GRADE 10 MIDTERM 1 EXAMS

ALL SUBJECTS

(STEM PATHWAY SET)

Compilation of Standard set of Mid-Term 1 Exams for the Current Grade 10 Class.

ALL SUBJECTS TESTED.

Core Mathematics, Essential Mathematics, English, Kiswahili, Biology, Chemistry, Physics, Geography, General Science, Computer Studies, Applied Agriculture, Home Science, Aviation Technology, Building & Construction, Electricity, Metal Work, Power Mechanics, Wood Technology, Media Technology, Marine & Fisheries Technology, CSL and Physical Education.

SERIES 1

For Marking Schemes

Mr Isaboke 0746 222 000 / 0753 222 000

MWALIMU CONSULTANCY

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

CORE MATHEMATICS

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

KENYA CERTIFICATE OF BASIC EDUCATION (K.C.B.E)

INSTRUCTIONS TO LEARNERS

1. **Write your name, school, assessment number, date, school code and then sign.**
2. Answer all questions provided.
3. Show all your working properly.
4. Use mathematical tables or a calculator where necessary.

DESCRIPTION	SCORE
TOTAL SCORE	100
LEARNER'S SCORE	
PERFOMANCE LEVEL	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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No.	Question Number & Description	Max Mar	Learner's Sco	Performance Lev
1	Question 1: Find the value of x	3		
2	Question 2: Evaluate numerical expressio	3		
3	Question 3: Convert recurring decimal to fraction	3		
4	Question 4: Evaluate without tables/calculators	3		
5	Question 5: Evaluate using tables (4 s.f)	4		
6	Question 6: Simplify algebraic expressior	3		
7	Question 7: Work, men and hours	3		
8	Question 8: Scale and area of map	3		
9	Question 9: Solve inequality and list integ	3		
10	Question 10: Equation of a perpendicular line	3		
11	Question 11: Triangle angles	3		
12	Question 12: Construction and measurem	3		
13	Question 13: Cylinder melted into sphere	3		
14	Question 14: Similar solids – volume	3		
15	Question 15: Evaluation using tables	3		
16a	Question 16(a): Capacity of bucket	3		
16b	Question 16(b): Volume to fill tank	2		
16c	Question 16(c): Number of buckets	3		
17a	Question 17(a): Sketch (angle of depressi	2		
17b(i	Question 17(b)(i): Height of the post	4		
17b(ii	Question 17(b)(ii): Distance of A from fo	2		
18a	Question 18(a): Draw map to scale	4		
18b(i	Question 18(b)(i): Area in square metres	4		
18b(ii	Question 18(b)(ii): Area in hectares	2		
19a	Question 19(a): Length of PQ	1		
19b(i	Question 19(b)(i): Angle APB	2		
19b(ii	Question 19(b)(ii): Angle AQB	2		
19c	Question 19(c): Area of shaded region	4		
20a	Question 20(a): Plot triangle PQR	1		
20b	Question 20(b): Centre & angle of rotatio	3		
20c	Question 20(c): Enlargement & coordinat	2		
20d	Question 20(d): Reflection & coordinates	3		
21a	Question 21(a): Drawing towns diagram	4		
21b(i	Question 21(b)(i): Distance A from E	3		
21b(ii	Question 21(b)(ii): Bearing of D from B	3		
—	**TOTAL MARKS**	**100**		

CORE MATHEMATICS: (100 Marks)

Answer all questions provided in this assessment paper.

1. Find the value of ***x*** ***(3marks)***

$2^{(x-3)} \times 8^{(x+2)} = 128$

2. Evaluate $\dfrac{-12 \div (-3) \times 4 - (-15)}{-5 \times 6 \div 2 + (-5)}$ **(3marks)**

3. Convert the recurring decimal $12.1\dot{8}$ into fraction **(3 marks)**

4. Without using tables and calculators, evaluate

$$\sqrt[3]{\frac{0.032 + 0.0608}{1.28 \times 0.4}}$$ **(3marks)**

5. Use tables of squares, square roots and reciprocals to evaluate correct to 4 s.f **(4marks)**

$$\frac{3}{\sqrt{0.0136}} - \frac{2}{(3.72)^2}$$

6. Simplify as far as possible. **(3marks)**

$$\frac{3}{x-y} - \frac{1}{x+y}$$

7. Fifteen men working for eight hours a day can complete a certain job in exactly 24 days.For how many hours a day must sixteen men work in order to complete the same job in exactly 20 days. **(3marks)**

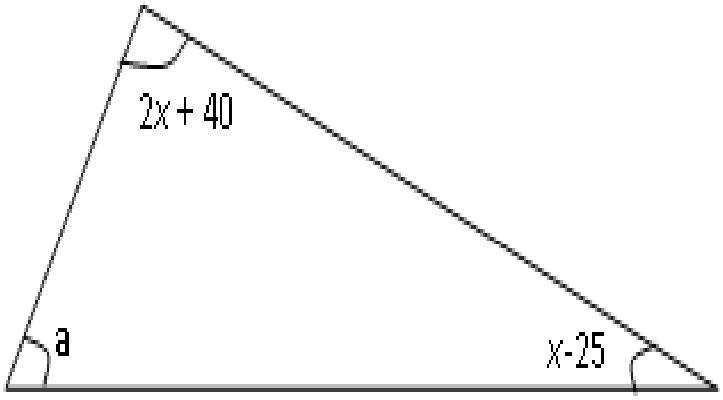
8. The scale of a map is 1:50000. A lake on the map is 6.16cm^2. Find the actual area of the lake in hectares. **(3marks)**

9.Solve the inequality below and write down the integral values that satisfy the equality

$-3x + 2 < x + 6 \leq 17 - 2x$ **(3 marks)**

10. Find the equation of a line which passes through the point (2, 3) and is perpendicular to $y - 3x + 1 = 0$, giving your answer in the form $y = mx + c$ **(3 marks)**

11.In the figure below, angle **a** is half the sum of the other angles. Evaluate the triangle**(3 marks)**



