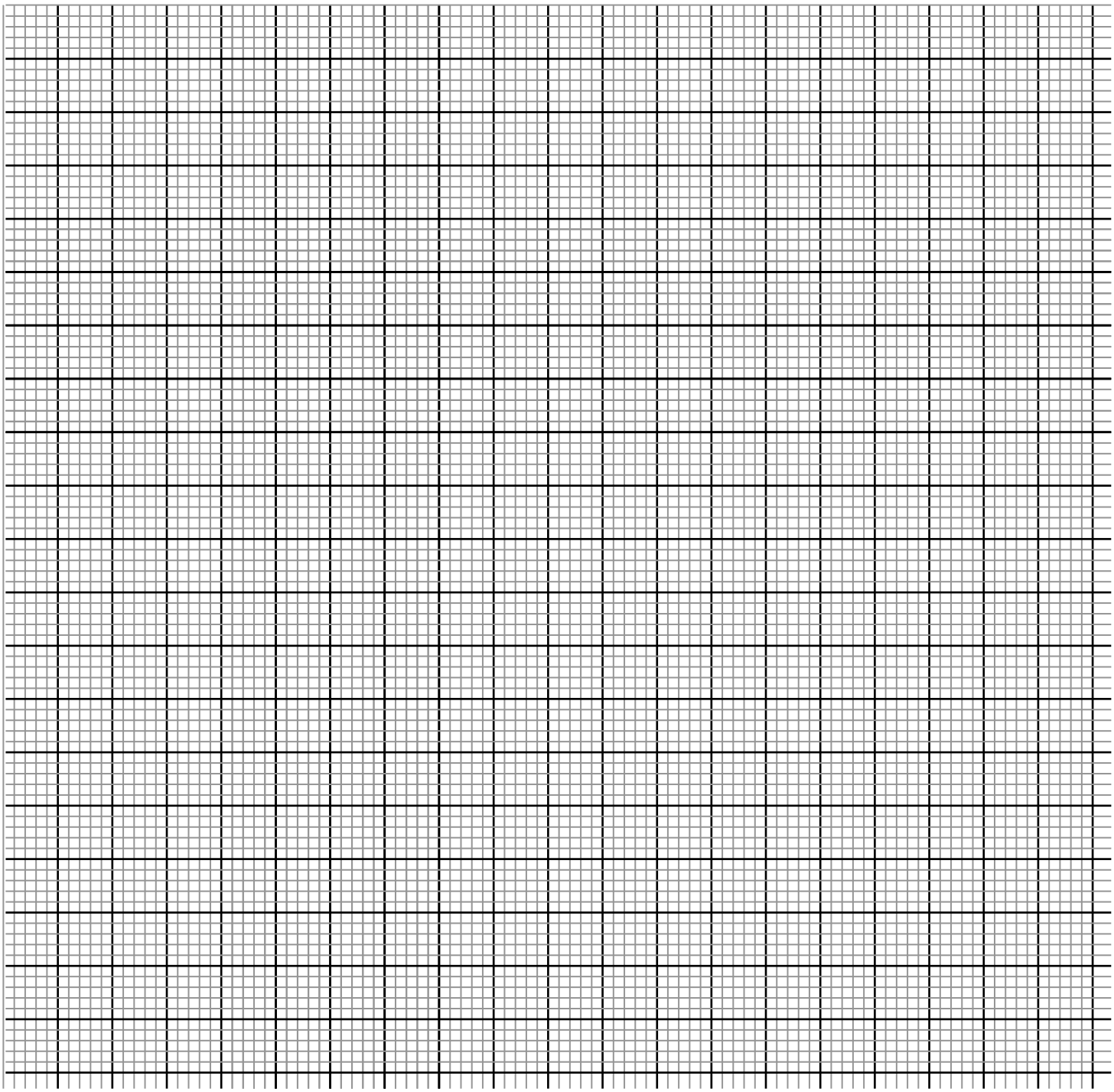


f) Set u = 25cm and adjust the screen until a clear image of the cross wire appears on the screen. Measure the value of **v** and record in the table.

g) Repeat the procedure (e) above for other values of **u** and complete the table below. **(7 marks)**

u (cm)	25	30	35	40	45	50
v (cm)						
m = $\frac{v}{u}$						

h) Plot a graph of **m** against **v**. **(5 marks)**



Determine the slope of the graph. **(3 marks)**

……

……

……

……

……

i) Given that the equation of the graph is given by $\left(m = \frac{v}{n} - 1\right)$ where ***n*** is a constant, determine the value of ***n***. **(2 marks)**

……

……

……

……

……

j) What physical quality does ***n*** represent? **(1 mark)**

……

……

k) Find the value of **v** when **m** = 0. **(1 mark)**

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BIOLOGY

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

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

(Kenya Certificate of Secondary Education)

INSTRUCTIONS TO CANDIDATES

a. *Write your name and class in the space provided above*

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

c. *Answer all the questions in the spaces provided*

d. *Candidate should answer all the questions in English*

FOR EXAMINER'S USE ONLY

QUESTION	**MAXIMUM SCORE**	**CANDIDATE'S SCORE**
1- 32	**80**	

QUESTIONS

1. Identify the following. **(2mrks)**

i. Type of movement in cells.

……

ii. Arrangement of leaves on a plant.

……

2.

i. Explain how adequate water supply increases the rate of glucose formation in **plants.** **(1mrks)**

……

……

ii. Name the element obtained from insects by insectivorous plants**.** **(1mrk)**

……

3.

a. A mushroom research station would like to employ a researcher. Which scientist is most appropriate**.** **(1mrk)**

……

b. Name the branch of biology that deals with phylogenetic relationship between organisms**. (1mrk)**

……

4. State the role of the diaphragm.

i. In the light microscope**.** **(1mrk)**

……

……

ii. During ventilation in man**.** **(1mrk)**

……

……

5. Explain why plants absorb water in waterlogged soil but not mineral salts. **(2mrks)**

……

……

……

6. A biological washing detergent removes stains like oils from cloths.

i. Name the enzyme that it contains. **(1mrk)**

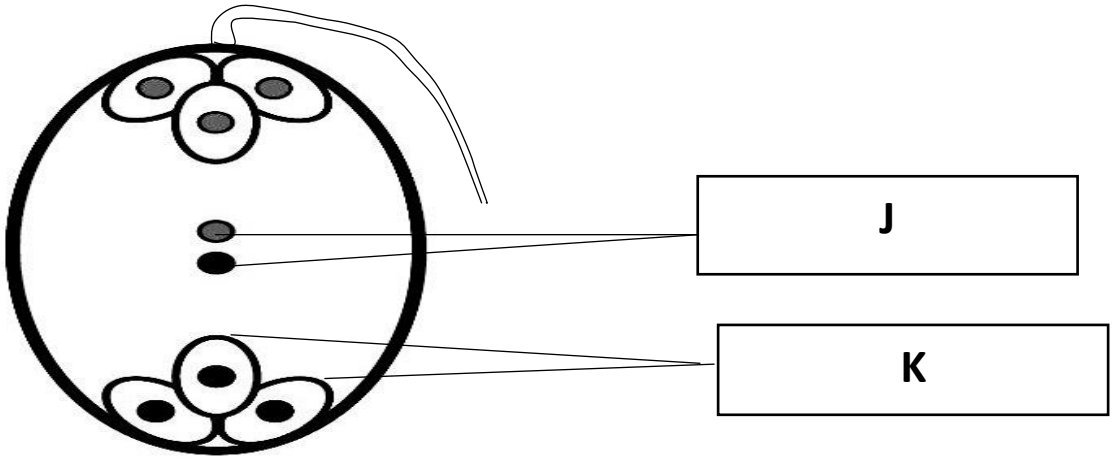
……

ii. Explain why the stains would be removed faster with the detergent in water at 35°c rather than at **15°c.** **(1mrk)**

……

……

7. Below is a diagram of an embryo sac.



Identify the structures labelled**.** **(2mrks)**

J-……

K-……

8. Explain why low temperature will cause seed dormancy by not very high temperatures**. (1mrk)**

……

……

9.

a. Explain why the average length of the chicken egg is 6cm while that of a human is 0.1mm**.(1mrk)**

……

……

b. Identify two features that enable mammalian fallopian tubes perform their function**.** **(2mrks)**

……

……

10.

a. State a limiting factor of using a potometer to measure the rate of transpiration. **(1mrk)**

……

……

b. Name the tissue that transports hormones in plants. **(1mrk)**

……

11. To control the spread of malaria, fish are introduced into water bodies near residential area.

a. Name this method of population control. **(1mrk)**

……

b. State an advantage of the above method. **(1mrk)**

……

12. Apart from vaccination, state two ways of controlling highly infectious disease among animals. **(2mrks)**

……

……

……

13.

a. Name the enzyme that breaks down hydrogen carbonate ions in mammalian blood to release carbon (IV) oxide. **(1mrk)**

……

b. Explain why obligate anaerobes die in presence of oxygen. **(1mrk)**

……

……

14.

a. Name the group of sporangia born on fern leaves. **(1mrk)**

……

b. Why are fruits not produced in gymnosperms? **(1mrk)**

……

……

15.

a. Explain why lactating mothers need extra energy. **(1mrk)**

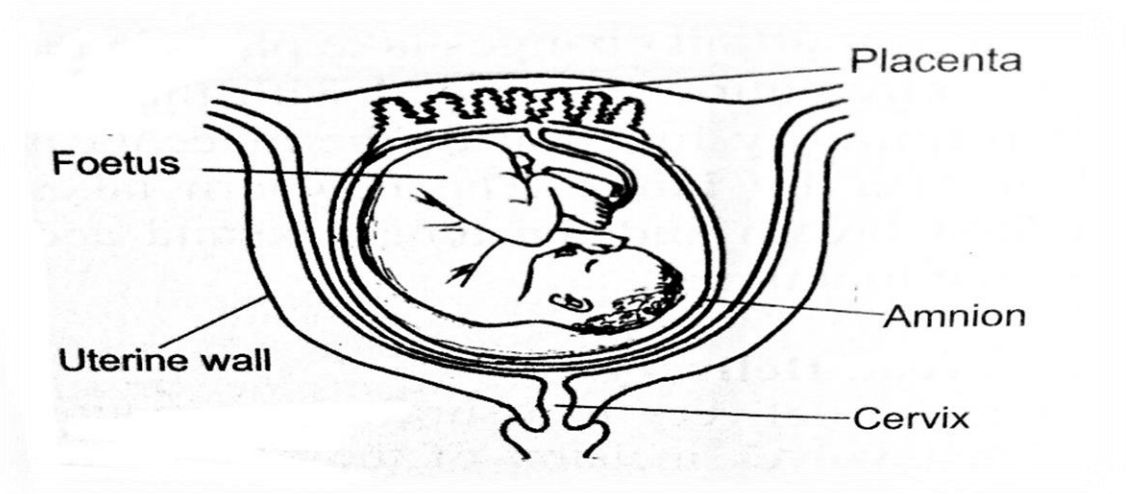
……

……

b. State the function of interstitial cells found in the testes. **(1mrk)**

……

16. Below is a diagram showing a foetus in the uterus.



State two observations showing that parturition is about to take place**.** **(2mrks)**

……

……

17. The symptoms of typhoid disease include high fever, vomiting and diarrhoea. Explain why they may lead to death if not treated. **(2mrks)**

……

……

……

18. The table below represents a chromatid which undergoes a mutation, the letters genes.

Before mutation

L	M	N	O	P	Q

After mutation

L	O	N	M	P	Q

a. Name the type of mutation. (1mrk)

……

b.

i. Identify the nucleic acid whose base sequence is shown below**.** **(1mrk)**

G-A-C-U-A-G-A-C-G

……

ii. If the above strand was involved in protein synthesis, how many amino acids would the protein have? **(1mrk)**

……

19. Explain why resistance to antibiotics is considered an example of evolution**.** **(2mrks)**

……

……

……

20.

a. People are encouraged to take the corona virus disease vaccine. How does it work? **(1mrk)**

……

……

b. What is the significance of;

i. Red blood cells lacking mitochondria. **(1mrk)**

……

……

ii. Xylem vessels being dead**.** **(1mrk)**

……

……

21. Use of fossil fuel as source of energy causes global warming. Governments are being encouraged to use 'clean energy'. State two sources of this energy**.** **(2mrks)**

……

……

……

22. An athlete training to take part in an international competition moved to a high attitude area to train for 12 days. He took his pulse rate per minute and recorded as shown below.

Day	1	2	3	4	5	6	7	8	9	10	11	12
Pulse rate	72	78	89	92	92	90	86	80	77	74	72	72

Account for the change in the pulse rate from.

i. Day 1-5. **(2mrks)**

……

……

……

ii. Day 6-12. **(2mrk)**

……

……

……

23. A patient complained of frequent thirst. A sample of the patient's urine was found not to have any sugar.

i. Name the hormone the person was deficient of. **(1mrk)**

……

ii. Name the gland that secretes the above hormone. **(1mrk)**

……

24.

a. The paddles of a whale and fins of a fish adapt them to aquatic habitat.

i. Name the evolutionary process that may have given rise do these structures. **(1mrk)**

……

ii. What name is given to such structures? **(1mrk)**

……

b. State two advantages of natural selection. **(2mrks)**

……

……

25.

a. Explain why ingestion of salty food may reduce the amount of water passed out in urine. **(2mrks)**

……

……

……

b. Explain why small birds puff their features when cold. **(2mrks)**

……

……

……

26.

a. Explain why halophytes have pneumatophores. **(1mrk)**

……

……

b. Explain how the following features adapt root hairs cells to absorption

i. Large sap vacuole. **(1mrk)**

……

……

ii. Numerous mitochondria. **(1mrk)**

……

……

27. A certain metabolic pathway takes place following sequence. **J-K-L-M-N**

An inhibitor was added to the reactants during an experiment. At the end of the experiment, there was more K and little L, M and N.

a. At what stage of the sequence was the inhibitor added. **(1mrk)**

……

b. Briefly explain how the inhibitor affected the reaction. **(2mrks)**

……

……

……

28.

a. Suggest a change in the diet of a person whose liver is damaged. **(1mrk)**

……

……

b. State the importance of caecum in herbivores. **(1mrk)**

……

c. Name the polysaccharide that offers mechanical support in;

i. Arthropods **(1mrk)**

……

ii. Plants. **(1mrk)**

……

29.

a. Explain why an effective respiratory system is associated with the circulatory system**. (2mrks)**

……

……

……

b. Distinguish between haemoglobin and myoglobin. **(2mrks)**

……

……

……

30.

a. New born babies have a higher heart beat than adults. Explain why**?** **(2mrks)**

……

……

b. What Is the advantage of oxyhaemoglobin over carboxyhaemoglobin**?** **(1mrk)**

……

31. Explain why;

i. Fish pass a lot of water over the gills frequently. **(1mrk)**

……

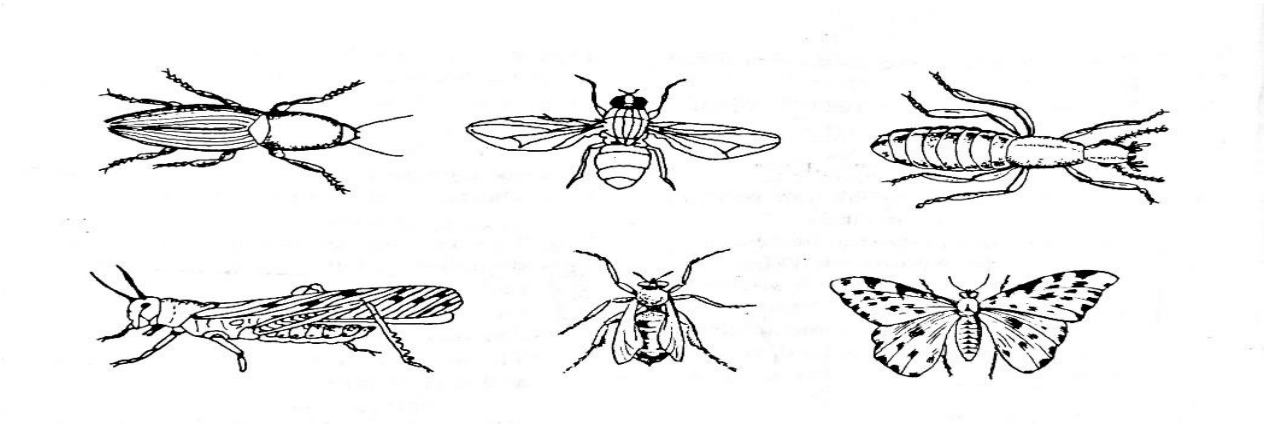
……

ii. Lack of magnesium leads to yellowing of leaves**.** **(1mrk)**

……

……

32. The organisms below belong to kingdom Animalia.



a. Name the phylum and class where they belong**.** **(2marks)**

i. Phylum**.**……

ii. Class **……/..**

b. Give a reason for placing the organisms in the class in (**a(ii)** above**.** **(1mrk)**

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BIOLOGY

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

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES;

(a) *Write your name, index number, date and sign on the spaces provided above.*

(b) *Answer ALL questions in section A.*

(c) *In section B, answer question 6 (compulsory) and either question 7 or 8.*

(d) *Candidates should answer the questions in English.*

FOR EXAMINERS' USE ONLY

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.

1. A common species of rats has individuals with white, black or grey coats. During a study, a rat with white coat was crossed with a rat with black coat. Both parents were pure lines. All theoff springs in F_1 generation had grey coats. Using letter B to represent the gene for black coat and W for white coat, answer the questions that follow.

a) Work out the phenotypes of the F_1 generation. **(4marks)**

b) Give a genetic explanation of the nature of off springs in the F_1generation. **(1mark)**

……

……

c) State the significance of a Test cross in the study of genetics. **(1mark)**

……

……

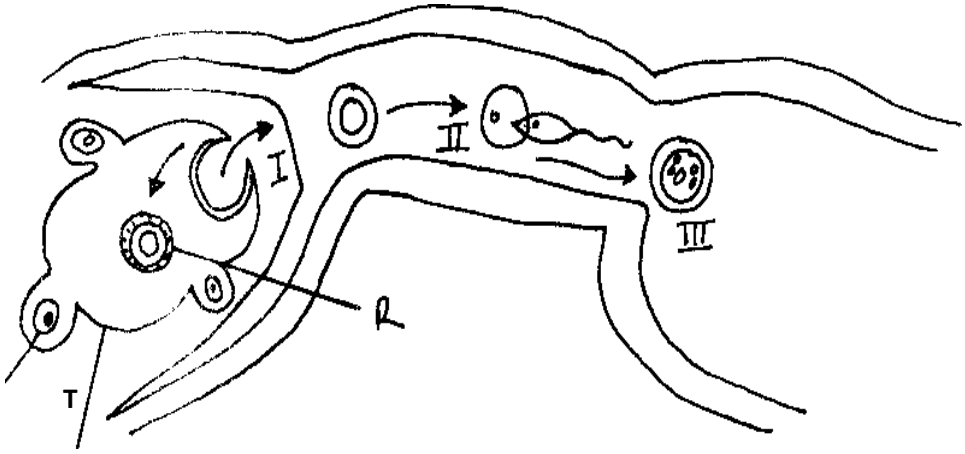
d) State the importance of crossing over in meiosis. **(1mark)**

……

e) Name one example of a characteristic in man that is transmitted by multiple alleles. **(1mark)**

……

2. The diagram below shows some of the processes that take place in a female reproductivesystem.



Ovary

a) Name process labeled; **(1mark)**

I. ……

b) Name structures labeled; **(2marks)**

T. …….

R. …….

c) Identify hormones responsible for formation of structures. **(2marks)**

T. …….

R. …….

d) Explain what leads to process at II. **(3marks)**

……

……

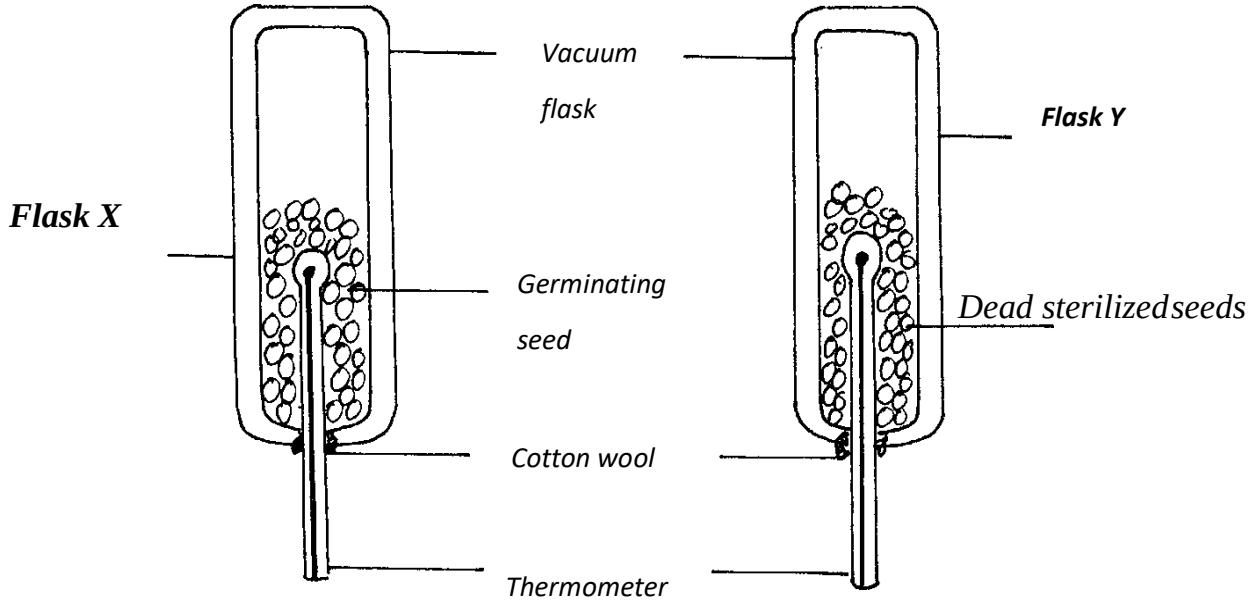
……

……

……

3. A group of students set up the apparatus below to investigate a physiological process.

Temperature changes were recorded for a period of one week.



(a) State the observation made in temperature reading in flask X **(1 mark)**

……

Give a reason **(2marks)**

……

……

b) Why are micro-organisms killed in boiled beans? **(1mark)**

……

c) Give a reason as to why the flasks were not fully filled with seeds **(1mark)**

……

……

d) Why were flasks inverted upside down? **(1mark)**

……

e) Why is the experiment carried out in a vacuum flask? **(1mark)**

……

f) What alteration would be made in the set up to make the results more reliable? **(1mark)**

……

……

4. Gastrin is a hormone produced by mammals.

(a) (i) Where is the hormone produced. **(1mark)**

……

(ii) What is the function of gastrin? **(1mark)**

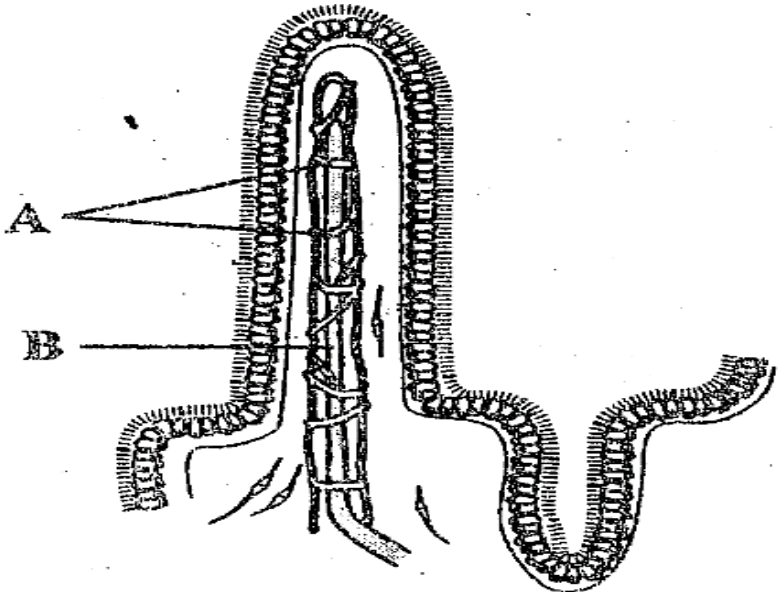
……

(b) What stimulates the production of gastrin? **(1mark)**

……

……

(c) The diagram below shows part of the human intestine.



(i) Identify the parts labeled **A** and **B.** **(2marks)**

A…….

B……..

(ii) To which circulatory system does the part labeled **B** belong. **(1mark)**

……

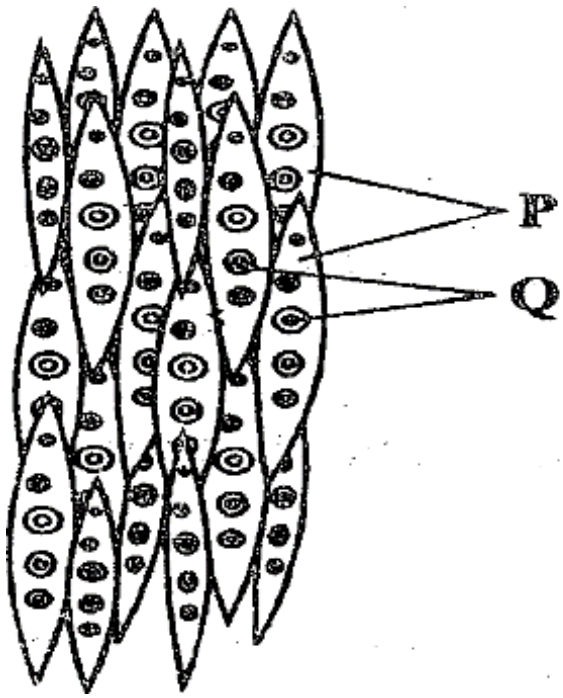
d) State any **two** adaptations of the human large intestine to its function. **(2marks)**

……

……

……

5. The diagram below represents part of a xylem tissue.



a) (i) Name the parts labeled **P** and **Q** . **(2marks)**

P ……

Q ……

(ii) Give the function of the part labeled **P**. **(1mark)**

……

……

b) State the function of the phloem tissue. **(1mark)**

……

……

c) (i) State how the functioning of the phloem tissue is affected if the companion cell is destroyed. **(1mark)**

……

……

(ii) Give a reason for your answer. **(1mark)**

……

……

d) State any **two** structural differences between phloem and xylem tissues. **(2marks)**

Phloem	**Xylem**

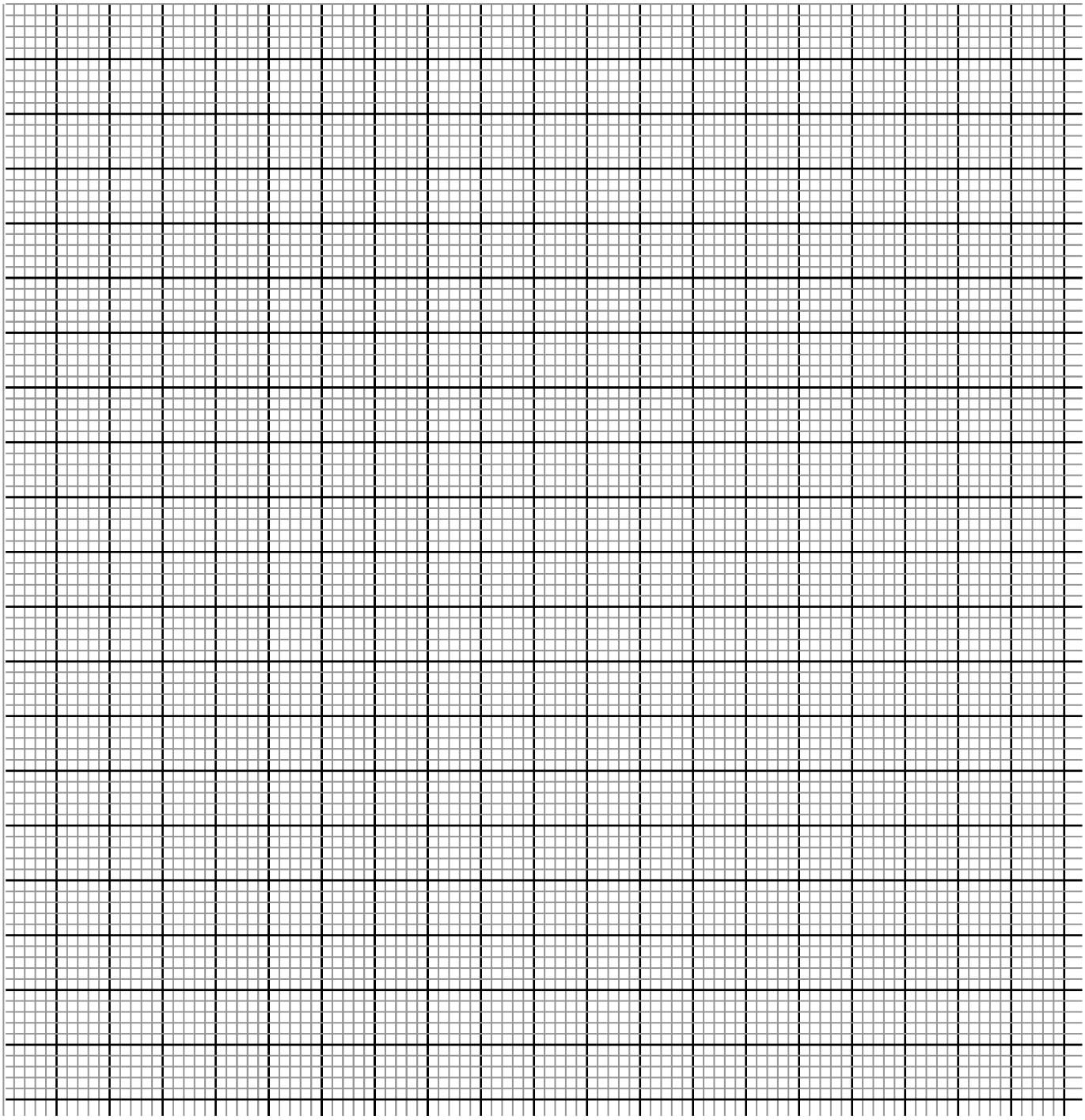
SECTION B (40 MARKS)

Answer question 6 (Compulsory) and either question 7 or 8 in the spaces provide afterquestion 8.