12. Without using a protractor, draw a triangle ABC where $\angle CAB = 30^{o}$, AC = 3.5cm and AB = 6cm. measure BC **(3 marks)**

13. A solid cylinder of radius 6cm and height 12cm is melted and cast into spherical balls of radius 3cm. Find the number of balls made **(3 marks)**

14. The surface area of two similar bottles are $12cm^2$ and $108cm^2$ respectively. If the larger one has a volume of $810cm^3$. Find the volume of the smaller **one** **(3 marks)**

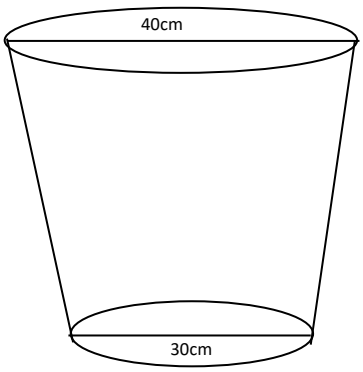
15. Evaluate using mathematical tables only. **(3 marks)**

$$\frac{6.373\log 4.948}{\sqrt{0.004636}}$$

16. The figure below shows a bucket of depth 30cm used to fill a cylindrical tank of radius 1.2m and height 1.35m which is initially three-fifth full of water.

Calculate, in terms of Π;

i)The capacity of the bucket in litre**s(3marks)**



ii) The volume of water required to fill the tank in litres **(2marks)**

iii) Calculate the number of buckets that must be drawn to fill the tank **(3marks)**

17. The angle of depression of a point A on the ground from the top of a post is 18^0 and that of another point B on the same line as A nearer to the foot of the post is 25^0. If A and B are 70m apart,

(a) Draw a sketch to represent positions of A and B. **(2marks)**

(b) Using your sketch calculate

(i) The height of the post from the ground level (Ans 1 d.p) **(4marks)**

(ii) The distance of point A from the foot of the post**.** **(2marks)**

18.A field was surveyed and its measurements recorded in a field book as shown below.

	F	
	100	
E 40	80	
	60	D 50
C 40	40	
	20	B 30
	A	

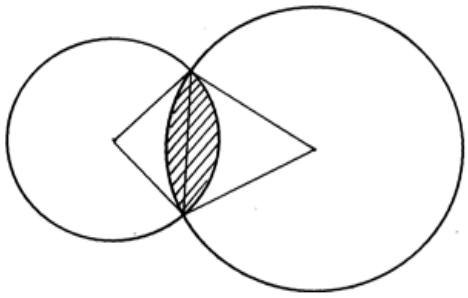
(a) Using a scale of 1cm to represent 10m, draw a map of the field. **(4marks)**

(b) Calculate the area of the field.

(i) in square metres. **(4marks)**

(ii) in hectares. **(2marks)**

19. **T**he figure below shows two intersecting circles with centres P and Q and radius 5cm for the small one and 6cm for the big one. AB is a common chord of length 8cm. Calculate;



(a) the length of PQ **(1 marks)**

(b) the size of;

(i) angle APB **(2marks)**

(ii) angle AQB **(2 marks)**

(c) the area of the shaded region **(4 marks)**

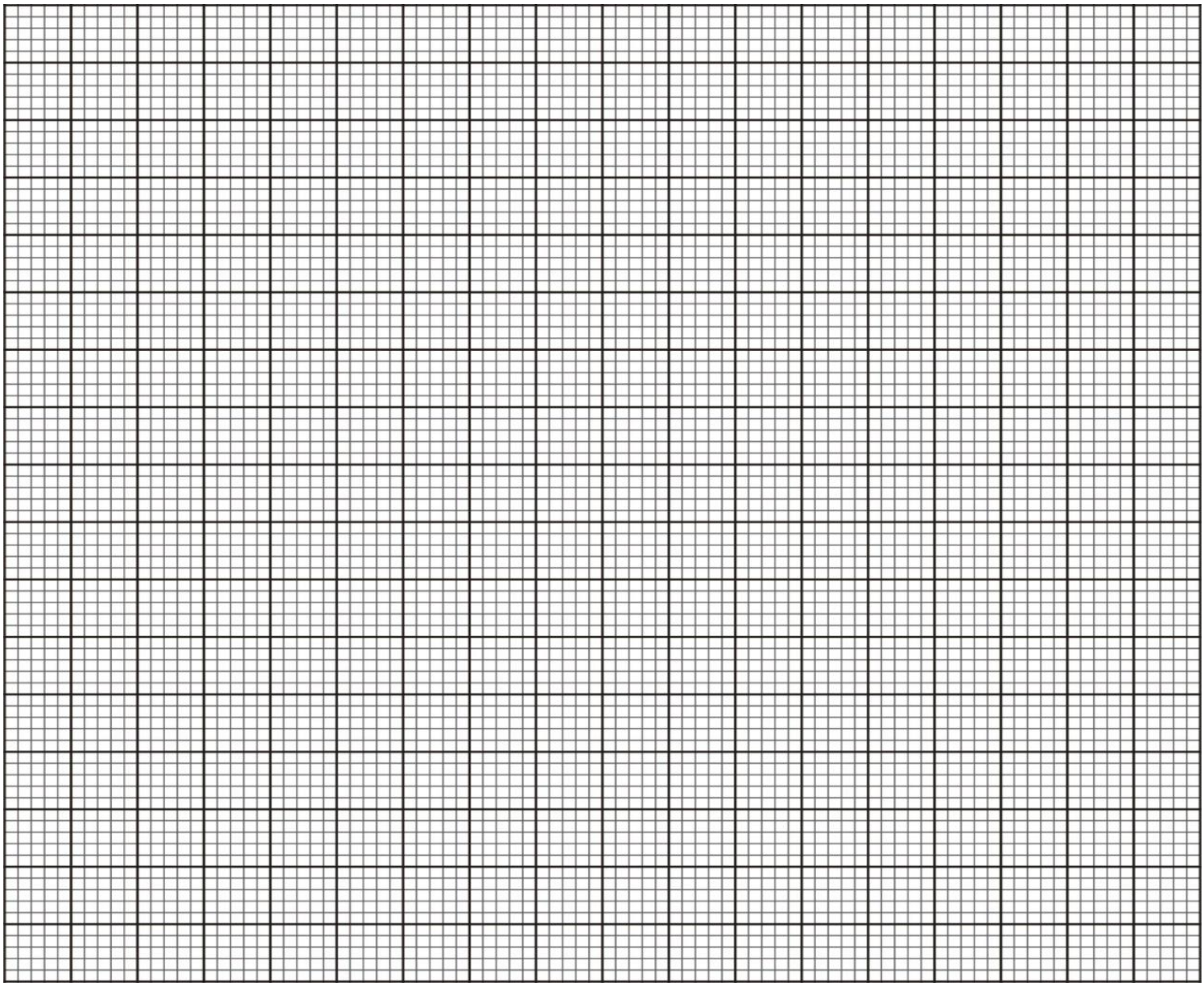
20. Triangle PQR has vertices P(3,2), Q(-1,1) and R(-3,-1).