6. Two species of parasitic wasps X (*Vespula vulgaris*) and Y (*Vespula acadica*) were introducedin an orchard in order to control to control the population of aphids. The numbers of each speciesof wasps were counted at two-month intervals and recorded. The table below shows the population of the two wasps over a 18-month period in the orchard.

Time		0	2	4	6	8	10	12	14	16	18
Population	Species X	400	1000	2800	4400	5400	6000	6400	6400	6200	6400
	Species Y	400	1800	2400	2200	1800	1400	800	600	400	600

a) Plot a graph of wasps against time on the grid provided. **(7marks)**



a) State the type of relationship between the two wasp species. **(1mark)**

……

……

……

b) Account for the differences in population of the two wasp species between:

i. 0 – 3 years **(3marks)**

……

……

……

……

……

ii. 4 – 14 years **(3marks)**

……

……

……

……

……

c) The experiment was continued for another 8 months. On the 18th month the population ofspecies X increased and surpassed that of Y. account for this observation. **(3marks)**

……

……

……

……

d) Explain how the population of the wasps was determined. **(3mks)**

……

……

……

……

7. Describe the role of the following organs in excretion and homeostasis.

a) The liver **(10 marks)**

b) The skin during hot environmental conditions **(10 marks)**

8. Discuss the various evidences, which show that evolution has taken place. **(20marks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BIOLOGY

231/3
PAPER 3 (PRACTICAL)
TIME: 1¾ HOURS

CONFIDENTIAL

231/3CONFIDENTIAL

1. Each candidate should be supplied with the following

(i) 4 test tubes and test tube rack.

(ii) Iodine solution – supplied with a dropper

(iii) $10cm^3$ solution of a mixture of soluble starch and glucose labeled W. NB: 30gms of glucose mix with 3g of starch add $100cm^3$ water, heat to boil, and then cool

(iv) Adequate distilled water

(v) Benedict solution

(vi) Means of heating

(vii) Sodium Hydroxide

(viii) Copper (II) Sulphate

(ix) DCPIP

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BIOLOGY

231/3
PAPER 3 (PRACTICAL)
TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **admission number** in the spaces provided.*
- *Sign and write **date** of examination in the spaces provided above*
- *Answer **all** the questions in section **A** and **B***
- *You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully.*

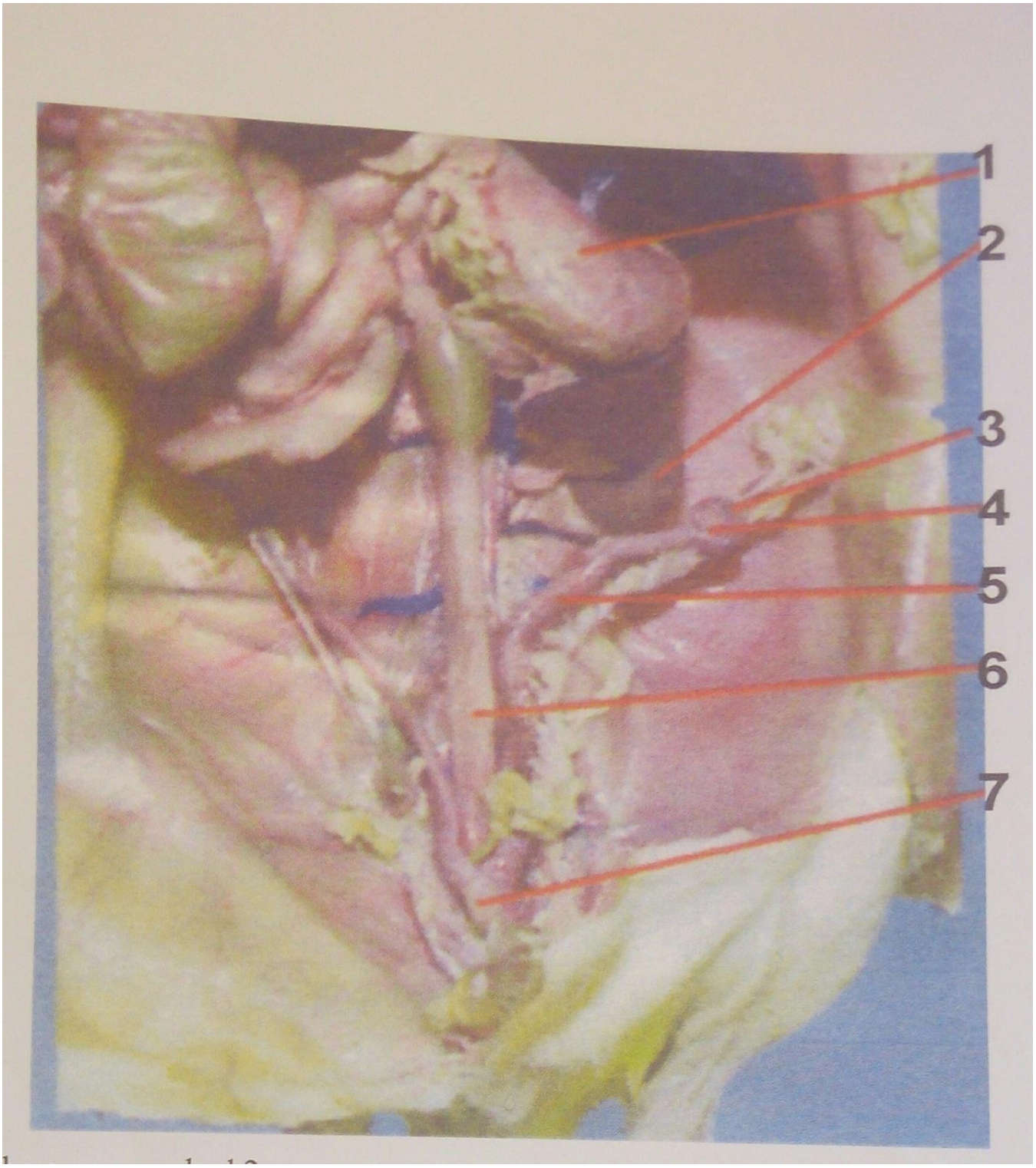
For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	15	
3	11	
TOTAL	**40**	

1. You are provided with solution W. Using the provided reagents; carry out possible food tests to identify food substances present in solution**.** **(14mks)**

Food substance	Procedure	Observation	Conclusion

2. Examine the photograph which shows parts of the urogenital system of a female rat and answer the questions that follow. The organ marked 1 is the stomach.



a) (i) Name the organ marked 2 **(1mk)**

……

……

(ii) State two functions of the organ (2mks)

……

……

(iii) What is the functional unit of the organ in (a)(i) above **(1mk)**

……

……

b) (i) Identify and name each of the organs marked 3 and 4 **(2mks)**

3

……

4

……

(ii) State two functions of the part marked 4 **(2mks)**

……

……

……

c) (i) Identify the organs marked 5 **(2mks)**

……

(ii) Explain two functions of the organ named in c (i) above. **(2mks)**

……

……

……

d) The organ marked 6 is the large intestine. State three function of the large intestine. **(3mks)**

……

……

……

3. You are provided with seven specimens of plants. They are labeled D1, D2, D3, D4, D5, D6, and D7.

The dichotomous key

1. a) Leaves needle like ……..go to 2

b) Leaves broad …….….. go to3

2. a) Leaves arranged in clusters on stem…….…….. Pinnacea

b) Leaves not arranged in clusters on stem…….…..Araucariaceae

3. a) Leaves compound……..…….. go to 4

b) Leaves simple…….…… go to 7

4. a) Leaflets pointed at the end ……...…….go to 5

b) Leaflets rounded at the end…….……go to 6

5. a) Leaflets attached to many small stalks that join the main one ……...….Mimosaceae

b) Leaflets attached to one stalk …….……Rosaceae

6. a) Leaflets attached to many small stalks that join the main one……...… Bignonaceae

b) Leaflets attached to one stalk …….……Compositae

7. a) Leaves green ……..…….go to 8

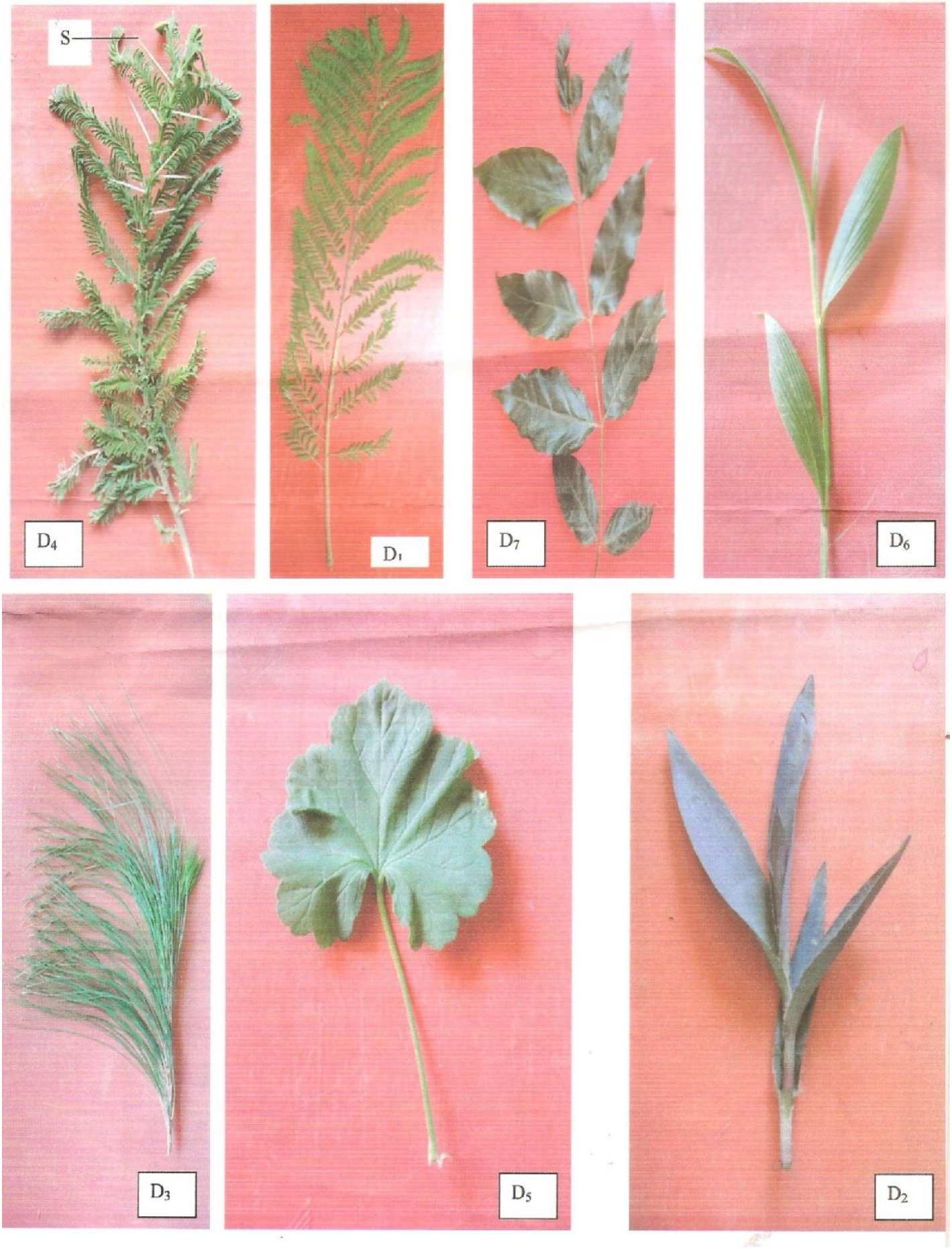
b) Leaves purple …….…….. go to 9

8. a) Leaves parallel veined ……..……..……..Graminae

b) Leaves net veined …….…… Geranaceae

9. a) Leaves parallel veined……..……..…Commelinaceae

b) Leaves net veined ……..…….Euphorbiaceae


S
D4
D1
D7
D6
D3
D5
D2

a) Use the dichotomous key to identify the taxonomics group of each of the seven specimens in the photographs **provided.** **(7mks)**

Specimen	Steps followed	Identity
Dl		
D2		
D3		
D4		
D5		
D6		
D7		

b) (i) Suggest the possible habitat that specimen D4 is adapted to **(1mk)**

……

……

(ii) Name one observable feature that adopts D4 to the habitat you have mentioned in (b) (i) above **(1mk)**

……

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

……

……

(iv) State the importance of the structure labeled S in specimen D4 **(1mk)**

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHEMISTRY

233/1
PAPER 1 (THEORY)
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO THE CANDIDATES:-

- *Write your **name** and **Admission number** in the spaces provided.*
- *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 EXAMINER'S USE ONLY:

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-25	80 MARKS	

QUESTIONS

1. [a] Define the term isotopes **[1mk]**

……

……

[b] The table below shows the isotopic composition of element Q

Isotope	relative
$^{20}_{10}Q$	90.92
$^{21}_{10}Q$	X
$^{22}_{10}Q$	0.26

‘

[i] In $^{21}_{10}Q$, what does 21 represent? **[1mk]**

……

……

[ii] Determine value of **X** **[1mk]**

……

……

……

[iii] Hence calculate R.A.M of **Q** **[2mks]**

……

……

……

……

2. [a] State Grahams law of **diffusion** **[1mks]**

……

……

[b] 400cm^3 of nitrogen gas diffuse through a porous plug in 120 seconds. How long would it take 360$cm^3$of oxygen gas to diffuse under the same conditions?

{N=14, O=16**}** **[3mks]**

……

……

……

……

……

3. Acid rain is formed when rain falls through air polluted with carbon (IV) oxide and Sulphur(IV)oxide. Identify two acids possibly present in such an acid **rain** **[2mks]**

……

……

4. **Ca^{2+}** is one of the cations present in hard water that makes water to be hard

[a] Identify another cation responsible for water **hardness** **[1mk]**

……

……

[b] One method of removing permanent hardness in water is by use of ion exchanger

[i] State two other methods that can be **used** **[2mks]**

……

……

[ii] After continuous use the ion exchanger column gradually looses the water hardness. How can its ability be recovered? **[1mk]**

……

……

[c] State one disadvantage of water hardness [1mk]

……

……

5. The empirical formulae of a compound is given as C_2H_4O. Given that its R.M.M is 88, find its molecular formulae {C=12, H=1, O=16**}** **[2mks]**

……

……

……

6. 29 grams of a saturated solution of salt M at 35^0C yield 8.5 grams of solid when evaporated to dryness. Determine the solubility of the salt at **35^0C** **[2mks]**

……

……

……

……

……

7. In an experiment, copper metal was heated in the air to form a black solid T. dilute Sulphuric {VI} acid was then added to solid T resulting to formation of solution W, after which Ammonia was then added to solution W drop wise till excess

[a] Identify solid T **[1mk]**

……

……

[b] Write a chemical equation for the reaction leading to formation of solution **W** **[1mk]**

……

……

[c] State the observations made when the am monia solution was added to solution W drop wise till excess **[2mks]**

……

……

……

8. What name is given to each of the following?

[a] Ability of a metal to be beaten/ hammered to a **sheet** **[1mk]**

……

[b] Force of attraction that holds two molecules **together** **[1mk]**

……

9. Draw the structures and name two hydrocarbons with molecular formulae C_4H_{10} **[4mks]**

10. 800cm^3 of a gas exert a pressure of 520mmHg at 75^{0}C .What pressure would 700cm^3 of the same gas exert at 100^{0}C? **[2mks]**

……

……

……

……

11. Aluminium is one of the metals that is commonly used in making cooking utensils. State two properties of aluminium that makes it suitable for this use **[2mks]**

……

……

……

12. Given the following bond energies in $KJmole^{-1}$

Bond	**Energy [$KJmole^{-1}$]**
C –C	348
C – H	414
Cl -Cl	243
C -Cl	432
H – Cl	340

[a] Determine the enthalpy charge in the following reaction

$C_2H_{6\,[g]} + Cl_{2[g]} \longrightarrow CH_3CH_2Cl_{[g]} + HCl_{[g]}$ **[3mks]**

……

……

……

……

……

[b] state whether the reaction was exothermic or endothermic **[1mk]**

……

……

13. The grid below shows a section of the periodic table

T			U			V	W	X
	Y		Z				A	
B								

[a] Which letter represents the least reactive element? Explain your answer **[2mks]**

……

……

……

[b] Which letter represents the most electropositive element? **[1mk]**

……

[c] What name is given to the family into which element X belongs to? **[1mk]**

……

[d] How does the electrical conductivity of element Y and Z compare? Explain **[2mks]**

……

……

……

14. Describe how you can prepare a dry sample of lead (II) carbonate starting with lead (II) nitrate crystals **[3mks]**

……

……

……

……

……

15. Explain why the relative molecular mass of NO_2 is sometimes 92 instead of 46 **[2mks]**

……

……

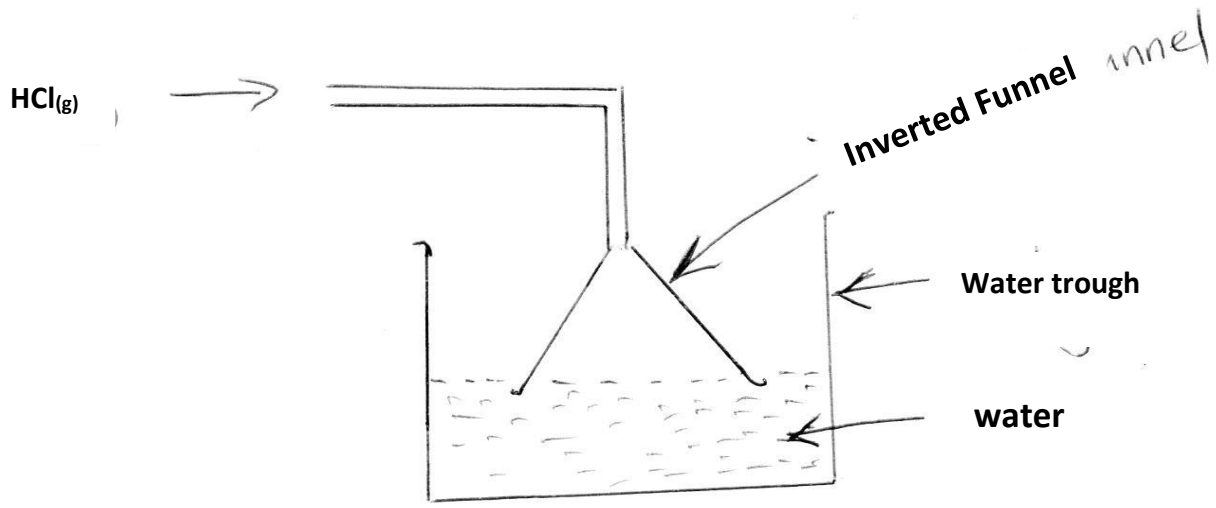
……

16. Using dots and crosses, show bonding in the following **[3mks]**

[a] H_2O

[b] $H2O^+$

17. The diagram below shows part of a set-up used to prepare a solution of hydrogen chloride gas in water



[a]What property of hydrogen chloride gas makes it necessary to prepare its solution in water as shown on the diagram **[1mk]**

……

……

[b]Give two reagents that can be used to prepare hydrogen chloride **[2mks]**

……

……

[c]State and explain the effect on red litmus paper when dropped in the resulting solution **[2mks]**

……

……

……

18. When 3.1g of Copper {II} Carbonate were heated in a crucible until no further change in mass, solid L and gas M were formed

[a]Identify solid L and gas M **[2mks]**

……

……

……

[b] Write a chemical equation for the reaction that **occurred** **[1mk]**

……

[c] Given Cu=64, C=12,O=16, calculate the mass of the solid L that was **formed** **[2mks]**

……

……

……

19. In terms of structure and bonding explain why silicon (IV) oxide has a higher melting point than phosphorous (IV) **oxide** **[2mks]**

……

……

……

……

20. Briefly describe two experiments that can be used to distinguish nitrogen (I) oxide and Nitrogen (II) oxide **[4mks]**

……

……

……

……

……

21. Manganese (IV) oxide is a common reagent used in the preparation of chloride gas using concentrated hydrochloric acid and preparation of oxygen gas using hydrogen peroxide

[a] State the role of manganese(IV) oxide in the preparation of;

[i]Chlorine **gas** **[1mk]**

……

……

[ii]Oxygen **gas** **[1mk]**

……

……

[b] State two physical properties of chlorine gas **[2mks]**

……

……

22. Give two reasons why air is considered a mixture and not a compound **[2mks]**

……

……

23. Sulphur has two allotropic forms

[a] Identify the two allotropic forms **[2mks]**

……

……

[b] Which of the allotropes is most stable at temperatures below 96^0C **[1mk]**

……

24. Rusting is a common chemical process that occurs on the surface of materials made of iron

[a] What is the chemical name of rust **[1mk]**

……

[b]Identify two conditions that accelerate the rusting process **[2mks]**

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHEMISTRY

233/2

PAPER 2 (THEORY)

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

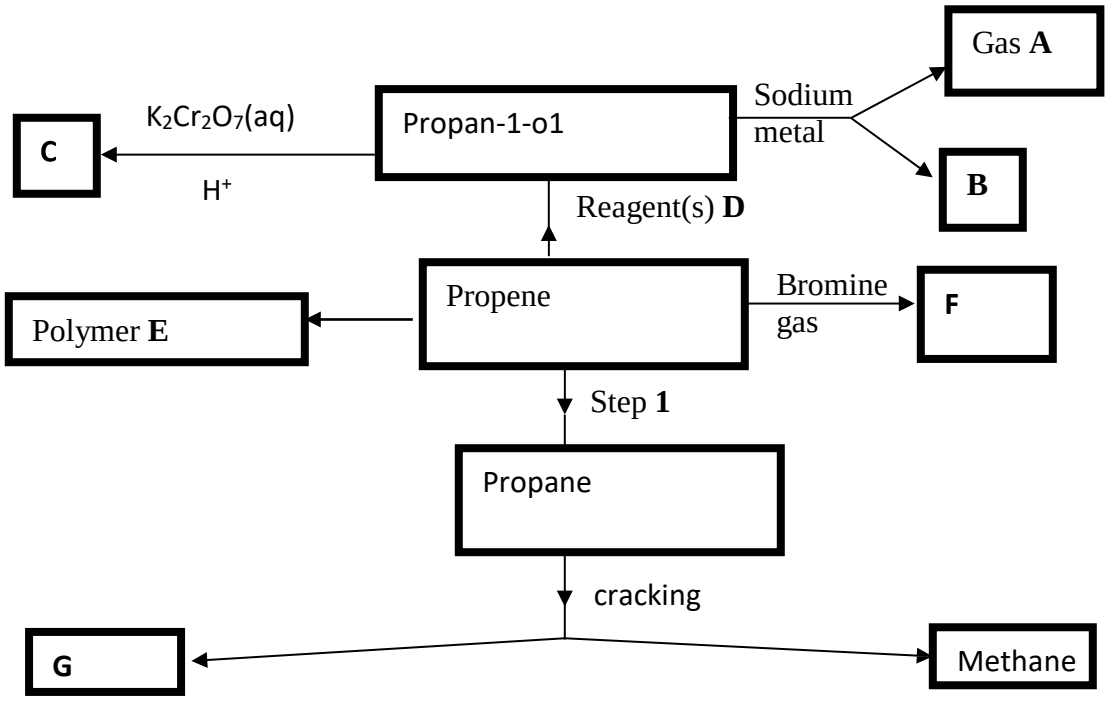
INSTRUCTIONS TO CANDIDATES

- ***a)*** *Write your name, school and index number in the spaces provided above.*
- ***b)*** *Sign and write date of examination in the spaces provided above.*
- ***c)*** *Answer **ALL** questions in the spaces provided.*
- ***d)*** *Mathematical tables and silent electronic calculators may be used.*
- ***e)*** *All workings **MUST** be clearly shown where necessary.*

Questions	Maximum Score	andidate's Score
1	14	
2	14	
3	11	
4	14	
5	16	
6	11	
TOTAL	80	

QUESTIONS

1. The scheme below shows a series of reactions and compounds. Study it and use it to answer thequestions that follow.



(a) Identify the following compounds and products **(6marks)**

A……

B……

C……

E……

F……

G……

(b) State 2 conditions for **step 1** to occur. **(1 mark)**

……

……

(c) Write an equation for the formation compound **F.** **(1 mark)**

……

(d) Identify reagent(s) **D.** **(1 mark)**

……

(e) State one industrial use of methane. **(1 mark)**

……

(f) Name the following organic compounds**.** **(3 marks)**

(i) C_3H_4

……

(ii)

$$CH_3CH_2CH_2\underset{\displaystyle OH}{\underset{|}{CH}}CH_2CH_3$$

……

(iii)

$$CH_2 = \underset{\displaystyle CH_3}{\underset{|}{C}} - CH_3$$

… ……..

(g) Draw the structure of a section of polymer E showing three repeat units. **(1 mark).**

2. The table below shows the elements in perid 3 of the periodic table. Study it and answer thequestions that follow.

Element	Na	Mg	Al	Si	P	S	Cl	Ar

(a) Write the formulae of two oxides for each of the following**:** **(2 marks)**

(i) Sodium: Oxide I …….

(ii) Oxide II ……..

(ii) Sulphur: Oxide I ……. Oxide II ……..