(a) Draw PQR on the grid provided. **(1mark)**

(b) Under a rotation the vertices of $P^1Q^1R^1$ are $P^1(1,4)$, $Q^1(2,0)$ and $R^1(4,-1)$. Find the centre and angle of rotation using points P and Q. **(3marks)**

(c) Triangle PQR is enlarged with scale factor 3 centreO(0,0) to give triangle $P^2Q^2R^2$. Draw triangle $P^2Q^2R^2$ and state its co-ordinates. **(2marks)**

(d) Triangle $P^1Q^1R^1$ undergoes reflection in line y = -x to give triangle $P^3Q^3R^3$. Draw $P^3Q^3R^3$ and state its coordinates. **(3marks)**



21. Use a scale of 1cm represents 50km in these questions. Five towns **A, B, C, D** and **E** are situated such that **A** is 200 km from **B** on a bearing of 050° from **E**. **C** is 300 km from **B** on a bearing of 150° from **B**. **D** is 350km on a bearing of 240° from **C**. **E** is 200km from **D** and the bearing of **D** from **E** is 100°

a) Draw the diagram representing the positions of the towns **(4marks)**

b) From the diagram, determine;

i) The distance in km of A from E **(3marks)**

ii) The bearing of D from B **(3marks)**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

ESSENTIAL MATHEMATICS

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……..

INSTRUCTIONS TO LEARNERS

1. *Answer ALL questions in this paper*
2. *Show all working clearly. Marks will be awarded for method.*
3. *Non-programmable calculators may be used.*
4. *All answers should be written in the spaces provided.*
5. *Take π = 3.14 or 22/7 where necessary.*
6. *Study all diagrams, graphs, and images carefully before answering.*

SCORE GRID

DESCRIPTION	SCORE
TOTAL SCORE	100
LEARNER'S SCORE	
PERFOMANCE LEVEL	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

CBC CBE SE

ESSENTIAL MATHEMATICS (100 Marks)

Answer all questions in this section.

1. *A farmer divides his land among his three children as shown in the information chart below.*

Information chart:

i. *First child receives 2/5 of the land*

ii. *Second child receives 1/3 of the land*

iii. *Third child receives the remainder*

If the Total land area is 450 hectares

a) *Calculate the fraction of land received by the third child. Show your working.* ***(2 marks)***

b) *Calculate how many hectares each child receives.* ***(3 marks)***

c) *Express the ratio of land distribution among the three children in simplest form.* ***(1 mark)***

2. Use logarithm tables in all your steps to evaluate: leaving your answer to four decimal places **(4mks)**

$$\sqrt[3]{\frac{38.32 \times 12.964}{86.37 \times 6.285}}$$

3. When a certain number **x** is divided by 30, 45 or 54, there is always a remainder of 21.

Find the least value of the number **x** **(3mks)**

4. Find the value of **x** **(3mks)**

$2^{(\mathbf{x}-3)} \times 8^{(\mathbf{x}+2)} = 128$

5. Evaluate without using a calculator **(3mks)**

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

6. Without using tables and calculators, evaluate

$$\sqrt[3]{\frac{0.032+0.0608}{1.28\times 0.4}}$$

(3mks)

7. Use tables of squares, square roots and reciprocals to evaluate correct to 4 s.f

$$\frac{3 - 2}{\sqrt{0.0136}\quad (3.72)}$$

(3mks)

8. Simplify the following expressions by reducing it to a single fraction

$$\frac{2x-5}{4} - \frac{1-x}{3} - \frac{x-4}{2}$$

(3mks)

9. Sixteen men working at the rate of 9hrs a day can complete a piece of work in 14 days.

How many more men working at the rate of 7 hours a day would complete the same job in 12 days**?**

(3mks)

10. Solve the equation**;** **(3mks)**

$9^{x+1} + 3^{2x+1} = 36$

11, A triangle ABC is formed by the points A (3,4), B (-7,2), and C (1,-2).

(a) Find the coordinates of the mid-points k of AB and p of AC **(1 mk)**

(b) Find the equation of the perpendicular bisector of the line kp **(2 mks)**

12. Two similar cans have different heights 8cm and the other one 10cm. If the surface area of the larger can is 480cm^2, find the surface area of the smaller can. **(3 marks)**

13. Find the value of x that satisfies the equation log (2x – 11) – log 2 =log 3 – log **x(3 marks)**

14. A metal hemisphere of radius 12cm is melted done and recast into the shape of a cone of base radius 6cm. Find the perpendicular height of the cone **(3mks)**

15. Solve the inequality and show the solution on the number line**.** **(3mks)**

$3-2x \angle x \angle 2x+5$

16 .The angle of elevation of the top of a tree from a point P on the horizontal ground is24.5°. From another point Q, five metres nearer to the base of the tree, the angle of elevation of the top of the tree is 33.2°. Calculate to one decimal place, the height of the tree **(3mks)**