(b) The products of the reaction between phosphorus and chlorine depend on the conditions used.Write the equation for the reaction when phosphorus reacts with limited phosphorus.

(1 mark)

……

(c) Identify the most electronegative element. Give a reason. **(2 marks)**

……

……

(d) State and explain the differences in the boiling points of:

(i) Magnesium oxide and sulphur (IV) oxide**.** **(2 marks)**

……

……

……

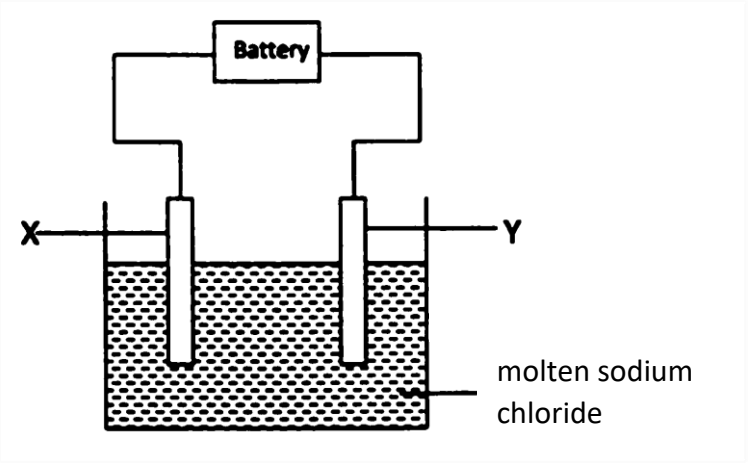
(ii) Sulphur and phosphorus. **(2 marks)**

……

……

……

(e) The diagram below shows the electrolysis of the chloride of sodium.



(a) On the diagram, indicate the missing condition. **(1 mark)**

(b) During the electrolysis, chlorine gas was formed at electrode Y. Identify the:

(i) Anode……. **(1 mark)**

(ii)Cathode…….. (1 mark)

(c) Write the half equation for the reaction taking place at the:

(i) Anode. **(1 mark)**

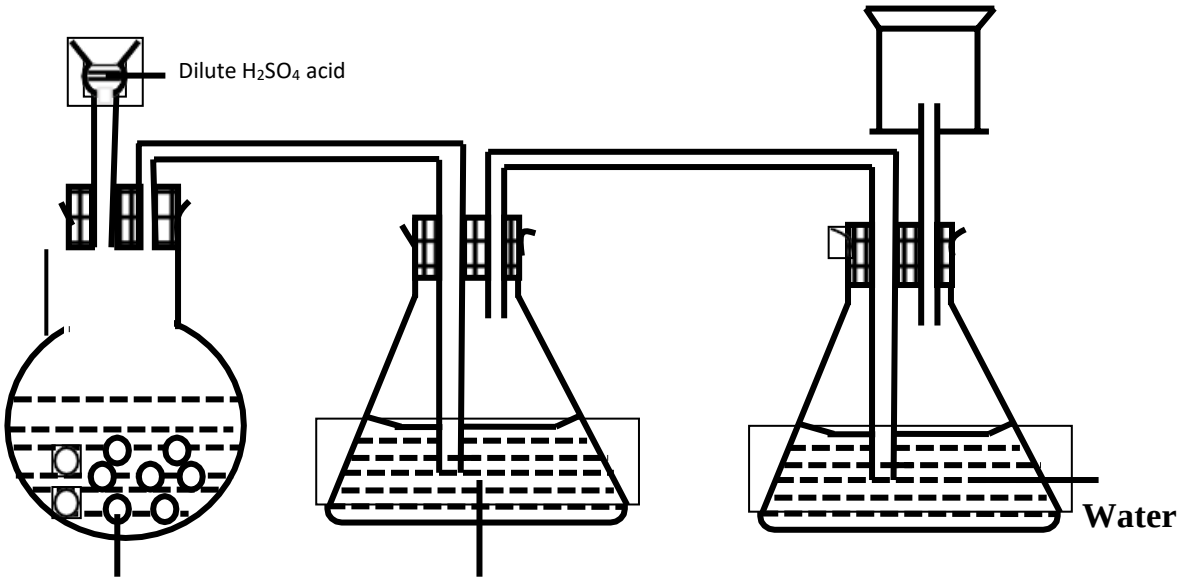
……

(ii) Cathode. **(1 mark)**

……

……

3. A student set up the apparatus shown below to prepare and collect dry carbon (IV) oxide gas.



(a) State a correction for three mistakes in the set up above **(3 marks)**

……

……

……

……

……

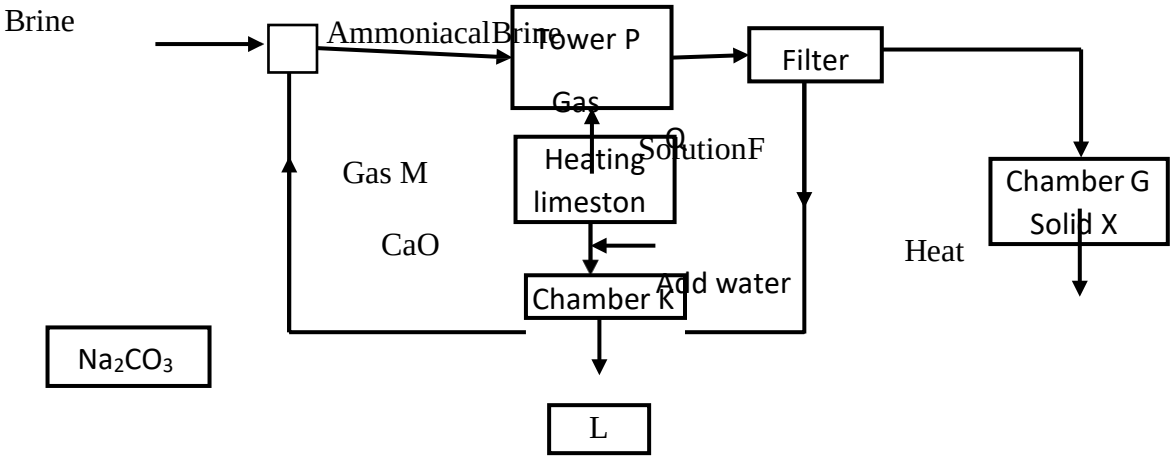
(b) Give two reasons why carbon (IV) oxide is used as a fire extinguisher **(1 mark)**

……

……

……

(c) The flow chart below is for the manufacture of sodium carbonate by the Solvay process. Use it to answer the questions that follow.



(i) Name:

Gas M …… Gas Q……(1 mark)

Solution F …… Solid X……(1 mark)

(ii) Name the product L formed and give one of its uses. **(2 marks)**

Name: ……

Use: ……

(iii) Write equations of the reactions in**:** **(2 marks)**

Tower P (Overall equation)

……

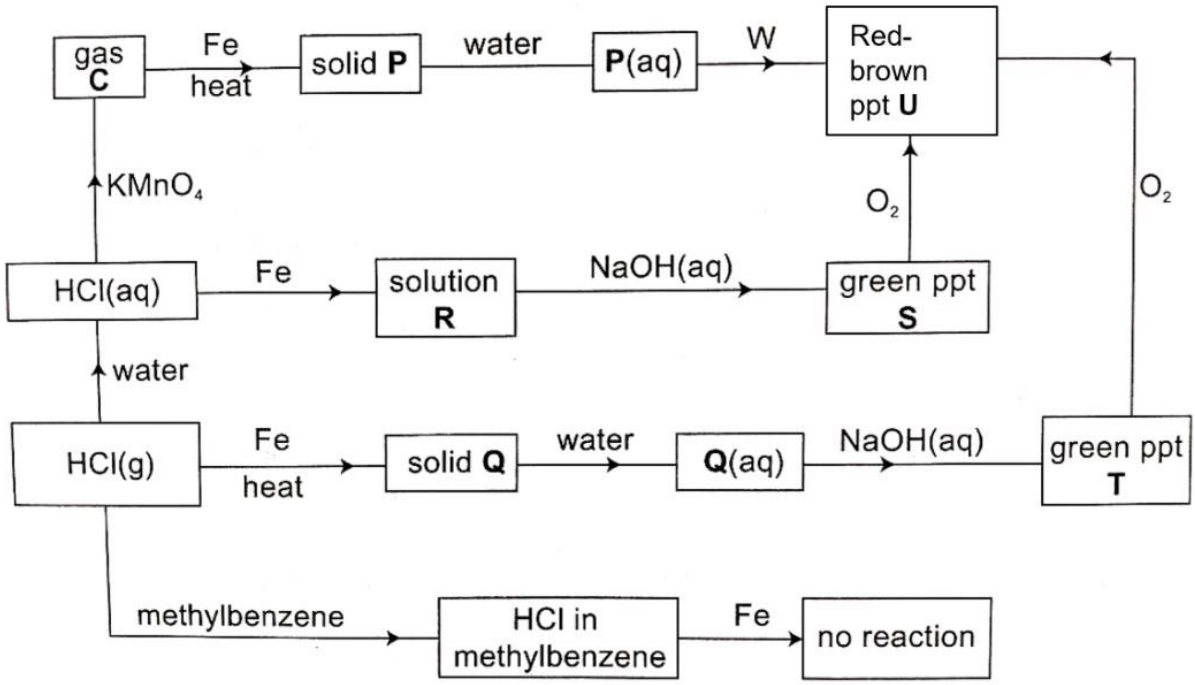
Chamber K

……

(v) Name the two raw materials required in the manufacture of sodium carbonate **(1 mark)**

……

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



(a) Identify:

(i) Gas C ……. **(½ mark)**

(ii) Solid Q …….. **(½ mark)**

(iii) Solid P …… **(½ mark)**

(b) From the flow chart, give two solutions that contain the same metallic ions. **(1 mark)**

……

……

(c) Give two precipitates in the flow chart that are the same and name them. **(3 marks)**

Precipitates:

……

Name:

……

(d) Explain the difference between HCl (g) in water and in methylbenzene as shown in the flow chart. **(2 marks)**

……

……

……

(e) Name reagent W. **(½ mark)**

……

(f) Write the equations for:

(i) The formation of solid P**.** **(1 mark)**

……

……

(ii) The formation of solid Q. **(1 mark)**

……

……

(g) In the preparation of a bleaching agent (sodium hypochlorite), excess chlorine gas was bubbled into15 litres of cold 2M sodium hydroxide.

(i) Write the equation for the reaction between chlorine gas and cold dilute sodium hydroxide.

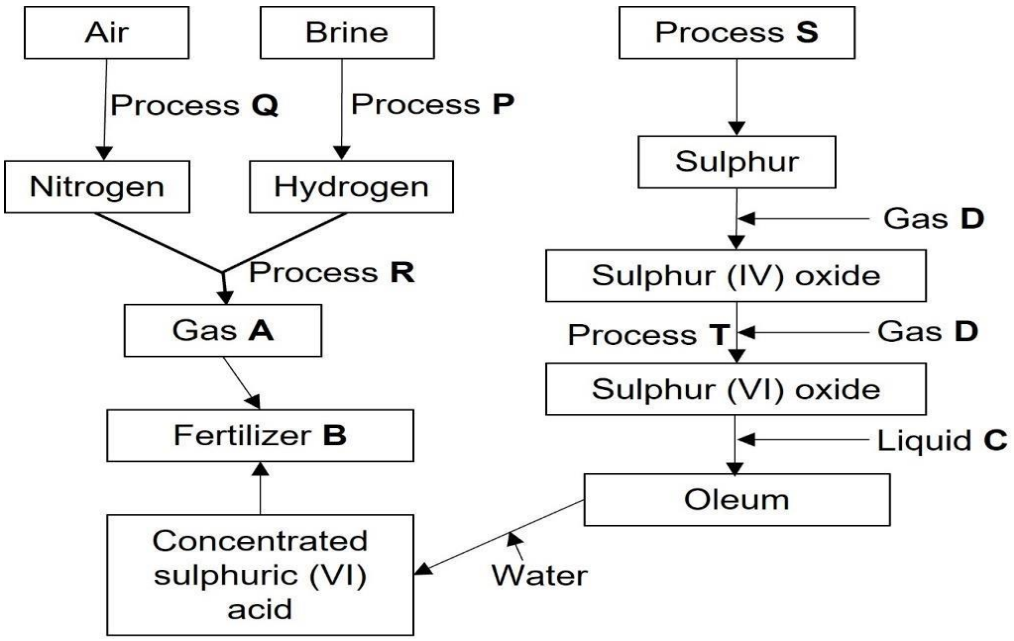
(1 mark)

……

……

(ii) Calculate the mass in **kilograms** of sodium hypochlorite produced. (Na = 23.0, Cl = 35.5, O = 16.0) **(3 marks)**

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



(a) Name the following: **(3 marks)**

(i) Process **Q** ……

(ii) Process **R** ……..

(iii) Process **S** ……..

(iv) Process **T** ……..

(v) Gas **A** ……

(vi)Fertilizer **B** ……

(b) Why is liquid C used instead of water **(1 mark)**

……

……

(c) Write the formula of oleum. **(1 mark)**

……

(d) Write the equation for the formation of:

(i) fertilizer **B**. **(1 mark)**

……

(ii) gas **A**. **(1 mark)**

……

(e) Name the **catalyst** and give the **conditions** for:

(i) Process **R**. **(3 marks)**

Catalyst ……

Conditions ……

……..

(ii) Process **T**. **(3 marks)**

Catalyst ……

Conditions ……

……..

(h) Explain how nitrogen is obtained from air using process **Q**. **(3 marks)**

……

……

……

……

……

6. The following is a procedure that was used to obtain the solubility of a salt **Q** in water at 25^0C. Studyit and answer the questions that follow.

Salt **Q** was dissolved in warm distilled water until no more could dissolve. The mixture was thencooled to 25^0C and allowed to settle. A dry evaporating dish and dry watch glass were weighed. Some of the solution was decanted into the dish, covered with the watch glass, and then weighed.

The solution was evaporated to dryness over a small flame. This residue, the dish and the watch glasswere weighed. The residue was then heated repeatedly until a constant mass was obtained.

The results below were obtained.

Mass of dish + Watch glass = 50.60g

Mass of solution + dish + watch glass = 80.6gMass of residue + dish + watch glass = 62.60g

(a) Use the data to answer the questions that follow.

(i) What is the purpose of the watch glass in such an experiment**?** **(1 mark)**

……

……

(ii) Why should the heating be continued until a constant mass is obtained? **(1 mark)**

……

……

(iii) Calculate the mass of the solution. **(1 mark)**

……

……

……

(iv) Calculate the mass of the residue. **(1 mark)**

……

……

……

(v) Calculate the mass of the water**.** **(1 mark)**

……

……

……

(vi) Calculate the solubility of salt **Q** in g per 100g of water at 25^0C**.** **(2 marks)**

……

……

……

……

(b) Hard water has both advantages and disadvantages. Give one advantage and one disadvantage of using hard water**.** **(2 marks)**

Advantage

……

……

Disadvantage

……

……

(c) Using an equation, explain how addition of sodium carbonate is used to remove water hardness. **(2 marks)**

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHEMISTRY

PAPER 3 (PRACTICAL)

CONFIDENTIAL

Each candidate should be supplied with the following;

1. Clamp and stand
2. Filter funnel
3. White tile
4. 100cm^3 or 50cm^3 measuring cylinder
5. 250cm^3 volumetric flask
6. 2 conical flasks
7. 25cm^3 pipette
8. 50cm^3 burrette
9. Metalic spatula
10. 6 clean test tubes
11. One boiling tube
12. Test tube holder
13. Thermometer
14. PH chart
15. Labeling paper
16. Pipette filler
17. 500$cm^3$of distilled water in a wash bottle
18. About 70cm^3 of solution A
19. About 100cm^3 of solution B
20. Exactly 5.0g of solid C [accurately weighed]
21. About 0.5g of solid D
22. About 0.5g of solid E
23. Phenolphthalein indicator

Each student should have access to the following;

1. 2M $Pb\{NO_3\}_2$
2. 2M $Ba\{NO_3\}_2$
3. 2M HNO_3
4. 2M NaOH
5. Bromine water
6. Universal Indicator

{Note: all the above solutions should be supplied with a clean dropper each]

7. Means of heating

SOLUTION PREPARATION

1. `Solution A is 1.25M HCl
2. Solution B is NaOH containing 6.4g of sodium hydroxide in1 litre of the solution
3. Solid C is 0.5g of oxalic acid accurately weighed
4. Solid D is a mixture of sodium carbonate and sodium sulphate accurately and thoroughly mixed in the ratio 1:1
5. Solid E is oxalic acid

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHEMISTRY

233/3
PAPER 3 (PRACTICAL)
TIME: 2¼ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO THE CANDIDATES:-

- ***Write your name and index number in the spaces provided***
- ***Sign*** *and write the* ***date*** *of examination in the spaces provided*
- ***Answer all the questions in the spaces provided.***
- *Mathematical tables and electronic calculators may be used.*
- *All working* ***MUST*** *be clearly shown where necessary.*
- *Use the first 15minutes of the 2 ¼ hours to ascertain you have all the chemicals and apparatus tha you may need.*

For Examiners use Only

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1	12	
2	12	
3	16	
TOTAL	**40**	

QUESTION 1

- You are provided with solution A and solution B
- Solution A is 1.25M hydrochloric acid
- Solution B is 0.16M hydroxide of metal M with formulae $M(OH)_x$ where x is a whole number
- You are required to carry out the experiment to determine the value of x

PROCEDURE

1. Using a measuring cylinder, measure $50cm^3$ of solution A into a clean 250cm3 volumetric flask and make upto the mark with distilled water

-label this solution W

2. Fill a clean burette with solution W
3. Pippette $25cm^3$ of solution B into a clean conical flask and add 2 drops of phenolphthalein indicator
4. Titrate solution B in the conical flask against solution A from the burette and record the results in the table below
5. Repeat [3] and [4] above as you record the results in the table below

	I	II	III
FINAL BURETTE READING [cm3]			
INITIAL BURETTE READING[cm3]			
VOLUME OF SOLUTION W USED			

[4mks]

[a] Calcualte the;

[i] Average volume of solution W **[1mk]**

……

……

……

[ii] Concentration of solution **W** **[2mks]**

……

……

……

……

[**iii]** Number of moles of hydrochloric acid [in solution W] that reacted with each $25cm^3$ portion of the solution of the metal hydroxide [solution B**]** **[2mks]**

……

……

……

……

[iv] Number of moles of the metal hydroxide [solution B] that reacted with each portion of hydrochloric acid [solution W] **[2mks]**

……

……

……

……

[b] Determine the stoichiometric equation of the reaction between the hydrochloric acid and the metal hydroxide **solution** **[2mks]**

……

……

……

……

……

[c] Hence State the value of X **[2mks]**

……

……

……

……

……

QUESTION 2

- You are provided with 0.5g of oxalic acid as solid C
- You are required to carry out the experiment to determine the solubility of the solid at different temperature

PROCEDURE

1. Fill a clean burette with distilled water

2. Put all the solid C into a clean boiling tube and then add $4cm^3$ of the distilled water from the burette

3. Heat the mixture as you stir gently with the thermometer until all the solid completely dissolves

4. Allow the solution to cool slowly as you continue stirring with the thermometer and note the temperature at which the crystals begins to form/just appears

5. Record this temperature in the table below

6. Add $2cm^3$ of distilled water from the burette to the same mixture in the boiling tube and repeat [3], [4] and [5] above

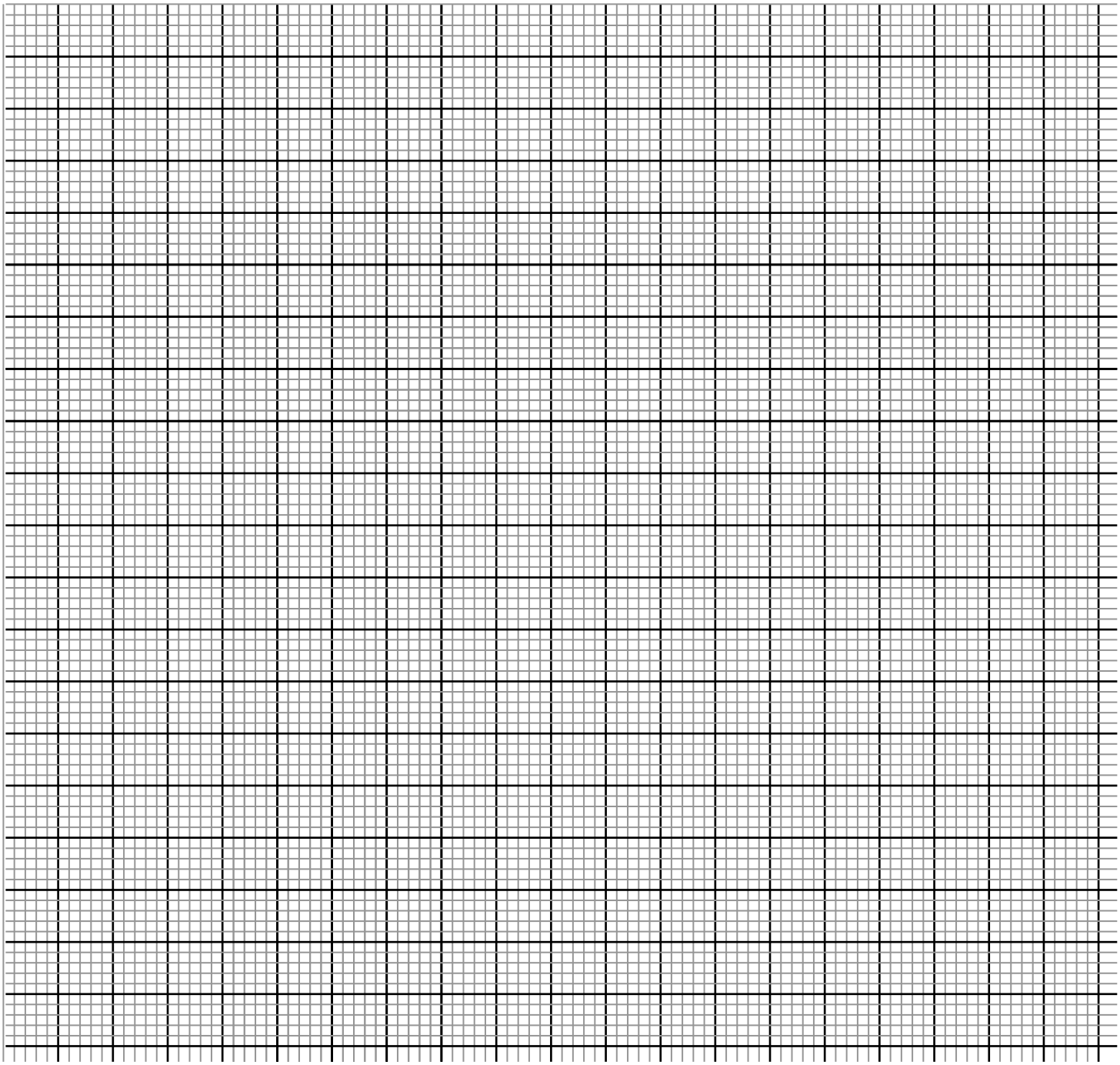
7. Add 2cm more of distilled water to the mixture and repeat 3,4 and 5 above again

8. Continue adding $2cm^3$ of distilled water as you repeat 3,4 and 5 above until the total volume of distilled water added to solid C is $12cm^3$

Total volume of distilled water Added to solid C in cm^3	Temp. in ^oC at which crystals Of solid C appears/begin to form	Solubility of solid C in g Per 100g of water
4		
6		
8		
10		
12		

[a]Complete the table by filling the solubilities of solid C in g per 100g of distilled water **[1mk]**

[b]Using your table, plot the solubility curve of solid C by plotting the solubility of solid C against the temperature at which crystals firs appear



[c] From your graph, determine the solubility of solid C at;

[i] 68^0C **[1mk]**

……

……

[ii] 62^0C **[5mks]**

……

……

……

……

……

……

[d]From your graph, explain the relationship between temperature and the solubility of solid C**[1mk**

……

……

QUESTION 3

- You are provided with solid D and E
- You are required to carry out the tests below as you write down the observations and the inferences

1. SOLID D

	TEST	**OBSERVATION**	**INFERENCES**
(a) [i]	Scoop half of solid D with a metallic spatula and put into Clean test tube Add about $2cm^3$ of distilled water and shake well. Divid the resulting mixture into 2 portions	[1mk]	[1mk]
[ii]	To the 1st portion, add NaOH(drop wise till excess	[1mk]	[1mk]

[iii]	Fetch a few drops of the 2nd portion on a metallic spatula and heat a non luminous flame	[1mk]	[$\frac{1}{2}$mark]
(b) [i]	Put the other half of solid D in another clean test tube and a HNO_3 drop wise until there no further change. Divide th resulting mixture into 2 portions	[$\frac{1}{2}$mark]	[$\frac{1}{2}$mark]
[ii]	To the 1st portion, add 3 drops $Pb[NO_3]_{2\ [aq]}$	[$\frac{1}{2}$mark]	[1mark]
[iii]	To the 2nd portion, add three drops of $Ba(NO_3)_{2\ (aq)}$	[$\frac{1}{2}$mark]	[$\frac{1}{2}$mark]

2. <u>SOLID E</u>

	TEST	OBSERVATIONS	INFERENCES
(a)	Scoop half of solid E on a metallic spatula and heat on a non-luminous flame	[1mk]	[1mks]
(b) [i]	Put the remaining solid E into a clean test tube and add about $2cm^3$ of distilled water. Shake the mixture and divide into 2 portions	[1mk]	[1mk]
[ii]	Determine the PH of the first portion	[$\frac{1}{2}$mark]	[$\frac{1}{2}$mark]
[iii]	To the second portion, add 2 drops of bromine water and warm	[$\frac{1}{2}$mark]	[$\frac{1}{2}$mark]

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

AGRICULTURE

443/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO CANDIDATES:

- *Write **your name** and **Index number** and **sign** in the spaces provided above.*
- *Answer **ALL** the questions in section **A** and **B** in the spaces provided in this booklet.*
- *Answer **any two** questions in section **C** in the spaces provided after the last question.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-14	30	
B	15-17	20	
C	18- 20	40	
	TOTAL	**90**	

SECTION A (30MKS)

Answer ALL the Questions in this section

1. List **four** environmental factors that affect crop distribution in a given area. **(2mks)**

……

……

……

……

2. Mention **two** methods of storing water on a farm **(1mk)**

……

……

3. Give one reason why too much air in the silo is undesirable in the process of making silage**.** **(½mk)**

……

4. State **two** advantages of a grass-legume pasture over a pure grass pasture **(1mk)**

……

……

5. State **two** characteristics of a large scale farming system. **(1mk)**

……

……

6. Give **four** reasons why farmers are encouraged to practice organic farming. **(2mks)**

……

……

……

……

7. (a) What is meant by the term **land reform?** **(½mk)**

……

……

(b) State **four** steps followed in land adjudication. **(2mks)**

……

……

……

……

(c) Mention any **four** pieces of information contained in a land title deed. **(2mks)**

……

……

……

……

8. State **two** ways how ridging controls soil erosion **(1mk)**

……

……

9. List down **two** determinants of national income **(1mk)**

……

……

10. State **two** possible causes of a hard pan. **(1mk)**

……

……

11. Differentiate between chitting and seed inoculation. **(1mk)**

……

……

……

12. Mention **four** management practices that are carried out on agro forestry trees from transplanting to maturity **(2mks)**

……

……

……

……

13. Give four possible causes of seed dormancy. **(2mks)**

……

……

……

……

14. State **four** reasons for planting cereals early in the planting season. **(2mks)**

……

……

……

……

15. Give **four** functions of Young Farmers Clubs in Kenyan secondary schools and colleges. **(2mks)**

……

……

……

……

16. Give **one** term used to explain a market condition where there is a:

(i) Sole seller **(½mk)**

(ii) Sole buyer **(½mk)**

17. Distinguish between the terms hybrid and composite as used in maize breeding **(1mk)**

……

……

18. State **two** characteristics of green manure plants **(1mk)**

……

……

19. Give **four** farming practices that may help in achieving minimum tillage **(2mks)**

……

……

……

……

20. What is biological weed control **(1mk)**

……

……

SECTION B (20MKS)

Answer ALL the questions in this section

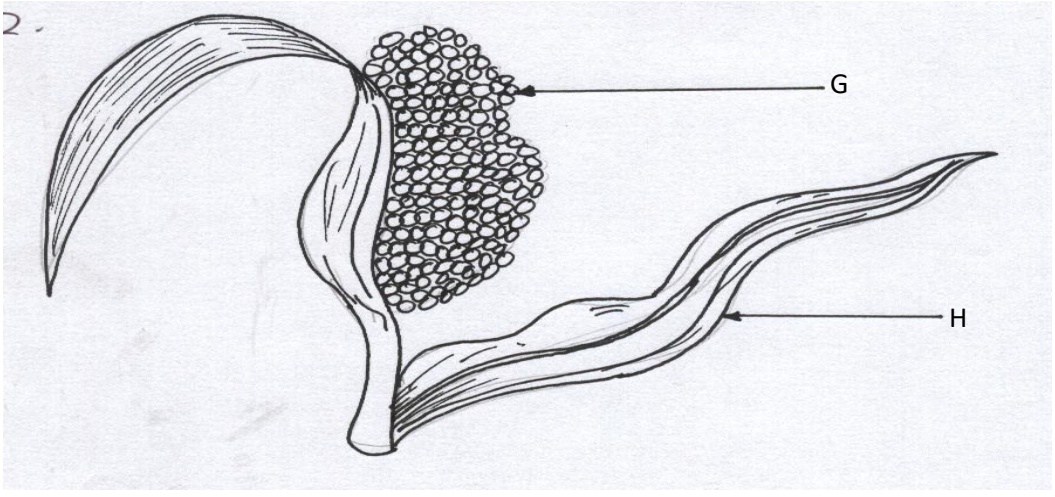
21.(a) A farmer can combine dairy meal and home made feeds in order to obtain 40kg of milk from a lactating cow as shown in the table below.