17.Three town P,Q and R are such that P is on a bearing of 120° and 20 km from Q. Town R is on bearing of 220^{o} and 12km from P

a) Using a scale of 1 cm to 2 km, draw and locate the positions of the three towns. **(3mks)**

b) Measure

i) the distance between Q and R in kilometres. **(2mks)**

ii)the bearing of P from R. **(1mk)**

iii)the bearing of R from Q. **(2mks)**

c)Calculate the area of the figure bounded by PQR. **(2mks)**

18. The information below shows the entries in a surveyor's field book after a survey of a farm.

XY = 280m is the baseline. All measurements are in metres

	280	**Y**
B 105	230	110E
	190	
	160	45E
A 100	90	
	40	95G
X	O	

(a) Use a scale of 1cm represents 20m to draw the map of the **farm** **(5mks)**

(b) Estimate the area of the farm in hectares **(5mks)**

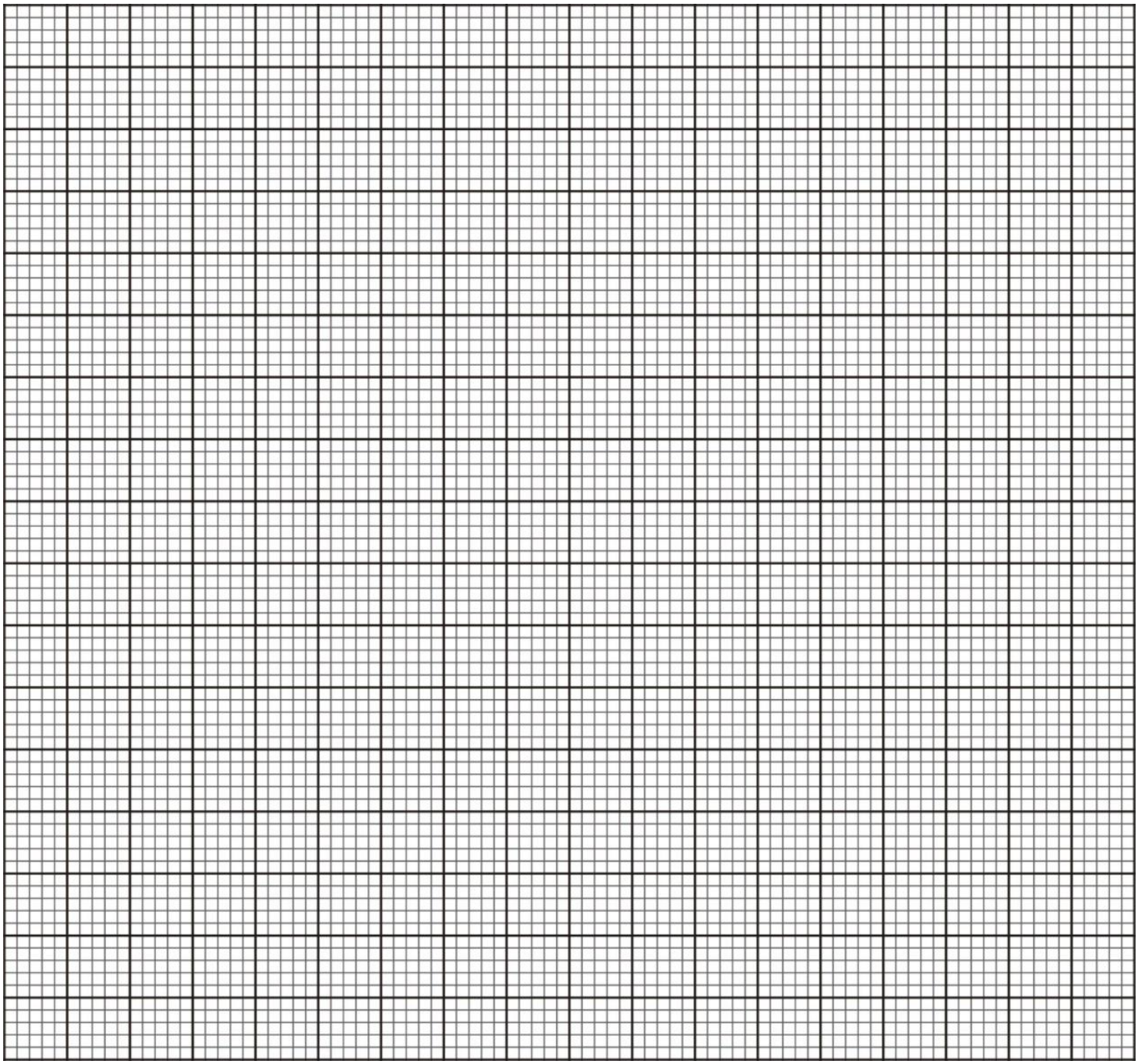
19. Triangle PQR has vertices P(3,2), Q(-1,1) and R(-3,-1).

(a) Draw PQR on the grid provided. **(1mk)**

(b) Under a rotation the vertices of $P^1Q^1R^1$ are $P^1(1,4)$, $Q^1(2,0)$ and $R^1(4,-1)$. Find the centre and angle of rotation using points P and Q. **(4mks)**

(c) Triangle PQR is enlarged with scale factor 3 centreO(0,0) to give triangle $P^2Q^2R^2$. Draw triangle $P^2Q^2R^2$ and state its co-ordinates. **(2mks)**

(d) Triangle $P^1Q^1R^1$ undergoes reflection in line y = -x to give triangle $P^3Q^3R^3$. draw $P^3Q^3R^3$ and state its coordinates.



20. The results of a mathematics test that a hundred students took are as shown below:-

Marks	No. of students
30-34	4
35-39	6
40-44	10
45-49	14
50-54	**X**
55-59	24
60-64	14
65-69	6

(a) Determine

(i) the value of **X** **(1mk)**

(ii) The modal class **(2mks)**

(b) Calculate the mea**n** **(4mks)**

(c) The median **(3mks)**

21. A country bus left Nairobi at 10.45a.m and traveled towards Mombasa at an average speed of 60km/h. A matatu left Nairobi at 1:15p.m on the same day and traveled along the same road at an average speed of 100km/h. The distance between Nairobi and Mombasa is 500km.