Dairy meal(kg)	Home-made feed(kg)	Marginal rate of subsistitution
1	48	0
2	39	V
3	32	7
4	27	W
5	23	4
6	21	X
7	20	1
8	19	Y

(i) Given the above information, calculate the Marginal Rate of Substitution and give the value of V, W, X and Y. **(4mks)**

(ii) Given that the price of dairy meal is Kshs.8.00 per kilogram and that of home-made feeds is Kshs.2.00 per kilogram, calculate the least cost combination. **(1mk)**

22. The diagram below illustrates one of the arable field crops. Study it carefully and answer the questions that follow.



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

b) State **two** common diseases that attack the parts labeled G and H **(2mks)**
G…… H……

c) Explain four **cultural** methods of controlling the disease named H in (b) above **(2mks)**

……

……

……

……

23. aName the deficient nutrient element in plants showing the following symptoms;

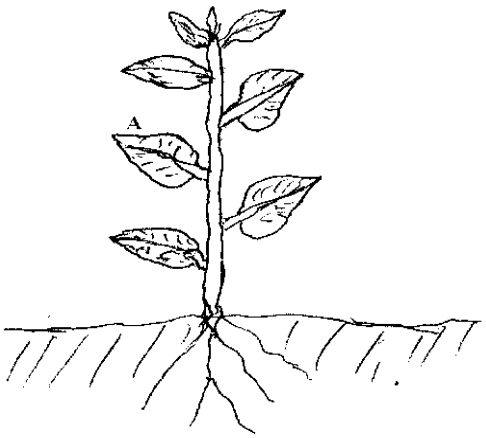
i. Stunted growth, die back of plant tips, leaves roll up and chlorosis along margins of younger leaves **(1mk)**

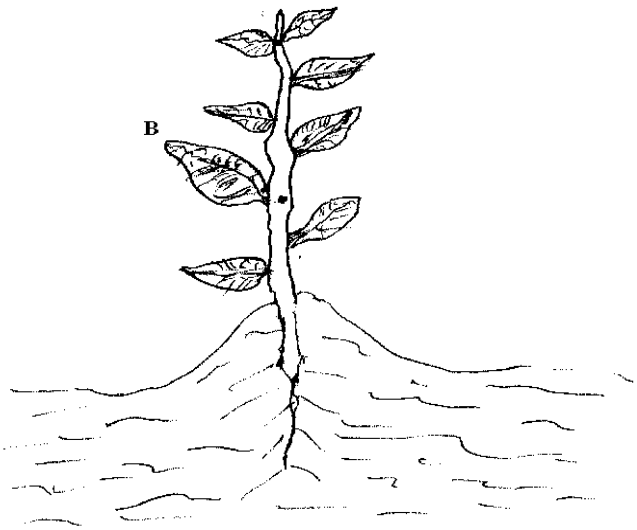
ii. Yellowing of leaves appears first on lower leaves; leaves turn brown and fall prematurely, stunted growth. **(1mk)**

iii. Leaf curling, yellowing of leaves tips and edges of leaves scorched and has small mottles. **(1mk)**

iv. Purpling of leaves, stunted growth, slender stalks and lateral buds remain dormant. **(1mk)**

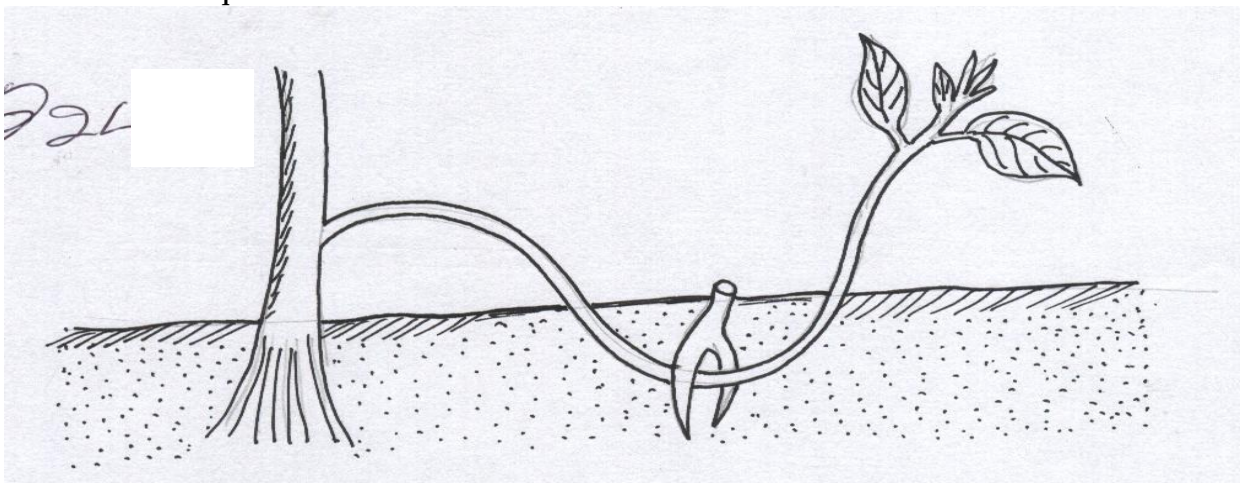
b The diagrams below show a practice out on various crops on the farm. **Study** them carefully and answer the questions that follow.





Identify the practice in diagram B **(1 mk)**

24. The figure below is a diagram illustrating a method of crop propagation. Study it carefully then answer the questions that follow.



a) Name the method of propagation illustrated above **(1mk)**

……

b) Give **two** ways of initiating faster root development in the propagation method shown above **(2mks)**

……

……

c) What would make it necessary for a farmer to choose the above method of propagation instead of using cuttings? **(2mks)**

……

……

……

……

SECTION C (40MKS)

Answer any TWO questions in this section

25. a) Describe the production of tomatoes under the following:-

(i) Transplanting: **(5mks)**

(ii) Field Management practices. **(5mks)**

b) Give **six** advantages of drip irrigation. **(6mks)**

c) Explain **four** factors that determine the quality of hay. **(4mks)**

26. Study the information provided carefully and use it to prepare a profit and loss account for Mr. Makunda farm for the year ending 2021 .His purchases and expenses were as follows:

Goats	4,000
Poultry	15,000
Dairy meal	25,000
Pasture seeds	50,000
Transportation of farm produces	15,000
Casual workers	12,000
Ox-plough	10,000
Opening Valuation	150,000

His sales and Receipts.

Mohair	75,000
Rabbits	36,000
Pigs	70,000
Groundnuts	100,000
Orange	20,000
Eggs	15,000
Closing valuation	200,000

a) Prepare profit and loss account **(15mks)**

b) Name Five methods of draining water in water logged / marshy areas. **(5mks)**

27. (a) Explain five problems associated with credits? **(5marks)**

b) Explain eight uses of farm records? **(8marks)**

c) Explain seven effects of strong winds in agriculture **(7marks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

AGRICULTURE

443/2

PAPER 2

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO CANDIDATES:

- *Write **your name** and **Index number** and **sign** in the spaces provided above.*
- *Answer **ALL** the questions in section **A** and **B** in the spaces provided in this booklet.*
- *Answer **any two** questions in section **C** in the spaces provided after the last question.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-18	30	
B	19-21	20	
C	22-24	40	
	TOTAL	**90**	

SECTION A (30MARKS)

Answer all the questions in this section.

1. Name two livestock tools that are used together as a pair. **(2mks)**

……

……

2. State two uses of pliers in the farm. **(2mks)**

……

……

3. Name two characteristics of merino sheep breed. **(2mks)**

……

……

4. State four factors that influence the pulse rate of a dairy cow. **(2mks)**

……

……

……

……

5. State three conditions that a good livestock structure should meet. **(3mks)**

……

……

……

6. Name two characteristics of an effective acaricide that a farmer would use to control ticks in livestock. **(2mks)**

……

……

7. Name three sources of water in an animals body. **(1 ½ mks)**

……

……

……

8. List three methods a farmer can use when selecting a breeding stock. **(1 ½ mks)**

……

……

……

9. List two ways through which a vaccine can be administered to poultry. **(2mks)**

……

……

10. State two signs of lambing in sheep. **(1mk)**

……

……

11. Identify the main use of queen excluder in a Kenya top bar hive. **(1mk)**

……

……

12. List two necessities of an Apiary. **(2mks)**

……

……

13. State two factors that may predispose dairy cattle to mastitis. **(1mk)**

……

……

14. State the importance of the following parts in an egg. **(2mks)**

a) Chalaza

……

b) Air space

……

15. List two ways of controlling cannibalism in poultry production. **(1mk)**

……

……

16. State two advantages of raising calves using natural method. **(1mk)**

……

……

17. State two disadvantages of using animal power in a farm**.** **(2mks)**

……

……

18. Name two maintenance practices carried out on a tractor battery**.** **(1mk)**

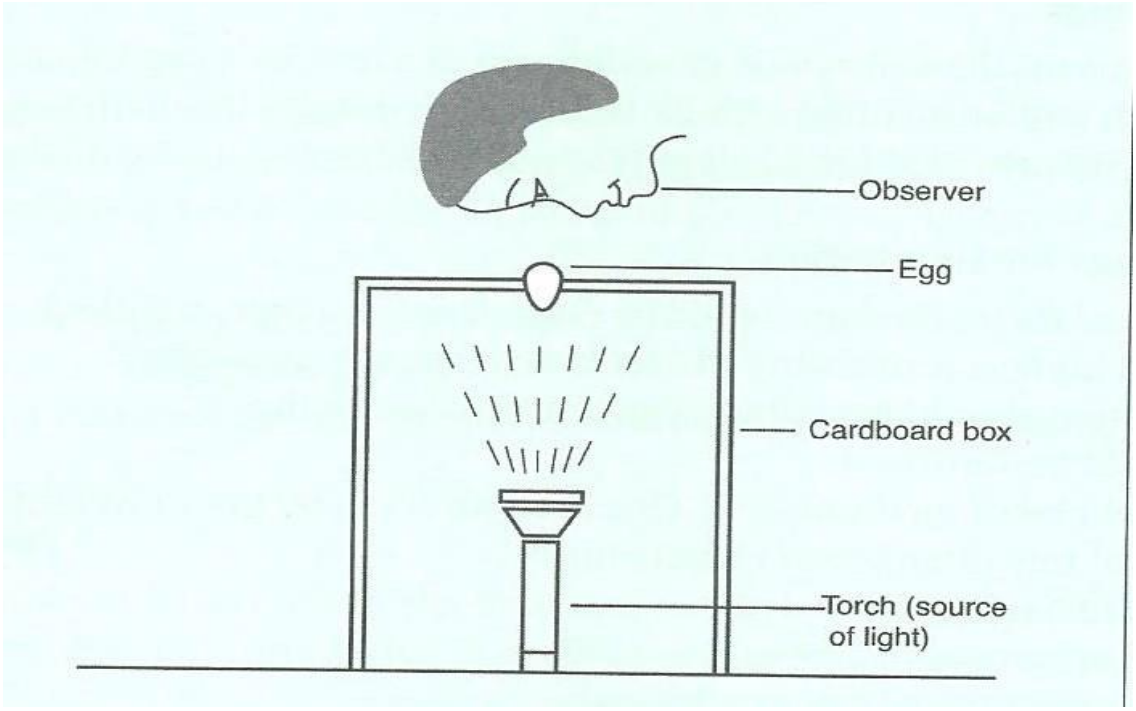
……

……

SECTION B (20MARKS)

Answer all questions in this section.

19. Study the diagrams below and answer the questions that follow.



a) Identify the practice above in poultry **production** **(1mk)**

……

b) State two signs of broodiness in **hens.** **(2mks)**

……

……

c) State three factors observed in an egg using the method shown **above.** **(3mks)**

……

……

……

d) Name one reason why a brooder should be round in **shape.** **(1mks)**

……

20. Study the diagram below and answer the questions.



a) Identify the practice above in sheep production **(1mk)**

……

b) Name two tools used to carry out the practiceabove **(2mks)**

……

……

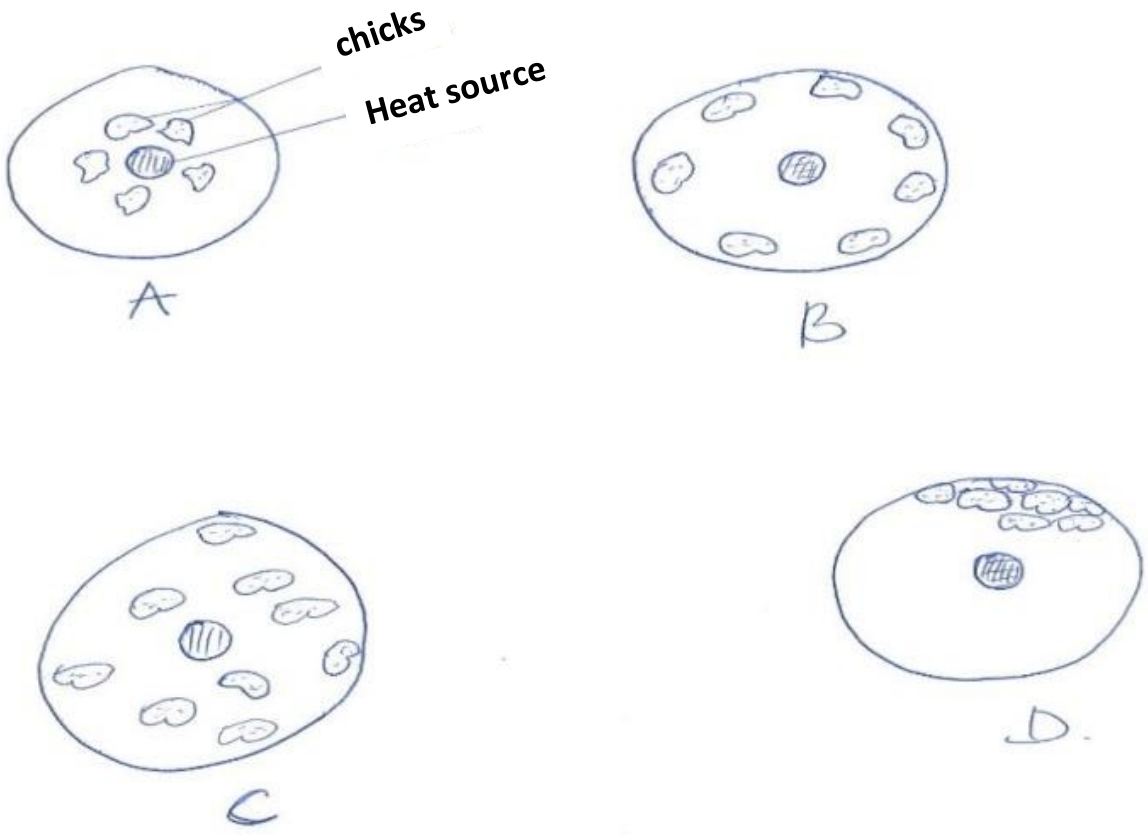
c) State three reasons why a farmer should carry out the practice above. **(3mks)**

……

……

……

21. Study the diagrams below and answer the questions following.



a) Explain the temperature and the behavoiur of chicks in each diagrams shown above. **(4mks)**

……

……

……

……

……

……

b) List three requirement of a good brooder. **(3mks)**

……

……

……

……

SECTION C (40 MARKS)

Answer any two questions.

22 a) Explain five reasons that would make bees swarm from the hive. **(10mks)**

b) Discuss the procedure a farmer would follow when establishing a fish pond. **(10mks)**

23a) Describe the factors farmers should consider when selecting materials for constructing farm structures. **(10mks)**

b) Explain five routine management practices in calf rearing. **(10mks)**

24a) State and explain five reasons why farmers should keep livestock healthy. **(10mks)**

b) Discuss four factors that influence the dairy feed requirement of an animal. **(8mks)**

c) Name two methods used to compute livestock feeds. **(2mks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BUSINESS STUDIES

565/1

PAPER 1

TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO CANDIDATES:

- *Write **your name** and **Admission Number** in the spaces provided.*
- *Answer **all** the questions in the spaces provided.*

FOR EXAMINER'S USE ONLY:

Question	Maximum score	Candidate's score
1-25	100 MARKS	

*Answer **all** the questions in the spaces provided*

1. Highlight four ways in which the introduction of money helped eliminate problems faced in barter trade. **(4mks)**

……

……

……

……

2. The following information relates to Kibet traders for the month of August 2012.

	(Sh.)
Opening stock	40,000
Purchases	46,000
Carriage inwards	2,100
Closing stock	22,500

Goods are usually sold at a markup of 20%.

Required: Prepare a trading account for Kibet Traders for the month ended 31st August 2012. **(4mks)**

3. Indicate the type of journal in which each of the following transactions would be recorded. **(4mks)**

Transaction	**Journal**
a) Sale of goods on credit	
b) correction of an undercharge	
c) Goods returned by customers	
d) Purchases on credit	

4. State four conditions which must be met inorder for an insurance contract to be valid. **(4mks)**

……

……

……

……

5. The following table represents information related to three **business (i) (ii) (iii) and (iv). (4mks)**

	Assets	Capital	Liabilities
i)	700,000	X	50,000
ii)	Y	500,000	225,000
iii)	600,000	410,000	Z
iv)	67,000	W	24,705

6. Outline four measures that may be taken by the government to curb unemployment. **(4mks)**

……

……

……

……

7. The following is a table of activities. Name the utility that is created by each activity. **(4mks)**

Activity	**Utility**
a) Making chairs from timber	
b) Delivering milk to consumers early in the morning	
c) Shop keepers selling sugar to consumers	
d) Pharmacist delivering drugs to a hospital	

8. Outline four roles of transport in the facilitation of trade. **(4mks)**

……

……

……

……

9. State four disadvantages of division of labour. **(4mks)**

……

……

……

……

10. Outline four features of a public corporation. **(4mks)**

……

……

……

……

11. Outline four benefits that may accrue to a business from political stability. **(4mks)**

……

……

……

……

12. Highlight four benefits of national income statistics to the government. **(4mks)**

……

……

……

……

13. Highlight four advantages of using billboards as a medium of advertising. **(4mks)**

……

……

……

……

14. Highlight four circumstances under which a proforma invoice can be used. **(4mks)**

……

……

……

……

15. State four duties of the office clerk. **(4mks)**

……

……

……

……

16. State four reasons for maintaining a cash book in a business enterprise. **(4mks)**

……

……

……

……

17. State four demerits of government involvement in business activities. **(4mks)**

……

……

……

……

18. Name the type of warehouse associated with each of the statement given below. **(4mks)**

Statement	**Type of warehouse**
a) Goods can be stored before payment of custom duties.	
b) Individuals can hire storage facilities.	
c) Goods are stored from several manufacturers	
d) Specialized goods are stored	

19. Outline four disadvantages of using internet in communication. **(4mks)**

……

……

……

……

20. Highlight four characteristics of economic resources. **(4mks)**

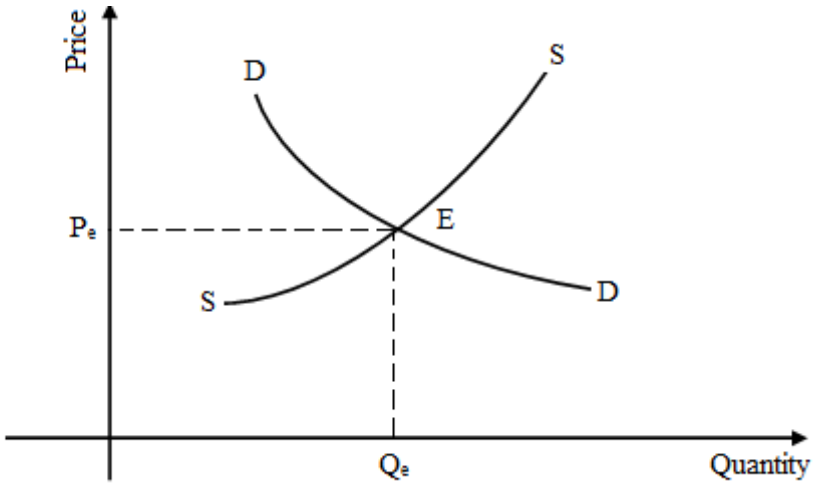
……

……

……

……

21. The following diagram shows the demand and supply curves of a commodity.



State four things that will happen to equilibrium price, Pe and quantity, Qe, if the supply of the commodity increases while demand remains constant **(4mks)**

……

……

……

……

……

22. State the effect of each of the following transactions on the balance sheet totals by writing increase or decrease or no effect in each case. **(4mks)**

Transaction	Effect
a) Bought machinery on credit	
b) Withdrew cash from the business for personal use.	
c) Purchased stock in cash	
d) Paid outstanding loan by cheque	

23. Identify the types of ledger in which each of the following accounts would be found .**(4mks)**

Account	Type of ledger
a) Otieno (buyer)	
b) Carriage outwards	
c) Mueni (supplier)	
d) Cash at bank	

24) List four sources of business ideas. **(4mks)**

……

……

……

……

25. Outline four factors that a firm may consider when deciding on what goods and services to Produce. **(4mks)**

……

……

……

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

BUSINESS STUDIES

565/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

565/2

PAPER 2

BUSINESS STUDIES

TIME: 2 ½ HOURS

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

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of **six** questions*
- *Answer any **five** questions in the answer booklet provided.*
- ***All** questions carry equal marks*

QUESTIONS

1 (a) Outline five documents which are required to be filed with the registrar of companies to facilitate the registration of a company. **(10mrks)**

(b) Explain five functions of an office. **(10mrks)**

2 (a) Muthomi is a trader at Nkubu market who sells carrots, Explain any five factors that could positively affect the quantity of carrot he supplies in the market. **(10mrks)**

(b) The following information was extracted from the books of Igoji Traders on 31st December 2014.

Details.	Ksh.
Sales	84,000
Purchases	58,800
Opening stock	15,700
Stock on 31/12/2014	13,000
Return out	1,500
Return in	9,000

Required:

(i) Prepare Igoji Traders Trading account for the period ending 31st December 2014. **(5mrks)**

(ii) Work out IgojiTraders percentage mark up. **(2mrks)**

(iii) Calculate Igoji traders rate of stock turnover. **(3mrks)**

3 (a) Explain five features of an oligopoly. (**10mrks)**

(b) Explain five insurance policies that the owner of budget supermarket may find useful for the business. **(10mrks)**

4 (a) Outline five differences between department stores and chain stores. **(10marks)**

(b) The following balances relate to wangu furniture enterprise as at 31st December 2008.

Machinery.		1,240,000
Stock		190,000
Debtors	150,000	
Motor vehicle		1,000,000
Cash		130,000
Drawings		550,000
Creditors		170,000
Bank overdraft	90,000	
15 yrs bank loan		1,300,000
Capital		1,400,000
Net profit		300,000

Prepare a balance sheet as at 31st December 2008 showing: (**10mrks)**

i) Net capital

ii) Total current asset.

iii) Total current liabilities

iv) Total fixed assets.

5 (a) Explain Five elements of communication. **(10mrks)**

(b)As at 1st June 2007, the cashbook of Kingara traders showed the following balance.

	Ksh.
Cash	10,000
Bank	4500(cr)

During the month, the following transactions took place:

June3: Kichwa a debtor settled his account of Ksh. 8000 by cheque of Ksh. 7500.

June 6: Paid wages by cash ksh.4000.

June10: Deposited Ksh.4000 into the business bank account from the cash till.

June15: Settled Wanjirus account of Ksh.5000 and was allowed a discount of 1%.

June20: Cash sales 90000

June24: Susan a debtor settled her account by cheque of Ksh.4000 having been allowed a Discount of 20%.

June 27: Purchased equipment khs.3000 and paid by cheque.

June29: Received Ksh.3000 cash from wariso.

June30: Banked all the available cash except Ksh.4500.

Required: Prepare a three column cash book for the month. **(10mrks)**

6 (a) Explain five circumstances that may lead to existence of a business opportunity to be exploited by the entrepreneur. **(10mrks)**

(b) Neema roses is a horticultural company producing flowers, explain five factors that may influence the choice of a channel for distributing its flowers. **(10mrks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHRISTIAN RELIGIOUS EDUCATION

313/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

313/1

CHRISTIAN RELIGIOUS EDUCATION

PAPER 1

TIME: 2 ½ HOURS

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

INSTRUCTIONS TO CANDIDATES:

- This paper consist of **six** questions
- Answer any **five** questions from this paper in the answer booklet provided.

QUESTION	1	2	3	4	5	6	TOTAL
MARKS							

QUESTIONS

1 a) Name any 8 historical book in the Old Testament **(8mks)**

b) Outline the reasons why the bible is referred to as good news. **(6mks)**

c) Give 6 occasions when Christians use the bible **(6mks)**

2 a) Narrate the covenant making between God and Abraham (Gen 15: 1 – 18) **(7mks)**

b) What are the differences between the African and the Jewish? **(8mks)**

c) Mention the significance of Gods covenant with Abraham. **(5mks)**

3 a) Explain 6 ways used by King David to promote the worship of Yahweh in Israel. **(6mks)**

b) Identify King Solomon's achievements in Israel **(7mks)**

c) How do Christians in Kenya demonstrate their faith in God? **(7mks)**

4 a) Describe the 3 groups of true prophets in the Old Testament **(6mks)**

b) Give 6 similarities between the traditional African prophets and the true prophets in the Old Testament **(6mks)**

c) State the problems experienced by church leaders in their work. **(8mks)**

5 a) What was the content of Jeremiah's letter to the exiles? Jer 29:5 – 10 **(7mks)**

b) Explain the challenges faced by prophet Jeremiah during his ministry **(7mks)**

c) Give 6 ways through which Christians settle disagreements among themselves**.** **(6mks)**

6 a) What changes have taken place in land ownership in Kenya today? **(6mks)**

b) List down the measures taken by the traditional marriage. **(7mks)**

c) Give reasons why people marry. **(6mks)**

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

CHRISTIAN RELIGIOUS EDUCATION

313/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

313/2

CHRISTIAN RELIGIOUS EDUCATION

PAPER 2

TIME: 2 ½ HOURS

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

INSTRUCTIONS TO CANDIDATES:

- This paper consist of **six** questions
- Answer any **five** questions from this paper in the answer booklet provided.

QUESTION	1	2	3	4	5	6	TOTAL
MARKS							

QUESTIONS

1. a) Explain the Jewish expectations concerning the messiah **(7mks)**

b) State 7 similarities in the annunciation of the birth of John the Baptist and that of Jesus Christ. **(7mks)**

c) Identify 6 lessons Christians learn from the annunciation of the birth of John the Baptist. **(6mks)**

2. **a)** State the teachings of John the Baptist as the forerunner of Jesus Christ. **(8mks)**

b) Outline what Jesus said about John the Baptist to his disciples **(6mks)**

c) Explain ways in which church leaders should respond to members who oppose them in their work **(6mks)**

3. a) Describe the incident in which Jesus had the last supper with his disciples **(7mks)**

b) Give 6 reasons why Jesus used bread and wine during the last supper **(6mks)**

c) Outline the importance of celebrating the Holy Communion in the church today. **(7mks)**

4 a) Identify 5 ways in which the work of the Holy Spirit was manifested on the day of Pentecost **(5mks)**

b) Identify the role played by the youth in church today **(7mks)**

c) State 8 challenges that hinder the church from carrying out its mission effectively **(8mks)**

5 a) Give seven advantages of a monogamous marriage. **(7mks)**

b) Outline the importance of children in both Christianity and traditional African communities. **(7mks)**

c) Identify 6 ways through which Christians help to minimize conflicts between parents and their children in Kenya today. **(6mks)**

6 a) Identify the main sources of Christian ethics **(5mks)**

b) Explain the Christian teachings on human sexuality **(8mks)**

c) How is the church helping the youth to deal with the temptation of pre-marital sex? **(7mks)**

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HISTORY AND GOVERNMENT

311/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO THE CANDIDATES:-

- *This paper consists of **three** sections; **A, B, & C***
- *Answer **all** questions in section **A**, **three** questions in section **B** and any **two** questions in section **C**.*
- *Answers to all questions **must** be written in the separate sheets provided.*
- *Candidate should answer the questions in English.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1- 17	
B	18	
	19	
	20	
	21	
C	22	
	23	
	24	
	TOTAL	

SECTION A (25MARKS)

Answer all questions in this section

1. What was the basic unit of political organisation of pre-colonial African communities in Kenya? **(1 mk)**

……

2. Give two economic activities acquired by the Maasai as a result of their interaction with this Bantus. **(2 mks)**

……

……

3. State two positive effects of the Indian Ocean trade on the coast of Kenya. **(2 mks)**

……

……

4. State two contributions of Ludwig Krapf in this spread of Christianity in Kenya. **(2 mks)**

……

……

5. Give one role of this Njuri Ncheke among the Meru. **(1 mk)**

……

6. Identify one reason that led to the decline of the city of Kilwa. **(1 mk)**

……

7. State two reasons why the Nandi resisted the British for long. **(2 mks)**

……

……

8. Give two reasons for the construction of Kenya – Uganda railway. **(2 mks)**

……

……

9. Identify one newspaper which published African grievances up to 1943. **(1 mk)**

……

10. Name one ox-officio members in parliament. **(1 mk)**

……

11. State two ways in which the Kenyan constitution promotes national unity. **(2 mks)**

……

……

12. State two features of political organizations which were formed in Kenya before 1939. **(2 mks)**

……

……

13. What is the main disadvantage of using negotiation as a method of conflict resolution? **(1 mk)**

……

14. Identify one institution which advised the governor in Kenya in the administration of the colony during the early 20th century. **(1 mk)**

……

15. Identify one type of democracy. **(1 mk)**

……

16. Give two reasons why elections are held regularly in Kenya today. **(2 mks)**

……

……

17. Which is the highest court in Kenya's judicial system? **(1 mk)**

……

SECTION B (45MARKS)

Answer any three questions in this section

18. (a) Name three Eastern Cushitic groups in Kenya. **(3 mks)**
(b) Describe the social organization of the Mijikenda during the pre-colonial period. **(12 mks)**

19. (a) Identify five sources of information on the history of the coast of East Africa **(5 mks)**
(b) Explain five social results of the contact between the Kenyan coast and the outside world by 1500 AD. **(10 mks)**

20. (a) Give five reasons for the rise of African independent churches in Kenya during the colonial period. **(3 mks)**
(b) Explain five roles played by women during the struggle for independence in Kenya. **(5 mks)**

21. (a) Identify three ways in which settler farming affected African farming in Kenya**.(3 mks)**
(b) Explain six settlers contribution to the development of agriculture during this colonial period in Kenya. **(12 mks)**

SECTION C (30MARKS)

Answer any two questions in this section

22. (a) Identify five elements of a good citizenship. **(5 mks)**
(b) Explain five factors which undermine national unity. **(10 mks)**

23. (a) Identify five ways in which Kenyan government ensures that the rule of law is upheld. **5 mks)**
(b) Outline five constitutional changes instituted in Kenya between 1981 and 1992 **(10 mks)**

24. (a) Give three reasons that may lead to the impeachment of a governor from office **(3 mks)**
(b) Explain six reforms that have been introduced in the correctional institutions in Kenya. **(12 mks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HISTORY AND GOVERNMENT

311/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO THE CANDIDATES:-

- *This paper consists of **three** sections; **A, B, & C***
- *Answer **all** questions in section **A**, **three** questions in section **B** and any **two** questions in section **C**.*
- *Answers to all questions **must** be written in the separate sheets provided.*
- *Candidate should answer the questions in English.*

FOR EXAMINER'S USE ONLY:

SECTION	QUESTIONS	CANDIDATE'S SCORE
A	1- 17	
B	18	
	19	
	20	
	21	
C	22	
	23	
	24	
	TOTAL	

SECTION A (25MARKS)

Answer all questions in this section

1. Name the type of government in which a group of people from the highest social class rule over others. **(1 mk)**

……

2. State two limitation of using archaeology as a source of historical information. **(2 mks)**

……

……

3. State two results of the enclosure movement in Britain during the Agrarian revolution. **(2 mks)**

……

……

4. Name two materials used to record written messages in ancient times. **(2 mks)**

……

……

5. Identify any two form of communication in traditional societies. **(2 mks)**

……

6. Give any disadvantages of television as a modern means of communication. **(1 mk)**

……

……

7. Identify the contribution of Jethro-Tull in the field of Agriculture **(1 mk)**

……

8. Give one reason that made the golden stool very important in pre-colonial period among the Asante. **(1 mk)**

……

9. Name the type of constitution used in Britain. **(1 mk)**

……

10. What was the main factor that led to the growth of Johannesburg city? **(1 mk)**

……

11. Give two functions of Emirs during the British indirect rule in Northern Nigeria. **(2 mks)**

……

……

12. Identify two personalities whose activities promoted colonialism in Africa. **(2 mks)**

……

……

13. Give one reason why the Berlin conference was convened. **(1 mk)**

……

14. Name the treaty signed between Samori Toure and the French in 1886. **(1 mk)**

……

15. Give two reforms introduced by the Germans after Maji Maji rebellion in Tanganyika**.** **(2 mks)**

……

……

16. State two reasons why the schliefiens plan failed to guarantee the Germans a quick win in the First World War. **(2 mks)**

……

……

17. What was the immediate cause of the First World War.? **(1 mk)**

……

SECTION B (45MARKS)

Answer any three questions in this section

18. (a) Give three ways in which Stone Age period was important to the evolution of man**.** **(3 mks)**
(b) Describe the culture of man during the Old Stone Age period. **(12mks)**

19. (a) State five reasons why pre-colonial communities in Africa engaged in trade. **(5 mks)**
(b) Explain five factors that have led to the industrial growth in south Africa. **(10 mks)**

20. (a) State reasons for Lewanika's collaboration with the British. **(3 mks)**
(b) Explain the political organisation of the Asante Kingdom. **(12 mks)**

21. (a) Name three political parties in South Africa. **(3 mks)**
(b) Explain six factors that led to the development of African nationalism in Ghana. **(12 mks)**

SECTION C (30MARKS)

Answer any two questions in this section

22. (a) State five causes of the First World War. **(5 mks)**
(b) Explain five reasons why the League of Nations failed to preserve world **peace.** **(10 mks)**

23. (a) Identify three chartered companies which were used by European powers to acquire colonies in
Africa. **(3 mks)**
(b) Explain the political impact of partition of Africa by European powers. **(12 mks)**

24. (a) State three aims of the economic community of West Africa. **(ECOWAS)** **(3 mks)**
(b) Explain six challenges facing economic community of West African state. **(ECOWAS) (12mks)**

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

GEOGRAPHY

312/1

PAPER 1

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES

- ***i.*** *This paper has two sections **A** and **B***
- ***ii.*** *Answer all questions in section **A.***
- ***iii.*** *Answer question **6** and any other two questions from section **B.***
- ***iv.*** *Candidates should check the questions paper to ascertain that all the pages are printed as indicated and that no question is missing.*

	QUESTION	TOTAL	SCORE
SECTION A	1-5	25	
SECTION B	6	25	
	7	25	
	8	25	
	9	25	
	10	25	

SECTION A; ANSWER ALL QUESTION IN THIS SECTION

1. a) List down **two** isothermal layers of the atmosphere. **(2mks)**

b) State any **three** characteristics of the lowest layer of the atmosphere. **(3mks)**

2. a) Differentiate between faulting and folding. **(2mks)**

b) Apart from Fold Mountains, name three other land forms resulting from folding. **(3mks)**

3. a) What is mass wasting**.** **(2mks)**

b) State**three** economic benefits of the weathering process. **(3mks)**

4. a) What is soil degeneration**?** **(2mks)**

b) Identify t**hre**e types of soil degeneration**.** **(3mks)**

5. a) Name the type of delta found at the mouth of: **[2mks]**

i. RiverNile

ii. River Omo

b) State **one** effect for each of the following types of river erosion**. (3mks)**

i. Head ward erosion

ii. Lateral erosion

iii. Vertical erosion

SECTION B

Answer Question 6 And Any Two Questions From This Section.

6. Study the map of **Kisumu East (1:50000)** provided and answer the following questions.

(a) i) What is the bearing of the trigonometrical station at Grid reference 081980 from the rock out crop at grid reference 071992. **(2 marks)**

ii) Measure the length of the all – weather road (bound surface) B 2/1 from the junction at grid reference 974911 to the edge of the Map, grid reference 947967.(Give your answer in kilometers) **(2 marks)**

iii) Draw a rectangle 10m by 15cm to represent the area covered by the map. On a rectangle, mark and name: **(1 mark)**

- A lake **(1 mark)**
- A plantation **(1 mark)**
- River Luando **(1 mark)**

b) i) Describe the relief of the area covered by the map. **(4 marks)**

ii) Explain how relief has influenced settlement in the area covered by the map**. (4 marks)**

b) Citing evidence from the map, give **three** economic activities carried out in the area covered by the map. **(3 marks)**

c) Students from the school at Masogo (grid square 0681) carried out a field study of the course of River Ombeyi.

i) State **three** findings they are likely to have come up with **(3 marks)**

ii) Give **three** advantages of studying rivers through field work **(3 marks)**

7. a) Define the term Vulcanicity**.** **(2mks)**

b) Distinguish between Extrusive and Intrusive Vulcanicity**.** **(4mks)**

c) Give any three resultant features due to intrusive Vulcanicity. **(3mks)**

d) Describe the continental Drift theory**.** **(3mks)**

e) i. State two artificial causes of earth movement**.** **(2mks)**

ii. Explainany three significance of Vulcanicity to human activities**.** **(8mks)**

8. a) What is **climate?** **(2mks)**

b) Explain how the following factors influences climate **[9mks]**

i. Latitude
ii. Altitude
iii. Ocean currents
iv. State four conditions that are necessary for the formation of **fog** **[4mks]**

c) i. Distinguish between aridity and desertification[2mks]
ii. State any four causes of aridity and desertification together with their possible solutions**.** **(8mks)**

9. a) Name two ways ofwater movement in oceans**.** **(2mks)**

b) List any four types of tides. **(4mks)**

c) State four factors that influence wave transportation**.** **(4mks)**

d) Form 4 geography class carried out afield study at a wave deposition site at the Coast of Mombasa.

i. List any four wave depositional features that might have been observed**.** **(4mks)**
ii. Explain any two factors influencing the type of Coast that they might have studied**.** **(4mks)**
iii. Give any three benefits they might have enjoyed due to conducting reconnaissance to their placeof study**.** **(3mks)**
iv. List two ways the learners might have used in collecting data. **(2mks)**
v. Mention any two types of coral reef they might have studied during the period of their study. **(2mks)**

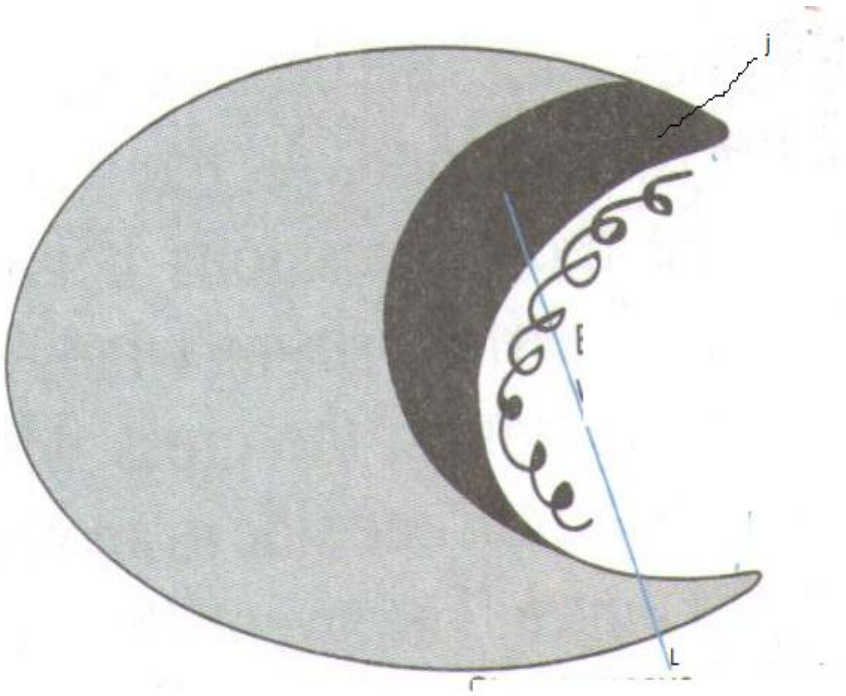
10. a) Name three major desert found in Africa. **[3mks]**

i. Give two processes in which wind erodes the earth's surface**.** **(2mks**)
ii. Explain three ways in which wind transports its load**.** **(6mks)**

b) Using well labeled diagrams, explain how the following desert features are formed.

i. Yardangs **(5mks)**
ii. Mushroom block**.** **(6mks)**

c) The diagram below represents features resulting from wind deposition in adesert.Use it to answer questions below;



i. Name the above feature. **(1mk)**

ii. Name the parts marked J and **L** **(2mks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

GEOGRAPHY

312/2

PAPER 2

TIME: 2¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

312/2

GEOGRAPHY

PAPER 2

TIME: 2 ¾ HOURS

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

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of **two** sections: **A** and **B***
- *Answer **all** the questions in section **A***
- *Answer question **6** and **any two** questions from **section B***
- *All answers **must** be written in the answer booklet provided*

SECTION A

Answer all the questions in this section.

1. a) Identify two hard wood tree species in Kenya. **(2 mks)**

b) Give two ways in which tree harvesting in Kenya differ from that of Canada. **(4 mks)**

2. a) Name two tourist attractions along the Kenyan coast. **(2 mks)**

b) State two physical factors that attract tourists in Switzerland. **(2 mks)**

3. a) Name two exotic breeds of dairy cattle reared in Kenya. **(2 mks)**

b) State three physical conditions that favour dairy farming in Kenya. **(3 mks)**

4. a) Name two prairies provinces of Canada where wheat is grown on large scale. **(2mks)**

b) Give three physical conditions that favour large scale wheat farming in prairies provinces of Canada. **(3 mks)**

5. a) What is a polder? **(2 mks)**

b) Name three crops grown in the polders. **(3 mks)**

SECTION B

Answer question 6 and any other two questions from this section.

6. The table below shows the number of tourists who visited Kenya from various parts of the world in 2005 and 2006. Use it to answer questions (a) and (b).

Place of origin	**No. of tourist per year**	
	2005	**2006**
Europe	942,000	965,000
Africa	120,000	154,000
Asia	97,000	128,000
North America	94,000	103,000
Australia & New Zealand	19,000	24,000
All other countries	29,000	41,000
Total	**1,301,000**	**1,415,000**

a) i) Which continent had the highest increase in the number of tourist visiting Kenya between 2005 and 2006. **(2 mks)**

ii) Calculate the percentage increase of tourist from Australia & New Zealand between 2005 and 2006. **(2 mks)**

iii) Draw a divided rectangle of 15cm long to represent the number of tourist that visited Kenya in 2005. Show your working. **(10 mks)**

b) i) State two advantages of using divided rectangle to represent geographical data**.** **(2 mks)**

ii) Give four reasons why in 2005 and 2006 there were more tourist visiting Kenya from Europe compared to those from other part of world. **(4 mks)**

c) Give five reasons why domestic tourism is being encouraged I n Kenya.

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

7. a) The table below shows the quantity of minerals produced in Kenya in tonnes between year 2001 and 2005. Use it to answer questions a (i) and (ii).

Minerals/year	2001	2002	2003	2004	2005
Soda ash	297,780	304,110	352,560	353,835	360,161
Fluorspar	11,885	85,015	80,201	117,986	109,594
Salt	5,664	18,848	21,199	31,139	26,595
Others	6,093	7,000	4,971	6,315	8,972

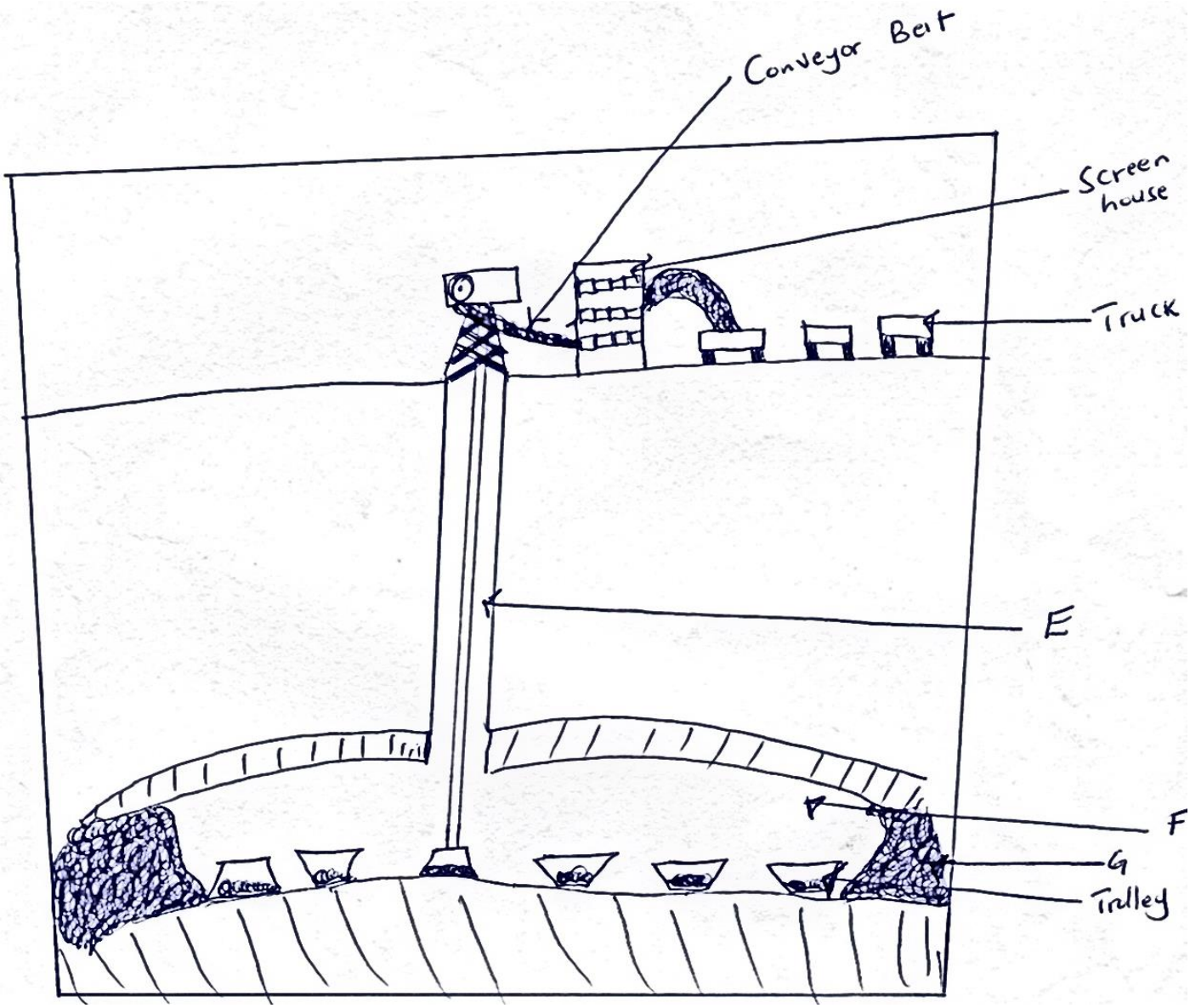
Source: Survey 2006

i)Calculate the average annual production of soda ash over the 5 year period. **(2 mks)**

ii)Calculate the total mineral production for the year 2003. **(1 mk)**

iii)Give three uses of soda ash. **(3 mks)**

b)The diagram below shows shaft mining.



i)Name the parts marked E, F, G. **(3 mks)**

ii)State two problems associated with shaft mining. **(2 mks)**

c)Explain four ways in which gold mining has contributed to the economy of South Africa**.(8 mks)**

d)Explain three negative effects of mining on the environment. **(6 mks)**

8. a)Name three cocoa growing areas in Ghana. **(3 mks)**

b) i)Outline the stages involved in the processing of cocoa from harvesting to the time it is ready for export. **(6 mks)**

ii)List four problems experienced by cocoa farmers in Ghana. **(4 mks)**

c)State four physical conditions necessary for growing of cocoa. **(4 mks)**

d)You intend to carry out a field study on agricultural activities around your school.

i)State four preparations that you would make for your study. **(4 mks)**

ii)Give four following activities you would carry out after the field **study.** **(4 mks)**

9. a) Differentiate between land reclamation and land rehabilitation. **(2 mks)**

b)State three methods used in reclaiming land in Kenya. **(3 mks)**

c)State three methods used to control tsetse flies in Lambwe valley in Kenya. **(3 mks)**

d) i)Explain four physical conditions favouring rice growing in MweaTebere Irrigation Scheme. **(8 mks)**

ii) Describe the stages in the reclamation of land from the sea in Netherlands**.** **(7 mks)**

iii) Name two major projects involved in reclaiming land in **Netherlands.** **(2 mks)**

10. a)i) Define fisheries. (**2 mks)**

ii) Name two countries in Southern Africa that are important for marine fish production. **(2 mks)**

b)Explain four factors that favour fishing in Japan. **(8 mks)**

c)Describe purse seining as a method of fishing. **(6 mks)**

d)i)State four problems experienced in the marketing of fish in Kenya. **(4 mks)**

ii)State three ways in which the Kenya government is promoting fishing industry in the country. **(3 mks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

ENGLISH

101/1
PAPER 1
TIME: 2 HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:-

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

FOR EXAMINER'S USE ONLY:

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

1. <u>QUESTION 1 : FUNCTIONAL WRITING</u> **(20 mks)**

Imagine that you emerged the top student nationally in **KCSE 2024 Examinations.** You invited ten friends to celebrate the splendid **KCSE** performance. One of the guests, ***Mr Isaboke*** enjoyed a special meal that you had prepared and has written to you requesting for the recipe. Send the recipe to him/her through his e-mail **isabokemicah@gmail.com**

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

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

The country ……1……benefited greatly from reduced fuel prices in the past year ……2….from favourable international market dynamics. ……3……..is a major production cost and when the prices go ……4……, commodity prices stabilize, which is good for the economy. ……5……., something untoward has been happening lately. Fuel ……6….has become erratic, causing distress to motorists. According ……7……..the petroleum institute of East Africa, which is the industry lobby, the intermittent supply is artificial. Some industry players are ……8.. oil for speculation, hoping to……9……..shortage and, in turn, influence the regulator, the Energy Regulatory commission, to raise the……10….

3. (a) Identify the silent letters in each of the following words. (3mks)

i) Soften

ii) Corps

iii) Juice

iv) Coup

(b) Indicate the correct intonation for the following sentences. (3mks)

i) Can I take you home?

ii) How did she travel to Nairobi?

iii) I have been working very hard for the coming examination.

4. Assume you are taking part in a group discussion. Explain how you would ensure you observe the rules of turn-taking. **(3mks)**

……

……

……

……

……

5. <u>Complete this dialogue with appropriate responses.</u> **(10 mks)**

Father: (*Angrily*) Where were you for a whole week?

Son:

……

…… (2mks)

Father: You better look for another lie" You were not there.

I confirmed with the headmaster.

Son: (*Hesitatingly*)

……

……

Father: I don't need apologies. Did you pay the fees I gave you?

Son:

……

……(2mks)

Father: (*reprimanding*) You did not lose the money. You drank it all at Jabazi Bar. I know. Why did you do that?

Son:

……

……

Father: Since you have becone an adult and began drinking, you don't need to be in school. Or do you?

Son: (*pleading*)

……

……

(2mks)

Father: (*interrupting*) I am giving you three days to decide whether you want to be in school or not.

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

ENGLISH

101/2
PAPER 2
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:-

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

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORES	CANDIDATE'S SCORES
1	20	
2	25	
3	20	
4	15	
Total Score	**80**	

1. <u>QUESTION 1: COMPREHENSION.</u> (20MKS)

<u>Read the passage below and answer the questions that follow.</u>

Substance Abuse has emerged in recent decades as a major concern both on and off the job. Although reasons vary, substance abuse can be a way that some people try to manage or reduce distress.

But it is important to be clear on what is generally meant by a drinking problem. In all cases related to alcohol abuse, a common factor is the unfavorable effect alcohol has on the health or well-being of the drinker and his or her associates. Common signs and symptoms that frequently indicate a drinking problem include being constantly absent from work, causing on-the-job accidents and expressing grievances most of the time.

Alcoholic employees can sometimes go undetected for years. Coworkers cover up for those unable to perform their jobs because of drunkenness. Even managers may be adept at concealing their alcohol abuse problems. Their secretaries or loyal associates may cover up for them. Alcoholics can be clever at inventing "credible" excuses when detected: "I must have a drink or two when I'm entertaining customers, of course."

Drug abuse, or drug addiction, exists when the taking of drugs, whether prescribed or non-prescribed, legal or illegal, causes difficulties in any area of an individual's life. Years ago, the stereotype of the drug user was either of a glazed-eyed musician frantically beating his sticks on a tight skin or a person who dwelt in a slum. Mass publicity on drug abuse has long since caused that <u>stereotype</u> to fade from view.