(a) Determine the time of the day when the matatu overtook the bus **(5mks)**

(b) Both vehicles continue towards Mombasa at their original speeds. How long had the Matatu waited before the bus arrived? **(5mks)**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

ENGLISH (Theory)

TIME: 2½ HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

1. *Write your name, school, assessment number, date, school code and sign*
2. *Answer all questions in Section A (70 marks) and Section B (30 marks).*
3. *Write your answers in the spaces provided.*
4. *Ensure your writing is legible, neat, and grammatically correct.*
5. *Manage your time well to complete both sections.*
6. *Where a question has sub-questions (a, b, c, d), answer all parts.*
7. */For summary questions, stick to the number of words required.*
8. *When rewriting sentences, follow the instructions given in brackets.*
9. *Maintain polite language and etiquette in dialogue and communication questions.*
10. *After finishing, recheck your work before submitting*.

Performance Levels Grid

ROW / QN	1	2(i)	2(ii)	2(iii)	3a	3b	3c	4	5	6
Marks	5	2	4	4	3	2	2	10	10	15
Learner's Score										
Performance Level										

ROW / QN	7a	7b	7c	8a	8b	8c	9a	9b	9c	10a	10b	10c
Marks	2	4	4	4	2	4	4	4	2	4	4	2
Learner's Score												
Performance Level												

Section	Max Marks	Learner Score
ENGLISH	60	
LITERATURE	40	
TOTAL	100	

SECTION A: LANGUAGE (60 MARKS)

TASK 1: LISTENING AND SPEAKING (15 MARKS)

Part A: Reading Aloud (5 marks)

1. The teacher will select a learner to read the passage aloud.

Reading Passage: The Transformative Power of Community Service Learning

The landscape of modern education is shifting from the traditional four walls of a classroom to the vibrant, living environment of the local community. **Community Service Learning (CSL)** has emerged as a cornerstone of the Competency-Based Curriculum, bridging the gap between theoretical textbooks and the practical realities of human society. It is not merely an extracurricular activity or a hobby; it is an essential pedagogical tool that fosters a deep sense of civic duty and personal growth in learners.

Through CSL activities, learners do not only acquire academic knowledge but also develop values such as **responsibility, empathy, and teamwork**. When students step out of their comfort zones to engage with the world around them, they begin to see the direct impact of their actions. For instance, in a biology lesson about ecosystems, a student might learn the names of indigenous plants. However, it is through a CSL project—such as a reforestation effort—that the student truly understands the fragility of the environment and the weight of their responsibility as a steward of the Earth.

The collaborative nature of these projects is where the most profound social lessons are learned. When learners work together to **clean local markets, plant trees, or educate the public** on hygiene and safety, they are forced to communicate, negotiate, and rely on one another. These scenarios teach them to respect one another and appreciate the importance of serving society as a collective unit. In a bustling market cleaning exercise, a student might find themselves working alongside peers from different backgrounds, united by a single goal: the betterment of their community. This unity dissolves prejudices and builds a foundation of mutual respect that is difficult to replicate in a seated lecture.

Furthermore, CSL acts as a mirror, reflecting the needs of the community back to the learners. By engaging in public health campaigns—such as educating the community on the prevention of waterborne diseases or the importance of airport safety zones—learners develop **empathy**. They begin to understand the challenges faced by others and feel a genuine desire to contribute to solutions. This emotional intelligence is a vital "soft skill" that modern employers value just as much as technical expertise.

Ultimately, such activities prepare learners to become **responsible citizens** in the future. A student who has spent their youth actively improving their neighborhood is far more likely to grow into an adult who votes, volunteers, and leads with integrity. They learn that they are not just passive residents of a country, but active participants in its growth and success. By integrating service with learning, we ensure that the next generation is not only intellectually capable but also morally grounded and socially conscious

Assessment Areas: Pronunciation Fluency Pace Observance of punctuation

Part B: Listening Comprehension (10 marks)

2. The teacher will read the passage below **ONCE**.

Listening Passage

During a school technology forum, learners were taught how digital tools can improve learning when used responsibly. The speaker explained that technology allows learners to research, communicate and collaborate easily. However, misuse of digital devices may lead to addiction, poor academic performance and cyberbullying. Learners were encouraged to practise self-discipline, respect others online and report harmful content to teachers or parents.

Questions:

i. What was the main topic of the forum? **Learner responds** (2 marks)

ii. Mention **two benefits** of technology mentioned in the passage. **Learner responds** (4 marks)

iii. Identify **one danger** of technology and **one solution** given. **Learner responds** (4 marks)

TASK 2: GRAMMAR (20 MARKS)

Part A: Nouns, Pronouns and Determiners **(8 marks)**

3. Read the passage below and answer the questions.

The learners in the community group shared their ideas during the planning meeting. Each member presented a proposal, and those suggestions were recorded carefully. Their teacher encouraged everyone to speak confidently and respectfully.

a) Identify **three nouns** used in the passage. **(3 marks)**

i. _____.

ii. _____.

iii. _____.

b) Identify **one pronoun** and state its type. (2 marks)

Pronoun	Type

c) Identify **one determiner** used in the passage. (2 marks)

Pronoun	Type

Part B: Verbs and Adverbs (6 marks)

a) Identify the **main verb** and the **auxiliary verb** in the sentence:

The learners have organised a successful project. (2 marks)

i. Main verb: _____.

ii. Auxiliary verb: _____.

b) Rewrite the sentence in the **future progressive tense**:

They lead the discussion. (2 marks)

_____

_____

c) Use an **adverb of manner** correctly in a sentence related to leadership. (2 marks)

_____

_____

_____

Part C: Adjectives, Prepositions and Conjunctions (6 marks)

a) Fill in the blanks with a suitable **coordinating conjunction**:

The team planned carefully _____ they wanted the project to succeed. (2 marks)

b) Arrange the adjectives correctly:

(metal / large / shiny) box (2 marks)

A _____ box.

c) Construct a sentence using a **simple preposition** correctly. (2 marks)

_____

_____

TASK 3: READING COMPREHENSION (10 MARKS)

Passage 1: (5 marks)

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

Technology has transformed the modern world in many ways. In schools, learners use computers, tablets and smartphones to access information within seconds. Online platforms allow learners to attend virtual lessons, submit assignments and communicate with teachers and classmates. Technology has also improved access to education for learners in remote areas.