Complicating the ongoing war on drugs are changes in public attitudes and drug-use patterns. It sometimes seems that no sooner is progress made in combating one illegal drug than a different kind of substance abuse comes into vogue. Ethyl alcohol was the social drug during prohibition (1920 – 1933), marijuana became the social drug of the 1960s and 1970s, and some observers believe that crack cocaine and possibly ectasy – another so-called upper – became the social drugs of the 1980s and 1990s. the drugs of choice and people's attitude toward them may change, but the problem of drug abuse appears to be continuing unabated.

Pinpointing the specific symptoms of alcohol and drug abuse problems is not a simple task. A supervisor's main responsibility, therefore should not necessarily be uncovering evidence of dependency on alcohol and drugs but instead being observant for declining job performance. Yet there are certain behavioural patterns that some excessive users of alcohol and drugs display. These patterns can sometimes be spotted through simple observation. Increasingly though, employers are taking more aggressive steps to ferret out substance abuse among their workforces. A growing number of companies, especially large ones with many employees and those in business with potential to effect public health or safety, are adopting drug-testing programmes.

The signs of alcohol dependency, unfortunately, do not always become manifest until the middle of the late stages of the problem. No wonder some managers have mistaken an employee's euphoric appearance for the "look of love". The earlier treatment begins, naturally, the earlier treatment begins, naturally, the easier it will be. A person could experience some isolated incidents of such

drinking problems without necessarily being a alcoholic. However, alcohol abuse usually results in declining job performance.

Because there are many symptoms of drug abuse, no one person would exhibit all of them and a supervisor should guard against assuming that the presence of one or more symptoms is conclusive of alcohol or drug abuse.

QUESTIONS

1. What is the main reason given for substance abuse? **(2 mks)**

……

……

2. From paragraph two, state three ways in which alcohol abuse can unfavourably affect the workmates of a drunker? **(3mks)**

……

……

……

……

3. According to the passage, what is drug abuse? **(2mks)**

……

……

4. What was the common misconception about who a drug user was? **(2mks)**

……

……

5. Rewrite the following sentences using "as soon as"

It sometimes seems that no sooner is progress made in combating one illegal drug than a different kind of substance abuse comes into vogue. **(1mk)**

6. What can we infer about "prohibition"? **(2mks)**

……

……

7. In not more than 55 words, summarize the reasons that make it difficult to effectively deal with substance abuse. **(4mks)**

……

……

……

……

……

……

……

8. Why do you think the author of the passage cautions supervisors against hastily concluding that one is a drug abuser? **(2mks)**

……

……

9. Explain the meaning of the following words as used in the passage. **(2mks)**

i) Credible

ii) Stereotype –

2. EXCERPT

"Mathematics at a summit!" complained the other heads of state. "What next?"

The old rogue knew they were having trouble understanding his equations. Yet did he offerthem any help? No. He wanted to enjoy the moment.

When he had enjoyed it for long enough, he offered the help he had withheld.

"Here is what those equations tell to you, Excellencies. They say you I will toss this coin twice. "He held high the coin that he was talking about. "If coin land..."He broke off again."How you say 'pile ou face' in English?

"Heads or tails," obliged President Gamlozi.

"Senks,"acknowledged the old man. "So, if coin land heads for first toss, then first equation -in first row, first column, of The Choice Matrix-is telling to you: Choose Way Omega for another toss and forget all about Path Alpha. But if coin land tails, then second equation- in first row, second column-is saying you: Choose Path Alpha and forget Way Omega instead."The old man looked at his audience. "Questions?" he asked.

"YES!" shouted Minister Zinto, already up on his feet. "With all due respect, PresidentBangoura, I think what you are suggesting now is total nonsense."

"QUOI? WHAT?

"Mr President, real summits don't decide by flipping coins."

"l see. And I suppose, *Cher le Ministre,* Dear Minister, you going make same protestation,with as much vigour, when your Way Omega get win."

The summit hall rocked with laughter.

"Order!" demanded the Chair. "Order, Excellencies, order! We will have order. As for you, Minister Zinto, you will speak only when I say so. Do you understand-yes? Then sit down!"The minister sat down.

Dr Afolabi rose. “Mr Chairman, I think the minister has a point," he said. "My advice herewould be.

The old man cut him off. "Your advice here would be what? That we utilise your method of “this on one hand and that on other hand'? Ha! We would still be here next year, admiring ourhands if we were to do so.

“Again the summit hall rocked with laughter”

"Order, please! Excellencies, order!" the Chair reminded everyone. "As for you, Dr Afolabi,if I find I need your..

QUESTIONS

a) What happened immediately before this excerpt? **(3 marks)**

……

……

……

……

b) What do we learn about African Heads of state in this excerpt? **(4 marks)**

……

……

……

……

c) Identify and illustrate three features of style employed in this excerpt. **(6 marks)**

……

……

……

……

……

……

……

……

d) What does the chair mean when he asks Abiola if he wanted them to utilize his method hand

……

……

……

……

e) What happens immediately after this excerpt? **(3 marks)**

……

……

……

……

f) Give the meaning of each of following words as used in this excerpt. **(5 marks)**

(i) Flipping

(ii) Rogue

(iii) Protestation

(iv) Utilize

(v) obliged

3. <u>Read the following oral poem and answer the questions that follow.</u>

Oh beautiful bride, don't cry,
Your marriage will be happy,
Console yourself, your husband will be good.

And like your mother and your aunt,
You will have many children in your life,
Two children, three children, four……..

Resign yourself do like all other,
A man is not a leopard,

A husband is not a thunderstruck,
Your mother was your father's wife,
It will not kill you to work.

It will not kill you to grind the grain
Nor will it kill you to wash the pots
Nobody dies from gathering firewood
Nor from washing clothes.

We did not do it for you,
We did not want to see you go,
We love you too much for that

Its your beauty that did it
Because you are so gorgeous
Ah, we see you laugh beneath your tears!

Goodbye, your husband is here
And already you don't seem
To need our consolations.

<u>QUESTIONS</u>

a) With evidence, classify the oral poem. **(2mks)**

……

……

……

b) Who do you think are the singers of the song? Illustrate. **(2mks)**

……

……

……

c) How do the singers make the situation bearable for the lady? **(2mks)**

……

……

……

d) What is the attitude of the society from which the song is derived towards women? **(2mks)**

……

……

……

e) Illustrate and explain the use of the following stylistic devices in this oral poem. **(4mks)**

i) Repetition –

……

……

……

ii) Ellipses –

……

……

……

……

f) State in note form the duties of a wife according to the song. **(2mks)**

……

……

……

……

g) Explain any social aspect and one economic activity carried out in the commodity from which the oral poem is taken **(4mks)**

……

……

……

……

……

h) Explain the irony in the 7th stanza. **(2mks)**

……

……

……

4. GRAMMAR

i) Rewrite the following sentences according to the instructions given.

a) If he comes he will not be punished.

Begin: Unless……

b) The snail reached the ark only by perseverance

Begin: Only…….

c) They had just walked out of the building when the bomb went off.

(Begin: No sooner ……

John told the principal that he needed to go and see the nurse because he was feeling unwell.

(Rewrite as direct speech)……

d) These books belong to the daughters of our teacher.

(Begin: These are ……..

ii) Replace the underlined words with phrasal verbs that begin with the words given in brackets. **(3mks)**

a) Parents should not <u>yield</u> to their children's unreasonable demands. (give)

b) The officials <u>cancelled</u> the match because of the heavy rain (call)

c) <u>Disagreeing</u> with his parents was his worst mistake. (fall)

iii) Explain the difference in meaning of the following pair of sentence.

a) I only heard the news in brief.

b) I only heard the news briefly.

……

……

……

……

iv) Change the following sentences into passive.

a) Njoroge wrote the best composition.

……

b) Sue bought the beautiful house on the hill.

……

v) Complete the following sentences using the appropriate form of the word given in brackets.

a) Sophie's mother …….of Sophie wearing very tight clothes to church (approve)

b) His ……..cost him his job (efficient)

c) The ……of the traveler's was hindered by the poor roads (mobile)

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

ENGLISH

101/3
PAPER 3
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO THE CANDIDATES:-

- *Answer THREE QUESTIONS in this paper*
- *Question 2 is a compulsory question*
- *Where a candidate presents work on more than one optional text, only first one to appear will be marked.*
- *All answers to be written in the answers booklet provided.*

FOR EXAMINERS USE ONLY.

Question	Maximum	Candidate's score
1	20	
2	20	
3	20	
Total Score	**60**	

1. Imaginative Composition **(20 mks)**

Either

a) Write a story starting with the statement,

The news on the cancellation of my KCSE results after being in Shule Njema High School for five years was received with shock and resentment**…**

OR

b) Write a composition based on the following statement.

"The solution to the run-away corruption is in the hands of Kenyan's themselves."

2. Compulsory questions. ***The Samaritan*** *by* ***John Lara*** **(20 mks)**

"The writer's society, just like any other world society, is riddled with betrayal." Using the **play*, The Samaritan,* by John Lara** for references, write a composition justifying this statement.

3. Answer only one question from these choices

The optional setbooks **(20 mks)**

Either

a) Short story

Ninema is a short story about challenges of women in life. By referring to the life of Ninema, support this assertion. **(20 marks)**

OR

b) Write an essay to show the truth of the saying.

Discuss the theme of grief as depicted in the novel, An **Artist of The floating world by <u>Kazuo Ishiguro</u>** **(20 marks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

KISWAHILI

102/1
PAPER 1
TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

102/1

KISWAHILI

KARATASI YA 1

MUDA: SAA 1 ¾

Hati Ya Kuhitimu Kisomo Cha Sekondari Kenya (K.C.S.E)

MAAGIZO

a) Jibu maswali mawili

b) Swali la kwanza ni la lazima

c) Kisha chagua swali linguine kutoka hayo matatu yaliyosalia

d) Kila insha isipungue maneno 400

e) Kila insha ina alama 20

INSHA

SWALI LA LAZIMA

1. Wewe ni mtafiti wa maswala ya usalama nchini. Mwandikie barua Waziri wa Usalama wa Ndani barua ukimweleza sababu za wanafunzi wa shule za upili kujiunga na makundi ya wanamgambo, almaarufu Al Shabab.

CHAGUA MOJA:

2. Utandawazi una athari mbaya katika maisha ya vijana. Jadili.

3. Andika insha inayodhihirisha maana ya 'Umdhaniye ndiye siye'

4. Kamilisha insha yako kwa maneno:

...sitaisahau siku hiyo kwani sijawahi kufedheheka kama nilivyoaibika siku hiyo.

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

KISWAHILI

102/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Hati Ya Kuhitimu Kisomo Cha Sekondari Kenya (K.C.S.E)

MAAGIZO

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

KWA MATUMIZI YA MTAHINI PEKEE.

SWALI	UPEO	ALAMA
1	15	
2	15	
3	40	
4	10	
JUMLA	**80**	

1.UFAHAMU **ALAMA 15**

Shule yangu ya upili

Majio yangu katika shule hii ya upili hayakutokea kwa bahati nasibu bali kwa mipango kabambe niliyoianza tangu nikiwa shule ya vichekechea. Nikiwa sitetereki hata kwa wazazi wangu waliponisihi nijiunge na shule nyingine za karibu nikawa sisikii la mwadhini wala la mteka maji msikitini. Nikawa na ragba ya mkanja nikingoja siku ya kujiunga na shule yenyewe. Kweli majuto ni mjukuu na huja kinyume.

Nilizaliwa katika aila yenye nafasi iliyotopea na kubobea katika ukwasi uliodhihirika kutokana na mitaa tulikoselelea kwa muda kabla ya baba kuaamua kununua nyumba yake mwenyewe huko upande wa Karen hivyo tukagura kutoka Runda. Wakati wa likizo tukawa tunaruka hadi pwani ambako mama yangu alikuwa amemiliki jumba lililokuwa katika ufuo wa bahari lililojengwa katika kipande kisichopungua ekari tatu alilotunukiwa wakati wa nikahi yao na wakwe wa baba yangu.

Wavyele wangu wakawa wanaendesha magari meusi ya kifahari ingawa sikuwahi kumwona mama akichangamka kuendesha magari yake ya maana, kila macheo ya siku za kazi gari lililoendeshwa na dereva ambaye alimstahi mama hadi akawa anamfungulia mlango wa gari na kuufunga baada ya mama kujitoma katika tumbo la gari lilimjia na kumrejesha kwa wakati. Nikajiunga na shule ya msingi ya kibinafsi ambako nilishughulikiwa kama kikembe. Wengi wa wale tuliosoma nao walikuwa wa tabaka langu na walikuwa wametoka katika kila sehemu nchini Kenya.

Hayawi hayawi huwa na siku ya kuripoti ikafika. Alfajiri, dereva mmoja akatumwa kwenda hadi Kisumu ili atulaki na kutusafirisha kutoka uwanja wa ndege hadi shule ya upili ambayo ilikuwa yangu ya rohoni. Nasi tukaelekea hadi uwanja wa ndege ili turuke hadi Kisumu. Safari yetu kutoka kitongoji cha kifahari hadi Airport ilikuwa njema, safari yetu tulipoabiri ndege ilikuwa bila bughudha, safari yetu kutoka Kisumu mjini haikuwa na kasoro na tulienda kulingana na mpango. Safari yetu ilikuwa mufti hadi tulipofika katika langu la shule ya kitaifa! Tulipotia ozi tu!!....jamani.....jamani nikafa moyo. Labda mama aliweza kubaini mabadiliko ya hisia zangu, nilitamauka, nikawa mchege na kusema kweli niliyoyaona sikuamini. Mvua iliyokuwa imepasua hapo awali ilikuwa imeacha vitua vya maji kwenye vijia vya kutembea vilivyochakaa na kubomoka bila yeyote kujali kuvikarabati. Majengo yalikuwa makongwe yaliyojengwa miaka mia moja iliyopita na yalistahili kuitwa makafadhi badala ya pahali pa kumkaribishia mwanafunzi aliyepita kwa alama mia nne na thelathini na tano. Asiye na wake ana Mungu, nikapiga moyo konde lazima nisajiliwe katika shule ya ndoto langu. Ningewezaje kughairi wazo langu baada ya siku hizo zote za maandalizi tena mbele ya wanuna walioniona kama kielelezo chao tangu walipozaliwa. Nikasajiliwa!

Sikujua, hakika sikujua, sikujua shule ya upili ya kitaifa yaweza kuwa hivi. Kweli mwanafunzi aweza kukosa viatu na hata kushindwa kununua rangi ya kupaka viatu hivyo iwapo amenunuliwa na wahisani? Nilimlaumu nina maana hakunieleza kuwa mtu anaweza kula chakula ambacho mbwa wetu hawezi hata kukiangalia. Nilipoingia katika ukumbi wa chakula nilihisi kitefutefu nusura nichafukwe na moyo, makapi ya mboga na uchafu usioelezeka ulinikumba, kisha

nikapewa kisahani cha plastiki na kupakuliwa kipande cha ugali ambacho bado kilikuwa na unga na kuachiwa hiari ya kukila au kukitupa. Wenzangu wakawa wanakirambatia chakula kwa kasi huku mmoja wao alipoona jinsi nilivyokiangalia changu akanihisi nimpe chote na kukimaliza fyu. Wote walikuwa na furaha kemkem na kuajabia utukufu wa shule iliyotukuka ya kitaifa ila mimi.

Baada ya mlo 'rojo rojo', tukaelekea darasani nilikopigwa na mghuma mkubwa. Tulikuwa wanafunzi hamsini na watano katika darasa moja tu! Mwalimu mmoja akaja na kutukaribisha shuleni kisha akatuarifu kuwa atakuwa mwalimu wa darasa letu. Nilipomsikia akinena nusura niishiwe na stahamala, kimombo chake kilinishangaza, hasa matamshi yake yalipungukiwa na kudhirisha athari za lugha ya asili. Nilihisi kana kwamba ningemrekebisha lakini sikudhubutu.

Tukafululiza hadi bweni na nikajilaza kitandani chembamba huku mwingine nisiyemjua lakini asiyejua kuwa kuna nguo maalum za kulala akalala uchi katika ghorofa ya juu ya kitanda chetu. Mgeni njoo mwenyeji apone maana baada ya muda wadudu ambao sikuwahi kuwaona aushini mwangu wakanza kunishambulia. Nikaamka baada ya kumnasa mmoja wa wadudu hawa na kuuliza mmoja wa wenzangu ni wepi wadudu hawa na kwa kutojali hata kidogo, akanieleza kuwa hawana neno bali ni kunguni tu, sikujua na kwa kweli mama hakuniambia kuwa kuna wadudu wanaotafuna mtu na hunuka fye! Sikulala kwa hofu huku wenzangu wakiforota kwa njia ya kunighasi. Sikuwahi kudhani kuwa watu wengi wanaweza kulala chumba kimoja huku changu kikiwa na hamamu na vifaa vyote muhimu kikibaki bila mtu!

Tulisomeshwa na walimu wasiojali kana kwamba tunaelewa au la. Hawakushughulika iwapo tulifanya kazi za ziada au la, ndio, hakujali chochote. Kilichonishangaza ni kuwa wanafunzi waliojiunga nasi kutoka shule za umma wenye alama duni waliwapenda na kuelewa haraka walichosomeshwa na hawakujali matamshi yao, labda hawakuyatambua.

Hatimaye tukafanya mtihani wa mwisho wa muhula wa kwanza. Nilishangaa ghaya iliponibainikia kuwa aliyetuongoza alikuwa ghulamu mmoja mshamba niliyempuuza tu mvulana kutoka kijijini ambacho singetambua katika ramani ya nchi ambaye hata vitu vya kimsingi vilimpiga chenga. Nikafanya uchunguzi nikatambua mwenzangu alikuwa na alama mia mbili hamsini na tatu akitoka katika darasa la nane, nilifanikiwa kuwa nambari mia mbili hamsini na tatu kwa jumla ya wanafunzi mia tatu! Tulipofunga kwa likizo ya Pasaka nikaamua kuchukua hatua nyingine sitawahi kuhama kutoka shule hii ya upili wala kuwa zaidi ya nambari kumi!

MASWALI

a) Thibitisha kauli kuwa msimulizi ana msimamo dhabiti **(alama 2)**

……

……

……

……

b) Tofautisha jinsi mwandishi alivyofunzwa katika shule ya kibinafsi na shule ya upili. **(alama 3)**

……

……

……

……

c) Taja mambo matatu yanayotuonyesha kuwa msimulizi alilelewa katika aila ya kikabaila kulingana na aya ya pili. **(alama 3)**

……

……

……

……

d) Andika masuala matatu yaliyomshangaza katika shule ya upili **(alama 3)**

……

……

……

……

e) Andika tamathali mbili zilizotumika katika kifungu. **(alama 2)**

……

……

……

f) Eleza maana ya msamiati huu kama ulivyotumika katika kifungu. **(alama 3)**

i) alimstahi ……

ii) kughairi ……

iii) kunighasi ……

2. UFUPISHO **ALAMA 15**

Soma makala yafuatayo kisha ujibu maswali

Mwana wa Adamu ni kiumbe cha ajabu! Ni kiumbe kilichopewa uwezo wa kuhodhi na kumiliki kila kitu, kiumbe kilichopewa akili na maarifa fuvu tele ili kutaratibu shughuli na mambo: kiumbe kilichopewa uwezo wa kuwasiliana na kutumia sauti nasibu ili kuwa na urari na muwala; kiumbe kilichopewa uwezo wa kufaidi viumbe wengine kwa njia mbalimbali na jumla jamala; hiki ndicho kiumbe kilichopewa idhini maalum ya kuzaana na kujaza dunia. Huyu ndiye mwana wa mama Hawa ambaye sasa amegeuka ndovu kumla mwanawe.

Kwa sababu ya bongo alizonazo, binadamu ana uwezo wa kutumia teknolojia kwa manufaa yake na ithibati zipo tele. Binadamu ametumia nyambizi kuzuru chini ya bahari, amefika mwezini, amevumbua magala: amevumbua uyoka: amevumbua tarakilishi na sasa shughuli zake ni za kutandaridhi. Mwenyewe yuasema kuwa dunia yake imekuwa kitongoji katika muumano huu.

Chambilecho wavyele, akili nyingi huondoa maarifa. Binadamu amekuwa dubwana linalojenga kushoto na kubomoa kulia na tuna sababu ya kulisoza dubwana hili kidole. Rabana ndiye msanii asiye mfanowe kwani aliisawiri murua. Rabuka akaona yote yalikuwa mema na mazuri: akamwambia binadamu," Haya twende kazi!"

Viwanda vya binadamu vinatiririsha maji-taka ovyo hadi mitoni, maziwani na baharini na matokeo yamekuwa ni vifo vya viumbe vya majini kama samaki ambavyo ni urithi aliopewa na muumba. Hakuna kiumbe kinachoweza kustahimili maisha bila maji safi. Maji yote sasa yametiwa sumu na binadamu kwa sababu ya 'maendeleo' yake. Joshi kutoa katika viwanda vivyo hivyo nalo limehasiri ukanda wa ozone ambao sasa umeruhusu jua kutuhasiri kwa joto kali mno. Siku hizi inasemekana kuwa kuna mvua ya aside inayonyesha katika baadhi ya sehemu za dunia na kuleta madhara makubwa. Labda hata mabahari yamekasirika kwa sababu hivi majuzi katika kile kilichoitwa 'tsunami', bahari lilihamia nchi kavu na kusomba maelfu ya binadamu na kuwameza wazima wazima. Vimbunga navyo vimetokea kwa wingi. Wataalamu wanasema kuwa viwango vya miyeyuko vitazidi kwa sababu ya joto na kiwango cha maji kitazidi pia. Binadamu atatorekea wapi?

Idadi ya binadamu imezidi hadi kiasi asichoweza kukishughulikia kwa sababu anaijaza kiholela kwa sababu anadai kuwa aliruhusiwa kuijaza. Hii ni imani potovu. Anasahau kuwa alipewa ubongo wa kuwaza na kuwazua kabla ya kufanya chochote. Dhiki, maradhi na ufukara zimehamia kwa binadamu na kumtia kiwewe'

Binadamu amefyeka misitu kwa kutaka makao, mashamba, mbao, makaa, ujenzi wa nyumba na barabara na mahitaji mengine mengi. Wanyama wamefurushwa na wengi kuangamia kwa sababu ya ukosefu chakula na wengine kushindwa kuhimili mabadiliko katika mazingira. Chemichemi za maji zimekauka nalo jangwa limeanza kutuzuru kwa kasi inayotisha. Kazi ya binadamu imekuwa ya kusukia kamba motoni. Itambidi aanze kujenga kwa matofali ya barafu.

a) Bila kupoteza maana iliyokusudiwa na mwandishi wa taarifa, fupisha aya ya kwanza.

(Maneno 40-50) (alama 5)

Matayarisho

……

……

……

……

……

……

……

……

Jibu

……

……

……

……

……

……

……

……

b) Kwa kuzingatia aya 4 za mwisho, eleza mambo muhimu yanayoshughulikiwa na mwandishi

Matayarisho **(maneno 95-105) (alama 8)**

……

……

……

……

……

……

……

……

……

……

……

……

Jibu

……

……

……

……

……

……

……

……

……

……

……

……

3. MATUMIZI YA LUGHA. **ALAMA 40**

a) Taja sifa mbili bainifu za irabu /u/ **(alama 2)**

……

……

……

b) Tunga sentensi kwa kutumia kiwakilishi huru cha nafsi ya tatu umoja. **(alama 2)**

……

……

……

c) Andika umoja wa sentensi zifuatazo. **(alama 2)**

i) Wakitaka tuwasamehe waje watuombe radhi kwa waliyotufanyia.

……

ii) Yaliyosemekana kuwa ni yao yameharibiwa na binamuo

……

d) Yakinisha **(alama 2)**

Hasikii la mwadhini wala la mteka maji msikitini.

……

……

e) Bainisha shamirisho **kipozi** na **kitondo** katika sentensi ifautayo. **(alama 2)**

Mama alimpikia mwanawe chakula alichokitamani sana.

……

……

……

f) Tunga sentnesi moja yenye chagizo ya mahali na ya wakati. **(alama 2)**

……

……

g) Onyesha mfumo wa sauti katika tungo: Mtumbwini. **(alama 2)**

……

……

……

h) Tambulisha vipashio vitatu vya sarufi ya Kiswahili. **(alama 3)**

……

……

……

……

i) Huku ukitoa mfano, eleza mantiki inayopatikana katika kauli ya kutendua. **(alama 2)**

……

……

……

j) Taja matumizi manne ya kiambishi "ki". **(alama 2)**

……

……

……

……

k) Eleza maana mbili ya sentensi ifuatayo. **(alama 2)**

Jambazi lilimwibia Okoth gari jipya.

……

……

……

……

l) Bainisha vishazi huru na vishazi tegemezi katika sentensi ifuatayo. **(alama 2)**

Nitaenda maktabani ingawa ninaumwa na kichwa.

……

……

……

……

m) Andika katika kauli ya kutendesha **(alama 1)**

Ile pombe aliyokunywa Chacha ilimfanya alewe.

……

……

……

n) Changanua kwa kutumia mtindo wa kielelezo matawi. **(alama 4)**

Mtoto ambaye amefika ni ndugu yangu.

……

……

……

……

……

o) Andika kinyume cha sentensi ifautayo. **(alama 2)**

Huzuni alisifu nduguye aliyekusanya takataka zote.

……

……

p) Tumia neno 'vibaya' kama:

i) kivumishi

……

ii) Kielezi

……

q) Tunga sentensi yenye kihuhishi cha 'A' - unganifu katika ngeli ya U - ZI. **(alama 1)**

……

……

r) Mbwa wetu amekatwa mkia. Geuza katika hali ya ukubwa. **(alama 2)**

……

……

s) Tunga sentensi moja kutofautisha maana ya maneno haya. **(alama 1)**

Mkembe, mkebe

……

……

……

t) Tumia ngali kutunga sentensi ili kuleta maana ya: **(alama 2)**

i) Tendo katika hali ya kuendelea

……

……

ii) Tendo kutoweza kufanyika kwa sababu ya wakati kupita

……

……

4. ISIMUJAMII (ALAMA 10)

a) Kwa nini kulikuwa na haja ya kusanifisha lugha ya Kiswahili. Toa sababu tano**. (alama 5)**

……

……

……

……

……

……

……

b) "….sote tunajua kwamba ni kudura. Makiwa!"

i. Tambua sajili iliyotumika katika dondoo hili. **(alama 1)**

……

ii. Eleza sifa nne za sajili hiyo. **(alama 4)**

……

……

……

……

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

KISWAHILI

102/3

PAPER 3

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

Hati Ya Kuhitimu Kisomo Cha Sekondari Kenya (K.C.S.E)

MAAGIZO

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

KWA MATUMIZI YA MTAHINI PEKEE

SWALI	UPEO	ALAMA
1	20	
2	20	
3	20	
4	20	
JUMLA	80	

SEHEMU A: Riwaya

1. LAZIMA

RIWAYA YA NGUU ZA JADI. – Clara Momanyi

Kwa kurejelea **riwaya ya Nguu za Jadi,** onyesha jinsi mwanamke amechangia kuilemaza jamii yake. **(al.20)**

SEHEMU B: Tamthilia

Bembea ya Maisha; Jibu swali la pili au la tatu

2) ***Wewe unajua vote valivosemwa. hadharani na faraghani. Si makanisani, si magweni. leo nikiviona vitoto hivi vilivyochekwa na kusimangwa jana, vikijiendeshea mambo yao ninaridhika"***

(a) Bainisha matokeo ya maneno yaliyopigiwa mstari **(alama6)**

(b) Eleza sifa za mwanawe msemewa **(alama4)**

(c) Kwa hoja kumi, jadili namna suala la malezi lilivyoangaziwa katika tamthilia. **(alama10)**

3) Kwa kurejelea mifano mbalimbali thibitisha namna ndoa katika tamthilia ya **Bembea ya maisha** zimemulika uhalisia wa jamii za kiafrika. **(alama20)**

SEHEMU C: Hadithi Fupi

Mapambazuko ya Machweo; Jibu swali la 4 au la 5

4. "...iwapo penzi hili litatia doa, basi nirudishie mfuko huu kama ishara ya kulitupa penzi langu kama)ongoo na mti wake...

a) Eleza muktadha wa dondoo hili. **(alama 4)**

b) Fafanua mbinu mbili ambazo zimetumika katika dondoo hili. **(ala 4)**

c) Eleza sifa sita za msemaji wa maneno haya. **(alama 6)**

d) EIeza umuhimu wa msemewa wa hadithi hii katika kujenga ploti. **(al 6)**

5. Kwa kurejelea hadithi ya **Ahadi ni Deni**, fafanua namna Uwajibikaji umejitokeza.

(alama 20)

SEHEMU D: Fasihi Simulizi

2. Soma utungo ufuatao kisha ujibu maswali

Heri ujue mapema
Nasaba yetu haina woga
Woga haumei kwetu, humea kwa kina mamako.
Tulichinja jogoo na fahali ili uwe mwanaume.