However, the increased use of technology has introduced several challenges. Some learners spend excessive time on social media and online games, leading to addiction and reduced concentration in class. Cyberbullying has also become a serious issue, causing emotional distress among young

people. For technology to benefit learners, it must be used responsibly, with guidance from parents, teachers and the community.

Questions:

a) Mention **two benefits** of technology in education. **(2 marks)**

i. _____.

ii. _____.

b) Identify **one challenge** associated with technology use. **(1 mark)**

_____

_____

c) Suggest **two responsible ways** learners can use technology**.** **(2 marks)**

i. _____.

ii. _____.

Passage 2: (5 marks)

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

Plants and animals play a vital role in maintaining balance in the ecosystem. Trees provide oxygen, shelter and food for both humans and animals. They also help prevent soil erosion and regulate climate. Animals, on the other hand, contribute to seed dispersal, pollination and control of pests.

Human activities such as deforestation, pollution and poaching threaten the survival of many plant and animal species. When forests are destroyed, animals lose their habitats and food sources. Protecting plants and animals is essential for sustaining life on Earth and ensuring future generations enjoy a healthy environment.

Questions:

a) State **two roles of plants** mentioned in the passage**. (2 marks)**

i. _____.

ii. _____.

b) Identify **one human activity** that threatens wildlife**. (1 mark)**

_____

c) Why is it important to protect plants and animals? **(2 marks)**

_____

_____

TASK 4: WRITING (15 MARKS)

Creative Composition – Story Continuation

6. Continue the story below in **not more than 250 words**.

When the community service project was announced, many learners felt unsure about what to expect. On the first morning, they gathered at the meeting point, unaware that the experience would completely change their attitude towards service……

Assessment Criteria:

- ✓ Creativity and relevance
- ✓ Organisation and coherence
- ✓ Grammar and vocabulary

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

KISWAHILI

MUDA: SAA 2

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

MAELEKEZO KWA MTAHINIWA

1. Andika jina yako,jina ya shule,namba ya mtihani,tarehe na kisha weka saini.
2. Soma maswali yote **kwa makini** kabla ya kuyajibu.
3. Mtihani una sehemu mbili:
4. Jibu **maswali yote** katika sehemu zote mbili.

VIWANGO VYA KUTATHMINI

NO.	1a	1b	2	3	4	5	6
Swali / Kazi	Ujumbe mkuu	Mbinu ya kifani	Matamshi (/b/ /mb/ /bw/ /mbw/)	Taarifa fupi	oja moja	Ukweli vs uvumi	Hisia za mhusika
Alama	2	2	4	4	1	1	1
Alama za Mwanafunzi							
Kiwango cha Utendaji							

NO.	A2
Swali / Kazi	nsha (Maudhui, Mtiririko, Lugha, Tahajia)
Alama	15
Alama za Mwanafunzi	
Kiwango cha Utendaji	

NO.	1	2	3	4	5	6	7	8
Swali / Kazi	Semi (Nahau)	Jainishaji wa maneno	Jundaji wa maneno	Tyakati za vitenzi	Kauli	Ukanushi	patanisho wa kisintaksia	Tungo sahihi
Alama	2	2	2	2	2	2	4	4
Alama za Mwanafunzi								
Kiwango cha Utendaji								

NO.	U1-1	U1-2	U1-3	U2-1	U2-2	U2-3
Swali / Kazi	Vazo kuu	Faida ya ushirikiano	Maana ya neno	Changamoto	Suluhisho	Aina ya kifungu
Alama	2	2	1	2	2	1
Alama za Mwanafunzi						
Kiwango cha Utendaji						

SEHEMU	A1	A2	A3	A4	JUMLA
Alama	15	15	20	10	60
Alama za Mwanafunzi					
Kiwango cha Utendaji					

Kiwango	Alama ya Kiwango	Uwiano wa %	Pointi	Alama ya Mwanafunzi
KUZIZISHA MATARAJIO	KUZ1	90–100%	8	
	KUZ2	75–89%	7	
KUKIDHI MATARAJIO	KUF1	58–74%	6	
	KUF2	41–57%	5	
KUKARIBIA MATARAJIO	KUK1	31–40%	4	
	KUK2	21–30%	3	
CHINI YA MATARAJIO	CHI1	11–20%	2	
	CHI2	1–10%	1	

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SEHEMU A: KISWAHILI (ALAMA 60)

Jibu maswali yote

A1. KUSIKILIZA NA KUZUNGUMZA (ALAMA 15)

Maelekezo

Mwalimu atasoma matini simulizi ifuatayo mara mbili. Sikiliza kwa makini kisha ujibu maswali.

Matini ya Kusikiliza (Itasomwa na mwalimu)

(Mwalimu asome simulizi kuhusu kijana anayepambana na changamoto za matumizi ya mitandao ya kijamii na umuhimu wa ukweli katika jamii.)

Kulikuwa na kijiji kimoja tulivu kilichoitwa Kijiji cha Tumaini. Katika kijiji hicho aliishi kijana mmoja aliyeitwa Baraka. Baraka alikuwa mwanafunzi wa kidato cha kwanza katika shule ya sekondari ya Tumaini. Alikuwa kijana mwenye bidii, mnyenyekevu na aliyependa sana teknolojia, hasa matumizi ya simu ya mkononi na mitandao ya kijamii kama vile WhatsApp, Facebook na TikTok.

Kila asubuhi Baraka aliamka mapema kwenda shule. Aliporudi nyumbani jioni, alifanya kazi za nyumbani kisha akachukua simu yake. Alipenda kuzungumza na marafiki zake kupitia mitandao ya kijamii. Huko ndipo alipohisi kuwa na furaha zaidi. Alipenda kusoma ujumbe, kuangalia picha na video, na kushiriki habari mbalimbali.

Siku moja, Baraka alipokea ujumbe kwenye kundi la darasa lao la WhatsApp. Ujumbe huo ulisema kuwa mwalimu wao wa Nidhamu alikuwa amepanga kuwaadhibu wanafunzi wote kwa kosa ambalo halikufanywa na darasa lote. Ujumbe huo uliandikwa na mtu ambaye hakujulikana vizuri. Baraka alishtuka sana. Bila kufikiria, aliusambaza ujumbe huo kwa wanafunzi wengine na hata kwa wanafunzi wa shule jirani.

Habari hizo zilisambaa kwa kasi sana. Wanafunzi wengi walijawa na hofu. Wengine walianza kumchukia mwalimu wao bila kujua ukweli. Wazazi pia walianza kuuliza maswali. Shule ikajaa uvumi na maneno mengi yasiyo ya kweli.

Baadaye, mwalimu mkuu aliitisha mkutano wa dharura. Alieleza kuwa ujumbe ule haukuwa wa kweli. Alisema kuwa kulikuwa na mwanafunzi mmoja tu aliyekuwa amevunja sheria za shule, na suala hilo lilikuwa likishughulikiwa ipasavyo. Wote walishangaa. Wanafunzi waligundua kuwa walikuwa wameamini uvumi bila kuuliza ukweli.

Baraka alihisi aibu na huzuni. Alitambua kuwa yeye ndiye aliyesambaza habari zisizo za kweli. Alijilaumu sana. Aliona jinsi ambavyo uvumi ulileta hofu, chuki na machafuko shuleni. Alijifunza kuwa mitandao ya kijamii inaweza kuwa hatari ikiwa haitatumika kwa busara.

Siku iliyofuata, Baraka aliamua kusema ukweli. Alimwendea mwalimu mkuu na kukiri kosa lake. Aliomba msamaha kwa unyenyekevu. Mwalimu mkuu alimshukuru kwa kusema ukweli. Alimweleza kuwa kusema ukweli ni jambo la muhimu sana katika jamii na shuleni.

Kuanzia siku hiyo, Baraka alibadilika. Alitumia mitandao ya kijamii kwa uangalifu. Alijifunza kuuliza maswali, kuthibitisha habari na kusema ukweli kila wakati. Alikuwa mfano mzuri kwa wanafunzi wenzake. Kijiji cha Tumaini kikarejea katika amani, na Baraka akawa somo la kuigwa.

Simulizi hii inatufundisha kuwa ukweli huleta amani, lakini uvumi huleta matatizo. Ni wajibu wa kila mmoja kutumia mitandao ya kijamii kwa hekima na kusema ukweli wakati wote.

Maswali (Jibu YOTE)

1. **Ufahamu wa Kusikiliza: Ujumbe na Fani**

   a) Eleza ujumbe mkuu unaopatikana katika matini uliyosikiliza**.(Mwanafunzi ajibu)** (2)

   b) Bainisha mbinu MOJA ya kifani iliyotumika na eleza dhima yake. **.(Mwanafunzi ajibu)** (2)
   (Alama 4)

2. **Matamshi Bora: /b/, /mb/, /bw/, /mbw/**

   Taja maneno MAWILI kwa kila sauti ifuatayo kisha uyatamke kwa usahihi:
   /b/, /mb/, /bw/, /mbw/ **(Alama 4)**

3. **Kuzungumza kwa Kupasha Habari**

   Kwa maneno yako, toa taarifa fupi kuhusu umuhimu wa kusema ukweli shuleni. **(Alama 4)**

4. **Kusikiliza kwa Kupata Habari**

   Taja hoja MOJA muhimu uliyopata kutokana na matini ya kusikiliza. **(Alama 1)**

5. **Kusikiliza kwa Kupambanua**

   Eleza tofauti kati ya ukweli na uvumi kama ilivyojitokeza katika matini. **(Alama 1)**

6. **Uzungumzaji wa Papo kwa Hapo**

   Eleza kwa ufupi ungehisi vipi kama ungekuwa mhusika mkuu wa simulizi hiyo. **(Alama 1)**

A2. UANDISHI WA INSHA (ALAMA 15)

Maelekezo

Chagua **MOJA** kati ya insha zifuatazo:

1. **Insha ya Kisimulizi**

   Simulia kisa kinachoonyesha athari za kusikiliza ushauri wa wazazi.

AU

2. **Insha ya Maelezo**

   Eleza kwa kina umuhimu wa fasihi simulizi katika kuhifadhi utamaduni wa jamii.

(Kigezo cha alama: maudhui 6, mtiririko 4, lugha 3, tahajia 2)

A3. SARUFI (ALAMA 20)

1. **Matumizi ya Semi**

   Tunga sentensi Mbili kwa kutumia nahau ifuatayo: *kupiga moyo konde*. **(Alama 2)**

i. _____.

ii. _____.

2. **Uainishaji wa Maneno**

   Tambua aina ya maneno yaliyopigiwa mstari:

   *Watoto **walikimbia** uwanjani kwa furaha.* **(Alama 2)**

_____.

3. **Uundaji wa Maneno**

   Unda maneno MAWILI kwa kutumia kiambishi **-ji**. **(Alama 2)**

4. **Nyakati za Vitenzi**

   Badilisha sentensi ifuatayo iwe katika wakati ujao:

   Mwanafunzi anasoma kwa bidii. **(Alama 2)**

_____

5. **Kauli**

   Badilisha sentensi ifuatayo iwe katika kauli ya kutendwa:

   Mwalimu anafundisha somo la fasihi. **(Alama 2)**

_____

6. **Ukanushi**

   Kanusha sentensi ifuatayo:

   Wanafunzi wote walifaulu mtihani. **(Alama 2)**

_____

7. **Upatanisho wa Kisintaksia**

   Eleza makosa MAWILI ya kisarufi katika sentensi ifuatayo kisha urekebishe:

   Vitabu mzuri iko mezani. **(Alama 4)**

Makosa

_____.

_____.

Rekebisho

_____.

8. **Tungo Sahihi**

Tunga sentensi sahihi kwa kutumia kivumishi cha sifa. **(Alama 4)**

_____

_____

A4. KUSOMA UFAHAMU (ALAMA 10)

UFAHAMU WA KWANZA (ALAMA 5)

Soma kifungu kifuatacho kisha ujibu maswali yafuatayo.