Ah! Kisu cha ngariba ni kikali ajabu. Iwapo
utatikisa kichwacho. Uhamie kwa
wasiotahiri, Ama tukwite njeku.

Mpwangu kumbuka hili,
Wanaume wa mlango wetu
Si waoga wa kisu
Wao hukatwa mchana hadi usiku Wala
hawalalamiki.

Siku nilipokatwa
Nilisimama tisti
Nikacheka ngariba kwa tashtiti Halikunitoka chozi.

Iwapo utapepesa kope
Wasichana wa kwetu na wa mbali Wote
watakucheka Ubaki ukinuna.

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

Maswali;

(a) Taja na uthibitishe shughuli zozote za kiuchumi za jamii ya wimbo huu **(alama 4)**

(b) Ni nani mwimbaji wa wimbo huu na anawaimbia nani? **(alama 2)**

(c) Huu ni wimbo wa aina gani? Thibitisha **(alama 2)**

(d) Mwimbaji wa wimbo huu ana taasubi ya kiume. Thibitisha kauli hii. **(alama 2)**

(e) Eleza wajibu wa nyimbo katika jamii (**alama 6)**

(**f)** Ijapokuwa nyimbo ni nzuri, zina ubaya wake. Thibitisha kauli hii **(alama 4)**

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

SEHEMU E: Ushairi (alama 20)
Jibu swali la 7 au la 8
7. Soma shairi lifuatalo kisha ujibu maswali

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

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

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

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

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

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

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

Mashehe wa mdaduwa, kwa ubani na uvumba,
Tufani hilo kwa kuwa, kusoze kwake kutamba,
Itokee afueni!
(Shairi la 'Tufani' la Haji Gora Haji, katika *Tamthilia ya Maisha*, uk 62)

Maswali;

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

8. Soma shairi lifuatalo kisha ujibu maswali

Daima alfajiri na mapema
Hunipitia na jembe na kotama

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

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

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

Na mimi kubaki kujiuliza
Kuna siri gani inayomliwaza? Au ni kujua
au kutojua?
Furaha ya mtu ni furaha gani? Katika dunia
inayomhini?
Ukali wa jua wamnyima zao
Soko la dunia lamkaba koo;

Dini za kudhani zamsonga roho Ayalimia
matumbo ya waroho.
Kuna jambo gani linalomridhisha? Kama si
kujua ni kutojua Lait angalijua, laity
angalijua!

Maswali:

a) Eleza hali ya mzungumziwa katika shairi hili. **(alama 2)**

b) Huku ukitoa mifano, onyesha aina <u>mbili</u> za uhuru wa kishairi uliotumiwa katika shairi hili **(ala. 4)**

c) Fafanua aina <u>tatu</u> za taswira ukirejelea ubeti wa pili **(alama 3)**

d) Maswali ya balagha katika shairi hili yanasisitiza maudhui yapi? **(alama 2)**

e) Kwa kutoa mifano, bainisha vipengele <u>vitatu</u> vya Kimtindo katika shairi hili **(alama 3**)

f) Eleza <u>toni</u> ya shairi hili **(alama 2)**

g) Bainisha nafsineni katika shairi hili **(alama 1)**

h) Eleza muundo wa shairi hili **(alama 3)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

MATHEMATICS

121/1
PAPER 1
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- *Write your **name**, **admission number** , **Signature** and write **date** of examination in the spaces provided*
- *The paper contains **two** sections. Section I and Section II.*
- *Answer **ALL** the questions in section I and any **five** questions in section II.*
- *Answers and working **must** be written on the question paper in the spaces provided below each question.*
- *Show all steps in your calculations below each question.*
- *Marks may be given for correct working even if the answer is wrong.*
- *Non programmable silent electronic calculators and KNEC mathematical table may be used, except where stated otherwise.*

FOR EXAMINERS USE ONLY

SECTION I

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**
Marks																	

SECTION II

Question	17	18	19	20	21	22	23	24	**TOTAL**
Marks									

GRAND TOTAL

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

SECTION I (50 MARKS)

Answer all the questions from this section

1. Simplify **(3 marks)**

$$\frac{\frac{2}{3}+\frac{2}{3}\ of\ \frac{4}{9}\div\frac{8}{5}-\frac{2}{15}\div\frac{8}{15}}{\frac{5}{6}-\frac{2}{12}\div\frac{3}{2}\times\frac{9}{7}}$$

2. Nyongesa spent a total of sh 970 on buying 3 text books and 5 pens. If he had bought 2 text books and 8 pens he would have saved sh 90. Find the cost of one text book. **(3 marks)**

3. The volumes of two similar solid cones are $1080cm^3$ and $1715cm^3$. If the curved surface area of the smaller cone is $840cm^2$, find the curved surface area of the larger cone. **(4 marks)**

4. The exterior angle of a regular polygon is a quarter the size of an interior angle. Determine the number of sides of the polygon. **(3 marks)**

5. $\cos\theta = \frac{1}{\sqrt{3}}$ where θ is an acute angle. Without using mathematical tables or calculator, find:

(a) $\boldsymbol{\sin\theta}$ **(2 marks)**

(b) $\boldsymbol{\tan(90 - \theta)}$ **(1 mark)**

6. Solve the inequality $4x - 3 > x \geq \frac{3x-5}{2}$ and give your answer as a compound inequality

(3 marks)

7. Simplify $16^{-3/4} \times 64^{2/3} \times \left(\frac{1}{4}\right)^{-3/2}$ **(3 marks)**

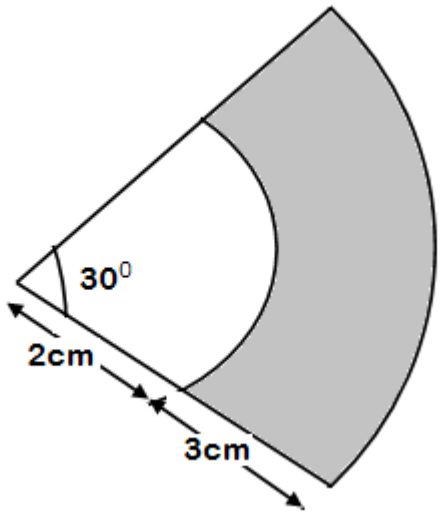
8. Boaz comes to Kenya with 5 600 Euros which he exchanges to Kenya Shillings. While in Kenya he spends Kshs 280 700 touring various parts of Mombasa County and donates Kshs 120 000 to a school for the blind. He then converts the remaining amount to sterling pounds and leaves Kenya. The exchange rates at the time were as follows:

Currency	Buying (Kshs)	Selling (Kshs)
1 Euro	105.63	105.98
1 Sterling pound	120.23	120.54

Calculate the amount of sterling pounds that he had as he was leaving Kenya. **(3 marks)**

9. Traffic lights at three different functions show green light at the intervals of 10 seconds, 12 seconds and 15 seconds. They all show green at 1.00pm. At what time had they previously shown green together? **(3 marks)**

10. Find the area of the shaded region in the figure below. **(3 marks)**



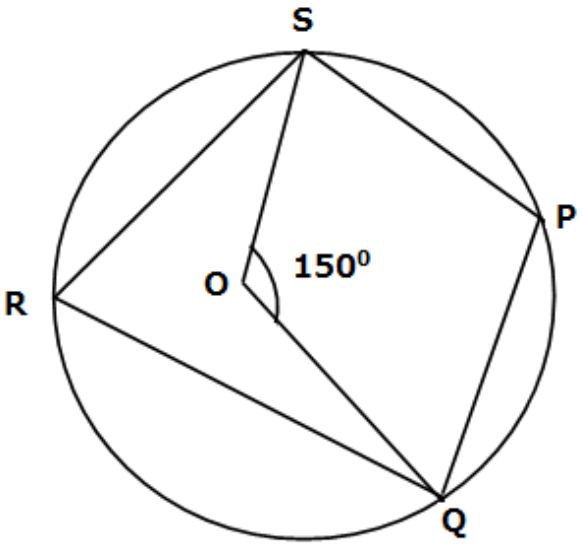
11. The point M $\left(\frac{1}{2}, 1\right)$ is the mid – point of points $A(a, -3)$ and $B(4, b)$. Find the values of a and b and hence the magnitude of $\overrightarrow{AB}$ **(3 marks)**

12. Calculate the volume of 2kg of a cork if the density of the cork is 0.25g/**cm^3.(3 marks)**

13. Solve the equation $2x^2 + 4x + 1 = 0$ using completing the square method. **(3 marks)**

14. PQRS is a trapezium in which PQ and SR are parallel. If PQ = 7cm, SR = 3cm, QR = 5cm and the area of PQRS is 18cm^2, calculate the height PS. **(3 marks)**

15. PQRS is a cyclic quadrilateral and O is the center of the circle. Angle QOS = 150^0.

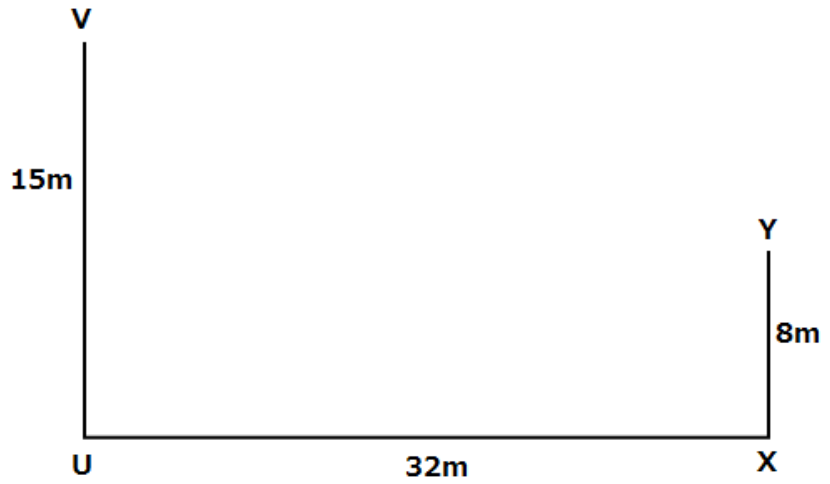


Find the size of:

(a) Angle QPS **(2 marks)**

(b) Angle QRS **(1 mark)**

16. The heights of two vertical poles UV and XY are 15m and 8m respectively. They area 32m apart and on a horizontal ground as shown in the figure below.



Calculate the angle of elevation of V from Y **(3 marks)**

SECTION II (50 MARKS)

Answer FIVE questions ONLY from this section

17. (a) Given the matrix $Q = \begin{pmatrix} 5 & 24 \\ 4 & 30 \end{pmatrix}$,find its inverse matrix Q **(2 marks)**

(b) Two friends Kamara and Teso, bought bulls at sh b per bull and goats at sh g per goat. Kamara spent sh.96,000 in buying 5 bulls and 24 goats while Teso spent sh 93,000 in buying 4 bulls and 30 goats

(i) Form a matrix equation to represent this equation **(1 mark)**

(ii) Use the inverse matrix Q^{-1} in (a) above to find the cost of one bull and that of one goat **(3 marks)**

(c) Kamara sold all his animals at a profit of 30% per bull and 40% per goat. Teso sold his animals at a profit of 25% per bull and 50% per goat. Determine who made more profit and by how much. **(4 marks)**

18. A bus left Kampala travelled towards Dar-es-Salaam at an average speed of 70km/h. after $3^1/_2$hrs, a car left Dar-es-Salaam and travelled along the same road towards Kampala at an average speed of 90km/h. the distance between Kampala and Dar-es-Salaam is 1077km.

a) Find:

(i) The distance of the bus from Kampala when the car left Dar-es-salaam **(2 marks)**

(ii) The distance of the bus from Dar-es-Salaam when the car left the bus (**4marks)**

b) After the car met the bus, the car stopped for 30 minutes. The car then continued with its journey and reached Kampala at the same time the car reached Dar-es-Salaam. At what new average speed between the meeting point and Kampala car move**.** **(4marks)**

19. The following table shows masses to the nearest kilogram, of 200 animals in Moseti's farm.

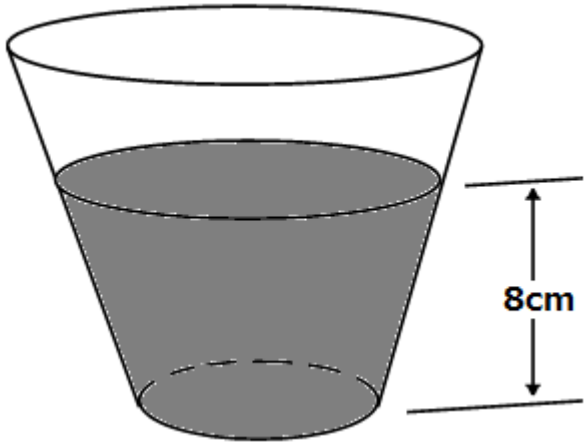
Mass (kg)	40-49	50-59	60-69	70-79	80-89	90-99	100-109
frequency	9	25	58	52	30	16	10

a) Using the assumed mean of 74.5, find the actual mean **(4 marks)**

b) Find the median mass **(3marks)**

c) Calculate the standard deviation of the data **(3marks)**

20. The diagram below represents a glass in form of a frustum of a cone, with milk to a depth of 8cm. the internal radius of the glass bottom is 3cm while the radius of a circular surface of milk is 5cm.



a) How many litres of milk correct to 2 significant figures are in the glass? **(3marks)**

b) A metallic hemisphere solid accidentally drops inside the milk. The level of glass in milk then rises by 6mm. if no milk splashed out of the glass when the solid dropped in, find

(i) The volume of the hemisphere solid **(4marks)**

(ii) The radius of the hemisphere solid **(3marks)**

21. In January, 2008, Kelly and Wasanga contributed sh 455,040 and sh 682,560 respectively and used the money to start a business. They agreed that the profit from the business would be shared as from the business would be shared as follows.

24% to be shared equally

36% to be shared in their ratio of contribution

40% to be retained for the running of the business.

a) The total profit for the year was 2008 was sh 750,000

(i) The difference in their total shares of profits **(4 marks)**

(ii) Calculate the amount that was retained for the running of the business**.** **(2marks)**

b) In January 2009, Wasanga took his whole share of profit to a bank that offered a compound interest at the rate of 6% per annum. If the interest was compounded semi-annually, calculate his total interest in the bank in December 2011. **(4marks)**

22. A rectangular tree nursery measuring 16m by 14 m is situated at the centre of a rectangular piece of land. A path of uniform width runs all around the tree nursery. The width of the path is x metres and the area of the piece of land 360m2. The path is graveled at the cost sh 75 per square metre.

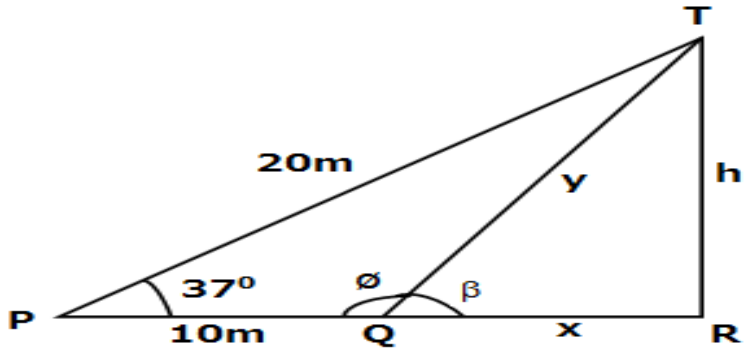
a) Determine

(i) The value of x **(5marks)**

(ii) The dimensions of the field **(2marks)**

b) Calculate the cost of gravelling the path **(3marks)**

23. The diagram below shows a vertical electricity pole TR supported by two wires PT and QT. the points PQ and R are collinear and on the horizontal ground. The angle of elevation of T from P is 37^0 and the distance between P and Q is 10m



Given that the length of PT is 20m, calculate to the nearest whole numbers

a) The length of the wire QT **(3marks)**

b) The angle of elevation of T from Q **(3marks)**

c) The height of TR of the electricity pole **(2marks)**

d) The length of P from R **(2marks)**

24. Two vertices of the triangle are A(3,6) and B(7,12)

a) Find the equation of the line AB **(3marks)**

b) Find the equation of the perpendicular bisector of line AB **(4marks)**

c) Given that AC is perpendicular to AB and the equation of line BC is $y = -5x + 47$, find the co-ordinates of C **(3marks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

MATHEMATICS

121/2
PAPER 2
TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- *Write your **name**, **admission numbe**r , **Signature** and write **date** of examination in the spaces provided*
- *The paper contains **two** sections. Section I and Section II.*
- *Answer **ALL** the questions in section I and any **five** questions in section II.*
- *Answers and working **must** be written on the question paper in the spaces provided below each question.*
- *Show all steps in your calculations below each question.*
- *Marks may be given for correct working even if the answer is wrong.*
- *Non programmable silent electronic calculators and KNEC mathematical table may be used, except where stated otherwise.*

FOR EXAMINERS USE ONLY

SECTION I

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	**TOTAL**
Marks																	

SECTION II

Question	17	18	19	20	21	22	23	24	**TOTAL**
Marks									

GRAND TOTAL

SECTION I (50 MARKS)

Answer all the questions from this section

1. Use logarithm to solve tables to evaluate **(4 marks)**

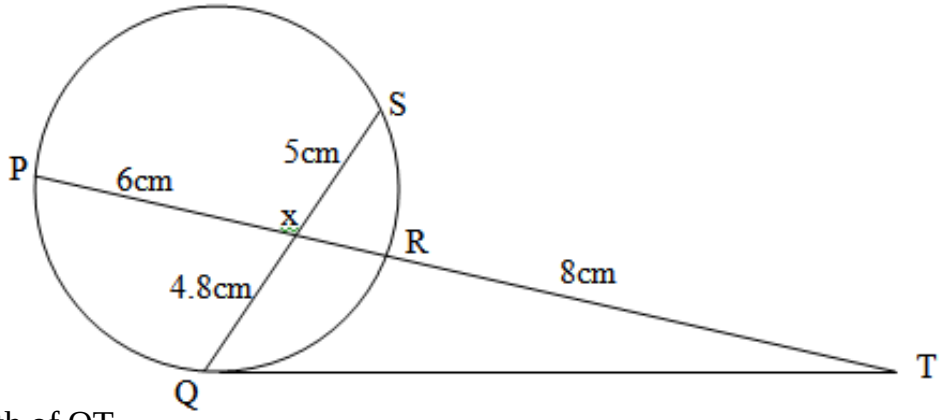
$$\sqrt[3]{\frac{45.3\times 0.00697}{0.534}}$$

2. The length and breadth of a rectangular paper were measured to be the **nearest** centimeter and found to be 20cm and 15 cm respectively. Find the percentage error in its perimeter leaving your answer to 4 significant figures**.** **(3 marks)**

3. Simplify the following surds leaving your answer in the form $a+b\sqrt{c}$

$$\frac{\sqrt{5}}{2\sqrt{2}-\sqrt{5}}+\frac{\sqrt{2}}{2\sqrt{2}+\sqrt{5}}$$ **(3 marks)**

4. In the figure below QT is a tangent to the circle at Q. PXRT and QXS are straight lines. PX = 6cm, RT = 8cm, QX = 4.8cm and XS = 5cm.



Find the length of QT **(3 marks)**

5. Mary and Jane working together can cultivate a piece of land in 6 days. Mary alone can complete the work in 15 days. After the two had worked for 4 days Mary withdrew the services. Find the time taken by Jane to complete the remaining work. **(3 marks)**

6. The equation of a circle is given by $3x^2 + 3y^2 – 18x + 12y – 9=0$. Determine the radius and the center of the circle**.** **(3 marks)**

7. Make Q the subject of the formula **(3 marks)**

$$T = P\sqrt{\frac{Q}{Q-1}}$$

8. Solve for x in the equation

$2\sin^2 x - 1 = \cos^2 x + \sin x$ for $0^0 \leq x \leq 360$ **(3 marks)**

9. Solve for x in $3\log_3 x + 4 = \log_3 24$ **(3 marks)**

10. In a transformation, an object with area $4cm^2$ is mapped onto an image whose area is $48cm^2$ by a transformation matrix $\begin{pmatrix} y+1 & y \\ 4 & 2 \end{pmatrix}$ Find the value of y **(3 marks)**

11. (a) Expand $(2 + 2y)^5$. **(2 marks)**

(b) Hence find the value of $(2.02)^5$, correct to 4 decimal places when substitution for y is up to y^4. **(2 marks)**

12. A coffee blender mixes 6 parts of type A with 4 parts of type B. If type A costs sh 72 and type B costs him sh 66 per Kg respectively, at what price should he sell the mixture in order to make 5% profit? Give your answer to the nearest ten cents. **(3 marks)**

13. The data below represents the ages in months at which 11 babies started walking:
9,15 , 12, 9, 8, 13, 7, 11, 13, 14 and 10.
Calculate the interquartile range of the above data **(3 marks)**

14. Karimi deposited sh 45000 in a bank which paid compound interest of 12% per annum. Calculate the amount after 2 years to the nearest whole number**.** **(3marks)**

15. Use tables of reciprocals only to work out **(3 marks)**

$$\frac{3}{0.6735}+\frac{13}{0.156}$$

16. PQR is a triangle of area 9 cm^2. If PQ is the fixed base of the traingle and 6cm long draw it and describe the locus of point R. **(3marks)**

SECTION II (50 MARKS)

Answer FIVE questions ONLY from this section

17. Income tax is charged on annual income at the rates shown below.

Taxable annual income (K£)	**Rate sh per k £**
1 - 2300	2
2301 - 4600	3
4601 - 6900	5
6901 - 9200	7
9201 - 11, 500	9
11501 and above	10

Personal relief of ksh. 1056 per month
Insurance relief of ksh. 480 per month

Mr. Kimathi earns a basic salary sh. 13800 per month. In addition to his salary he get a house allowance of ksh.8000 per month and medical allowance of sh. 5000 per month.
Calculate;

a) Mr. Kimathi's taxable income per annum in K£ **(2marks)**

b) Mr. Kimathi's net tax per month in Kenya shillings. **(5marks)**

c) Calculate Mr. Kimathi's net monthly salary in Kenya shillings. **(3marks)**

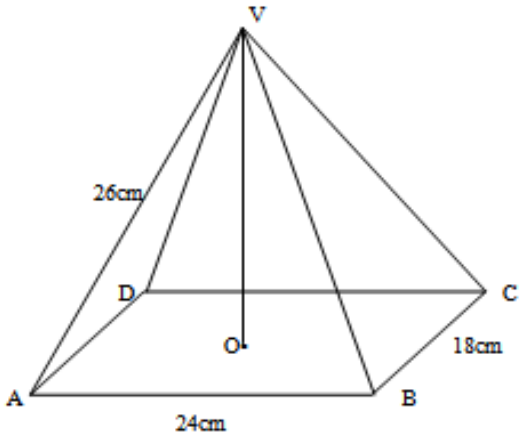
18. (a) An arithmetic progession is such that the first term is -5, the last is 135 and the sum of the progression is 975. Calculate:

(i) The number of terms in the series **(4 marks)**

(ii) The common difference of the progression **(2 marks)**

(b) The sum of the first three terms of a geometric progression is 27 and first term is 36. Determine the common ration and the value of the fourth term **(4 marks)**

19. The diagram below represents a pyramid standing on rectangular base ABCO. V is the vertex of the pyramid and VA = VB = VC = VD = 26 cm. M and N are the midpoints of BC and AC respectively. $AB = 24\ cm$ and $BC = 18\ cm$.



Calculate:-

a) The length of the line AC **(2marks)**

b) The length of projection of the VA on the plane ABCD. **(1mark)**

c) The angle between line VA and the plane ABCD. **(2marks)**

d) The vertical height of the pyramid. **(2marks)**

e) The size of the angle between the planes VBC and ABCD. **(3marks)**

20. Three quantities R, S and T are such that R varies directly as S and inversely as the square of T.

a) Given that R = 480 when S = 150 and T =5, write an equation connecting R, S and T. **(4marks)**

b) (i) Find the value of R when S = 360 and T = 1.5. **(2marks)**

(ii) Find the percentage change in R if S increases and T decreases by 20%. **(4marks)**

21. The water supply in a town depends entirely on two water pumps. A and B. The probability of pump A failing is 0.1 and the probability of pump B failing is 0.2.

a) Draw a tree diagram to represent this information **(2marks)**

b) Calculate the probability that;

(i) Both pumps are working **(2marks)**

(ii) There is no water in the **town** **(2marks)**

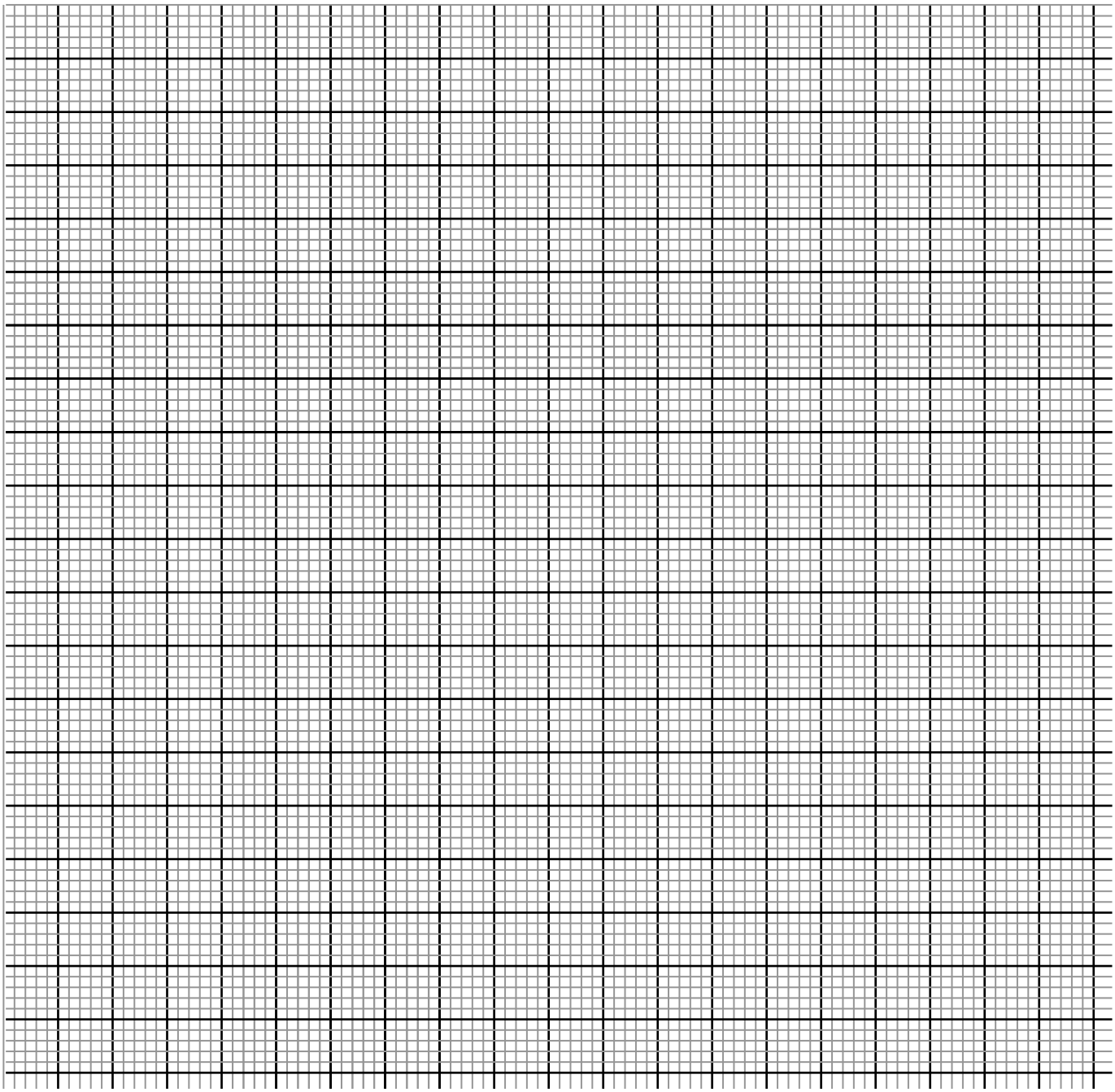
(iii) Only one pump is working **(2marks)**

(iv) There is some water in the town **(2marks)**

22. Complete the table below by filling in the blank spaces. **(2 marks)**

x^0	0^0	30^0	60^0	90^0	120^0	150^0	180^0	210^0	240	270^0	300	330	360^0
Cos x^0	1.00		0.50			-0.87		-0.87					
2 Cos ½ x	2.00	1.93					0.00						

a) On the grid provided using a scale of 1cm to represent 30^0 on the horizontal axis and 4 cm to represent 1 unit on the vertical axis draw the graph of $y = \cos x^0$ and $y = 2\cos ½ x^0$ **(4 marks)**



b) State the amplitude and period of y = 2cos ½ x **(2 marks)**

c) Use your graph to solve the equation **(2 marks)**
2 cos ½ x – cos x = 0

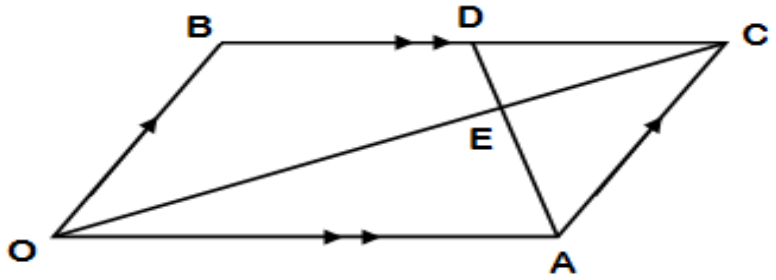
23. ABCD is a quadrilateral with coordinates $A\ (2,1), B\ (3,2), C\ (3,4)$ and $D\ (0,3)$. ABCD is mapped onto A'B'C'D' under transformation **T** given by a shear with x – axis invariant such that A' (4, 1).

a) Determine the 2×2 transformation matrix representing **T** and hence determine the coordinates of B', C' and D'. **(4 marks)**

b) A'B'C'D' is transformed to A"B"C"D" under a transformation **H** such that A"$(-6,-9)$ and D"$(-12,-15)$. Determine the 2×2 matrix representing **H** and hence determine the coordinates of B" and C" **(3 marks)**

c) A"B"C"D" mapped onto A"'B"'C"'D"' under a transformation **V** representing a reflection in the line $y = -x$. Determine the 2×2 matrix representing **V** and hence determine the coordinates of A"'B"'C"'D"' **(3 marks)**

24. A parallelogram OACB is such that **OA** = **a**, **OB** = **b.** D is the mid-point of BC. **OE** = h**OC** and **AE** = k**AD**.



(a) Express the following in terms of **a**, **b**, h and k.

(i) OC **(1 mark)**

(ii) OE **(1 mark)**

(iii) AD **(1 mark)**

(iv) AE **(1 mark)**

(b) Find the values of h and k. **(4 marks)**

(c) Determine the ratios:

(i) AE : ED **(1 mark)**

(ii) OE : OC **(1 mark)**

FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

COMPUTER STUDIES

451/1

PAPER 1

THEORY

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

INSTRUCTIONS TO CANDIDATES:

- ***a)*** *Write your **name** and **Index number** in the spaces provided above.*
- ***b)*** *This paper consists of **TWO** sections **A** and **B.***
- ***c)*** *Answer **ALL** the questions in section **A**.*
- ***d)*** *Answer question **16** and any other **THREE** questions from section **B.***
- ***e)*** *All answer should be written in the spaces provided*

SECTION	QUESTION	CANDIDATE'S SCORE
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

SECTION A; (40 MARKS)

Answer all the questions in the spaces provided

1. Anthony, a student at Kericho Technical College defined a computer as "an electronic device which accepts, processes data and produce information depending on its decisions". Was this student right? Explain you answer. **(1Mrk)**

……

……

2. Output from the computer can normally be in several forms. Give the difference between Soft copy and Hard copy. **(2mks)**

……

……

……

3. Define the term program documentation. **(2mks)**

……

……

4 . State any **two** types of documentation created in system development. **(2mks)**

……

……

5. What is data security? **(1mk)**

……

……

6. Explain any **two** ways in which computers have been made user-friendly for persons that are physically challenged. **(4mks)**

……

……

……

……

7. Explain the meaning of the following terms as used in computer data transmission**.** **(3Mks)**

(a) Simplex transmission

……

……

(b) Half duplex transmission

……

……

(c) Full duplex transmission

……

……

8. What are the **four** major parts of a Database System? **(4 Mks)**

……

……

……

……

9. Give the difference between machine language and assembly language**.** **(2Mks)**

……

……

……

10. Define the term robot. **(1Mrk)**

……

……

11. Differentiate between a drive and a device driver. **(2Mks)**

……

……

……

12. a. Differentiate between an electronic spreadsheet and the traditional analysis sheet **(2mks)**

……

……

……

b. Explain how you would change the name of a worksheet in Microsoft Excel. **(3Mks)**

……

……

……

……

……

13. State **three** reasons why it is important observe safety precautions and practices in a computer laboratory. **(3mks)**

……

……

……

14. a. List two examples of Desktop Publishing Software. **(1mrk)**

……

……

b. Differentiate between Save and Save As as used in most windows applications. **(2mks)**

……

……

……

15. Define the following internet related terms. **(5 Marks)**

(a) Internet Protocol

……

……

(b) Search engine

……

……

(c) Browser

……

……

(d) E-learning

……

……

(e) Uniform Resource Locator

……

……

SECTION B: (60 MARKS)

Answer question 16 and any other three questions

16. a. Define the term control structure. **(2mks)**

……

……

b. Study the following pseudocode and answer the questions that follow.

```
Start
N = 0
X = 0
While N < 3
   Repeat
        X = X + 1
   Until X = 2
   N = N + 1
End while
Stop
```

i. Determine the value of N and X. **(5mks)**

ii. Draw a flowchart of the above pseudocde. **(8mks)**

17. (a) State any **three** reasons why people may resist the introduction of computers at their place of work. `` **(3mks)**

……

……

……

(b) State **two** operational methods of an organizational ensuring the security of data**.** **(2mks)**

……

……

(c) Explain the components of an expert system. **(6mks)**

……

……

……

……

……

……

……

……

d. Explain the role of feed back in a system. **(2mks)**

……

……

e. List **two** theories of system development. **(2mks)**

……

……

18 .a Briefly explain the following terms as used in spreadsheet **(4mks)**

(i) Cell

……

……

(ii) Range

……

……

(iii) Value

……

……

(iv) Function

……

……

b. List **three** paragraph formatting features of word processors. **(3mks)**

……

……

……

c. Explain the difference between the printing of multiple pages and multiple copies. **(2mks)**

……

……

……

d. Distinguish between a worksheet and a work book **(2mk)**

……

……

e. Explain **four** examples of action query. **(4mks)**

……

……

……

……

19. a. Explain any **three** benefits of using ATMs in banking industry. **(6mks)**

……

……

……

……

……

……

b. Explain **two** advantages of advertising on web instead of using an advertising brochure. **(4mks)**

……

……

……

……

c. Mention any **three** ways of ensuring efficient back up of data. **(3mks)**

……

……

……

d. Give any **two** benefit of hacking to an organization's computer system. **(2mks)**

……

……

……

20. a. Perform the following binary arithmetic.

i. $1011101_2 + 100100_2 - 1111101_2$ **(4mks)**

ii. $5\,{}^{6}/_{8} - 8{}^{2}/_{5}$ using ones complement. **(4mks)**

b. Differentiate between data validation and data verification. **(2mks)**

……

……

……

c. List **three** factors that determine the methods of data access in a computer**.** **(3mks)**

……

……

……

d. Give any **two** characteristics of mater file. **(2mks)**

……

……

……

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

COMPUTER STUDIES

451/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

451/2

COMPUTER STUDIES

Paper 2

(PRACTICAL)

Time: 2½ hours

Instructions to candidates

1. *Write your name and Index number at the right hand corner of each print out.*
2. *Write your name and Index number on the CD provided.*
3. *Write the name and version of the software used for each question attempted in the answer sheet*
4. *Answer **all** the questions*
5. *Passwords **should not be used** while saving in the CD provided.*
6. *All answers **must** be saved in your CD provided.*
7. *Arrange your printouts and staple them together*
8. *Hand in all the **printouts** and the CD used*

QUESTION 1

a) Use DTP software to design the following business card using the following layout specifications:

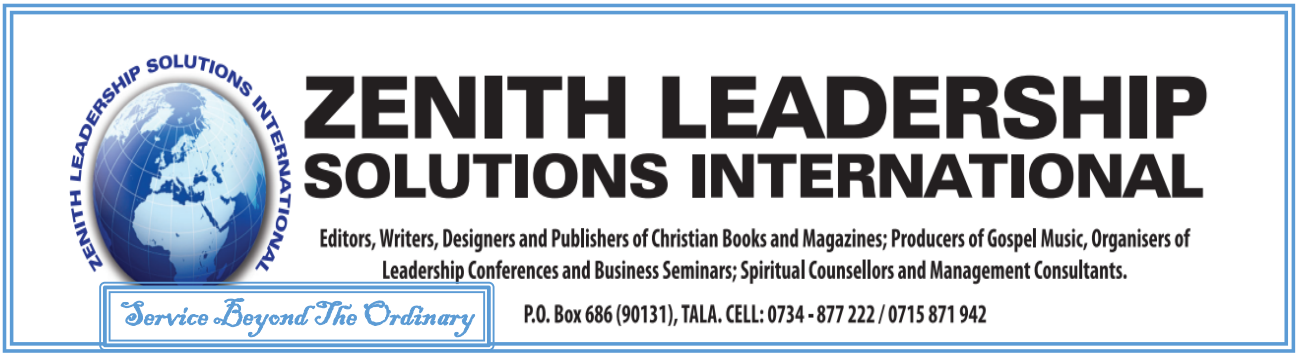
(i) Paper size A4 portrait. **(2 marks)**

(ii) Set the margins to 0.5 inches all round. **(2 marks)**

(iii) Divide the page into TWO columns **(2 marks)**

(iv) The border should occupy the first column **(2 marks)**

b) Prepare the publication as exactly as it appears and save it as Business card. **(10 marks)**



c) Insert your full name above the heading "ZENITH LEADERSHIP…" and centre it across(5 marks)

d) Create the logo to occupy between 0.8" to 1.80" left and 0.70" to 1.85" from top. **(5 marks)**

e) The title should occupy between 1.70" to 7.50" across and 0.75" to 1.45" from top. Font Arial black with italics and fill effect pattern of dark horizontal. **(5 marks)**

f) The words "ZENITH LEADERSHIP" should occupy 2.50" to 5.70" across and 1.50" to 2.00" from top. Font Book antique size 26, bold and centered. **(4 marks)**

g) The rest of the text is in font Bodoni MT size 12. **(2 marks)**

(i) Align all the text as shown. **(2 marks)**

(ii) Group the publication as one. **(2 marks)**

(iii) Fit FOUR copies of the design into a single page**.** **(2 marks)**

h) Include a page header with your index number. **(2 marks)**

i) Save as Updated Business card. **(1 mark)**

j) Print the publication **Business card** and **Updated Business Card**. **(2 marks)**

QUESTION 2

The table below shows records extracted from Motors Sales Company Database. Create a database and name it MOTOR SALES. **(1 mark)**

Customer Name	Customer Address	Customer Town	Car Reg No	Car Type	Car Make	Car price	Customer ID	Amount paid
Ogutu	254	Nakuru	KBJ 001T	Truck	Nissan	1,100,000	B001	800,000
John	678	Eldoret	KCM 002M	Bus	Mazda	2,400,000	B002	2,000,000
Uhuru	963	Nairobi	KBB 003V	Saloon	Toyota	800,000	B003	800,000
Ogutu	147	Nakuru	KCJ 004B	Pick up	Peugeot	1,000,000	B004	700,000
Chumba	456	Bungoma	KCH 678B	Lorry	Isuzu	3,000,000	B005	2,000,000
Kariuki	789	Webuye	KBB 006N	Pick up	Toyota	1,800,000	B006	1,600,000
John	678	Eldoret	KBJ 007D	Bus	Scania	7,500,000	B002	7,500,000
Uhuru	963	Nairobi	KCC 678G	Truck	Toyota	1,800,000	B003	1,800,000
Phillip	159	Kisumu	KCJ 009H	Saloon	Nissan	9,00,000	B007	900,000
Ogutu	254	Nakuru	KCH 010L	Pick up	Isuzu	1,500,000	B001	1,200,000
Uhuru	357	Kisumu	KCJ 011J	Saloon	Peugeot	600,000	B008	600,000
Kariuki	789	Webuye	KBG 012B	Bus	Isuzu	10,000,000	B006	9,500,000
Ogutu	147	Nakuru	KDA 013A	Truck	Nissan	2,700,000	B004	2,700,000

a) Using the data above, create a table that will hold Car details and another table to hold Customer details. Name them **TABLECAR** and **TABLECUSTOMER** respectively and set appropriate *primary keys* **(4 marks)**

b) Enforce referential integrity between two tables. **(2 marks)**

c) Create different input forms for each table. Name them **FORMCAR** and **FORMCUSTOMER**. Use them to enter data into the tables. **(12marks)**

d) Display a report only showing the details of the Customers who have cleared paying for the Car. Name the report **REPORT CLEARED.** Add "CLEARED CUSTOMERS'' as the title of the **report.** **(7 marks)**

e) Using the two tables create an *outlined report* showing the *customer details, the total amount paid by each customer* and *the total amount received* by the company. Name the report **SUMMARY** and the title as "OVERALL CUSTOMERS REPORT.'' **(8 marks)**

f) Create a query to display the Car details with balances of less than 300,000. Name the query as **BALQUERY.** (4marks)

g) Create a report showing the *Car type, the total sales for each car type* and *the grand total*. Name the report as **REPORTGRAND.** **(6 marks)**

h) Using landscape orientation, print **REPORTCLEARED**, **SUMMARY** and **REPORTGRAND** with *footers bearing your lastname* and *index number* at the *center of the page*. **(6 marks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HOME-SCIENCE

441/1

PAPER 1

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

INSTRUCTIONS TO CANDIDATES:

- *Write your **name** and **index number** in the spaces provided.*
- *This paper consists of three section **A,B** and **C***
- *Answer **all** the questions in section **A** and **B***
- *Answer any **two** questions in section **C.***
- *Answers should be written in the spaces provided in this booklet.*

FOR EXAMINER'S USE ONLY:

QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
1-15	40	
16	20	
17	20	
18	20	
19	20	
Total	**100**	

SECTION A (40 marks)

Answer all the questions in this section.

1. Differentiate between indirect and semi-direct methods of lighting. **(2mrks)**

……

……

……

2. Give two reasons for serving soup to the sick. **(2mrks)**

……

……

……

3. Give two disadvantages of cross method of ventilating a room. **(2mrks)**

……

……

……

4. Identify two suitable methods of cooking for an invalid and give a reason for each. **(4mrks)**

……

……

……

……

……

5. Differentiate between renewable and non-renewable resource and give an example of each.**(4mks)**

……

……

……

……

……

6. Outline three qualities of a well ventilated kitchen. **(3mrks)**

……

……

……

……

7. Give three advantages of using improvised fuel. **(3mrks)**

……

……

……

……

8. Give two disadvantages of relying on solar energy in the home. **(2mrks)**

……

……

……

9. Highlight three limitations of using candles for lighting a home. **(3mrks)**

……

……

……

10. Outlined three disadvantages of using fans. **(3mrks)**

……

……

……

11. State three dangers of using electricity at home. **(3mrks)**

……

……

……

12. Explain two effects of bright colours in a room. **(2mrks)**

……

……

……

……

13. Explain conditioning as used in flower arrangement. **(2mrks)**

……

……

……

14. Give two reasons for keeping potatoes in cold water as soon as they are peeled. **(2mrks)**

……

……

……

15. Give three disadvantages of blue plate service. **(3mrks)**

……

……

……

SECTION B: COMPULSORY (20 MARKS)

Answer all the questions in this section.

16. You have been left in charge of the house during mid-term break.

(a) Explain how you would launder your mother's silk dress. **(10mrks)**

……

……

……

……

……

……

……

……

……

……

……

……

……

(b) Describe how you would clean a Formica topped kitchen table. **(6mrks)**

……

……

……

……

……

……

……

……

……

(c) Explain how to improvise a broom to be used to sweep an earthen floor of the kitchen. **(4mrks)**

……

……

……

……

……

……

SECTION C (40 MARKS)

Answer any two questions in this section.

17. (a) With the aid of three well labeled diagrams, describe the procedure of making an overlaid seam. **(10mrks)**

(b) Outline the steps to follow when mending a gaping seam of an apron. **(7mrks)**

(c) State three general rules to be followed when repairing clothes. **(3mrks)**

18. (a) Explain six points to consider when selecting furniture for a family. **(6mrks)**

(b) Mention three nutritional disorders that are associated with lifestyle. For each disorder mentioned, give a point on how to manage it **(6mrks)**

(c) State three points on prevention and point on management of fractures. **(6mrks)**

(d) Give two reasons for shaving pubic hair. **(2mrks)**

19. (a) Outline six measures to take to prevent spread of infections when caring for the sick at home. **(6mrks)**

(b) Give six factors to consider when choosing fabric for making curtains or soft furnishing**. (6mrks)**

(c) State four important points a lactating mother should observe for successful breastfeeding**.(4mks)**

(d) State four reasons for softening water for laundry work. **(4mrks)**

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HOME-SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

441/2 HOME SCIENCE PAPER 2

CONFIDENTIAL

School to provide the following for each candidate:

- *Plain cotton poplin 91cm wide by 50cm.*
- *Mercerized cotton thread to match the fabric.*
- *Embroidery thread to contrast well.*

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HOME-SCIENCE

441/2

PAPER 2

TIME: 2½ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

441/2

HOMESCIENCE

PAPER 2

TIME: 2 ½ HOURS

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

441/2 HOME SCIENCE

(CLOTHING & TEXTILE CONSTRUCTION)

A pattern of a baby shirt is provided. You are advised to study the sketches, the question paper and the layout before you begin the test.

1. Materials provided:

Pattern pieces of the baby shirt:

- ✓ A -Shirt Front
- ✓ B -shirt Back
- ✓ C- sleeve
- ✓ D -pocket
- ✓ E -collar
- ✓ F -back neck facing

2. Plain cotton poplin 91cm wide by50cm.
3. Mercerized sewing cotton thread to match.
4. Embroidery thread to contrast well.

THE TEST:

Using the materials provided, cut out and make up the left half of the baby shirt to show the following:

a) The working embroidery stitches on letters A, B on the pocket.
b) The preparation and attaching of the pocket.
c) The working of the shoulder seam using machine fell seam.
d) The working of French seam at the side.
e) The preparation of the collar.
f) The joining of the front and back facing at the shoulder.
g) The neatening of the free edge of the facing.
h) The attaching of the collar.
i) The preparation of the sleeve using French seam.
j) The preparation of the sleeve and neatening half way with loop stitches.
k) The hand hemming of the lower edge of the sleeve.
l) The working of the top button hole only.

OMIT:

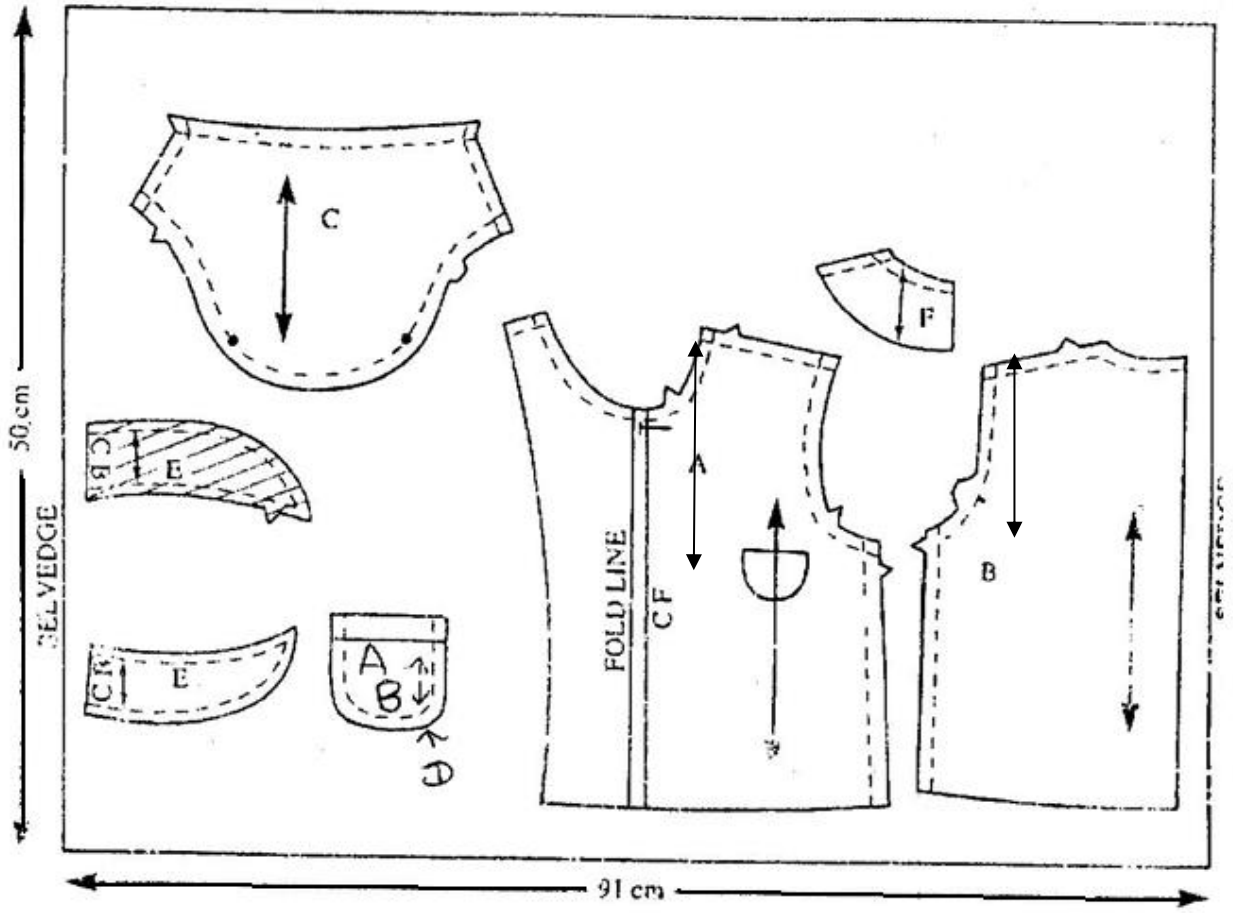
i) The management of the lower hem.
ii) The working of all the other buttonholes.

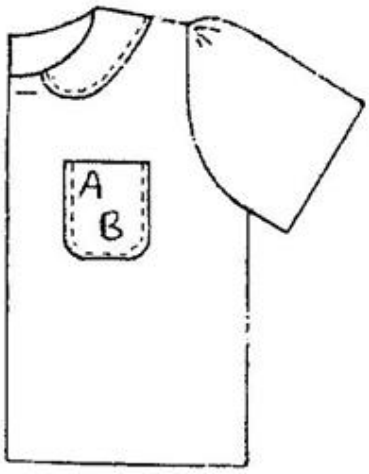
NB:

At the end of the examination, firmly sew on to your work, on a single fabric, a label bearing your name and index number. Remove the needle and pins from your work. Then fold your work carefully and place it in the envelope provided. Do not put scraps of materials in the envelope.

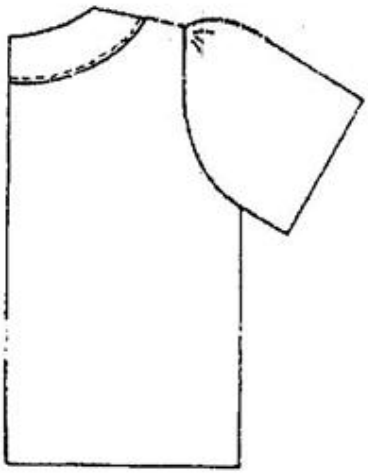
FOR MARKING SCHEMES CONTACT 0746-222-000 / 0742-999-000

THE LAYOUT (NOT DRAWN TO SCALE)





FRONT VIEW



BACK VIEW

KCSE BRAIN-WAVE PREMOCK

2024 SERIES 1 TRIAL

HOME-SCIENCE

441/3

PAPER 3

TIME: 1¾ HOURS

NAME……

SCHOOL…… SIGN……

INDEX NO…… ADM NO……

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

PLANNING SESSION: 30 MINUTES

PRACTICAL TEST SESSION: 1¼HOURS

INSTRUCTIONS TO CANDIDATES:

- *Read the test carefully*
- *Text books and recipes may be used during the planning session as reference material. You will be expected to keep to your order of work during the practical session.*
- *You are allowed to take away only your reference materials at the end of the planning session. You are not allowed to bring additional notes to the practical session.*

THE TEST

Your mother has requested you to prepare breakfast for the two of you. Using the ingredients listed below, prepare, cook and present a beverage and two tea items for the two of you.

INGREDIENTS:

- Margarine
- Eggs
- Salt
- Milk
- Dhania
- Plain wheat flour
- Sugar
- Oil
- Tomatoes
- Tea leaves/coffee/drinking chocolate

PLANNING SESSION: 30 MINUTES

Use separate sheets of paper for each task listed below and use carbon paper to make duplicate copies then proceed as follows:

1. Identify the beverage and the tea items then write down their recipes.
2. Write down your order of work.
3. Make a list of the foodstuff and equipment you will require.

THE END

FOR THE FOLLOWING;

- ✓ ONLINE TUITION
- ✓ REVISION NOTES
- ✓ SCHEMES OF WORK
- ✓ SETBOOKS VIDEOS
- ✓ TERMLY EXAMS
- ✓ QUICK REVISION KITS
- ✓ KCSE TOPICALS
- ✓ KCSE PREMOCKS
- ✓ TOP SCHOOLS PREMOCKS
- ✓ JOINT PREMOCKS
- ✓ KCSE MOCKS
- ✓ TOP SCHOOLS MOCKS
- ✓ JOINT MOCKS
- ✓ KCSE POSTMOCKS
- ✓ TOP SCHOOLS PREDICTIONS
- ✓ KCSE PREDICTIONS
- ✓ KCSE REVEALED SETS

CALL/TEXT/WHATSAPP

0746 222 000

0742 999 000

mwalimuconsultancy@gmail.com

This is a Copyright Property of Mwalimu Consultancy Ltd.

Powered By Mr Isaboke