Katika eneo la mashambani lililojulikana kama Kijiji cha Amani, maisha ya wanajamii kwa muda mrefu yalikuwa ya changamoto nyingi. Barabara zilikuwa mbovu kiasi kwamba wakati wa mvua magari hayakuweza kupita, watoto walilazimika kutembea umbali mrefu kwenda shule, na wakulima walipata hasara kwa sababu hawakuweza kusafirisha mazao yao kwa urahisi. Zaidi ya hayo, kituo cha afya kilikuwa mbali sana na hivyo wagonjwa waliteseka kwa kukosa huduma za haraka. Hali hii iliwafanya wanakijiji waishi kwa kukata tamaa huku kila mtu akijali matatizo yake binafsi bila kushirikiana na wengine.

Hata hivyo, hali ilianza kubadilika pale wazee wa kijiji walipoitisha mkutano wa dharura uliowaleta pamoja wanakijiji wote. Katika mkutano huo, walikubaliana kuwa hakuna maendeleo yatakayopatikana iwapo kila mtu angeendelea kufikiria maslahi yake pekee. Waliona umuhimu wa kushirikiana kama jamii moja yenye lengo la pamoja. Ilipendekezwa kuanzishwa kwa vikundi vya kijamii vitakavyoshughulikia masuala tofauti kama elimu, afya, miundombinu na kilimo.

Baada ya makubaliano hayo, wanakijiji walianza kufanya kazi kwa pamoja. Kila wiki walipanga siku maalum ya kazi ya jamii ambapo wanaume, wanawake na vijana walijitolea kuchangia nguvu zao. Walirekebisha barabara kwa kutumia vifaa vilivyopatikana kijijini, wakachimba mifereji ya kupitisha maji ya mvua na kujenga daraja dogo lililosaidia kuunganisha kijiji na soko la karibu. Hatua hizi zilirahisisha usafiri na kuimarisha biashara za wakulima.

Katika sekta ya elimu, wanajamii waliamua kujenga madarasa mapya katika shule ya msingi ya kijiji. Wazazi walichangia mawe, mchanga na kuni huku walimu wakijitolea kusimamia ujenzi. Hatimaye, shule ilipata mazingira bora ya kujifunzia na idadi ya wanafunzi iliongezeka kwa sababu wazazi walivutiwa na juhudi hizo. Vilevile, kituo kidogo cha afya kilijengwa kwa msaada wa mashirika ya kijamii baada ya wanakijiji kuonyesha umoja na bidii yao.

Maendeleo haya yalileta mabadiliko makubwa katika maisha ya wanajamii. Uhusiano kati yao uliimarika, migogoro ilipungua na kila mtu alijivunia kijiji chake. Wanakijiji wa Amani walijifunza kuwa ushirikiano ni nguzo muhimu ya maendeleo na kwamba jamii iliyoungana inaweza kushinda changamoto nyingi bila kutegemea msaada wa nje pekee.

Maswali:

1. Eleza wazo kuu la kifungu. **(Alama 2)**

_____

_____

2. Taja faida MOJA ya ushirikiano iliyobainishwa. **(Alama 2)**

_____

_____

3. Toa maana ya neno moja kulingana na muktadha. **(Alama 1)**

_____

_____

UFAHAMU WA PILI (ALAMA 5)

Soma kifungu kifuatacho kisha ujibu maswali yafuatayo.

Teknolojia imekuwa na mchango mkubwa katika kuboresha elimu duniani kote. Kupitia matumizi ya kompyuta, simu janja na mtandao wa intaneti, wanafunzi wanaweza kupata taarifa kwa urahisi na kujifunza kwa njia bunifu. Walimu pia hutumia teknolojia kuandaa masomo, kufanya tathmini na kuwasiliana na wanafunzi wao kwa haraka.

Hata hivyo, matumizi ya teknolojia katika elimu yanakumbwa na changamoto kadhaa. Changamoto kubwa ni ukosefu wa vifaa vya kiteknolojia kama vile kompyuta na intaneti hasa katika maeneo ya vijijini. Aidha, baadhi ya walimu na wanafunzi hawana ujuzi wa kutosha wa kutumia teknolojia hizo ipasavyo.

Ili kukabiliana na changamoto hizi, serikali na wadau wa elimu wanahimizwa kuwekeza katika miundombinu ya kiteknolojia na kutoa mafunzo kwa walimu na wanafunzi. Hatua hizi zitasaidia kuhakikisha teknolojia inatumika kikamilifu kuboresha ubora wa elimu.

Maswali:

1. Eleza changamoto MOJA iliyotajwa. **(Alama 2)**

_____

_____

2. Taja suluhisho MOJA lililopendekezwa. **(Alama 2)**

_____

_____

3. Bainisha aina ya kifungu. **(Alama 1)**

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

BIOLOGY

TIME: 1½ HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

1. *Write your name, assessment number, class and date on all the answer sheets provided.*
2. *Answer all the questions in the spaces provided.*
3. *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*
4. *Make your drawings neat, clear, and large, and label them correctly using ruled lines.*
5. *Section A requires short answers – be brief and precise.*
6. *Section B requires longer explanations and reasoning – write clearly and in detail.*

SCORE GRID

ITEM	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	TOTAL	SECTION	SCORE
Number	1	2	3	4	5	6	7	8	9	—	A: THEORY 70	
Question Marks	10	10	6	8	8	8	8	6	6	**70**	B: PRACTICAL 30	
Learner's Score												
Performance Level												

Performance Levels Grid

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

SECTION A: THEORY (70 Marks)

Answer all questions in this section.

1. A community near Lake Victoria is experiencing an increase in water-borne diseases, crop failure due to pests, and poor waste management.

a) Define **Biology**. (2 marks)

_____

_____

b) Match the branch of Biology in **Column A** with its correct description in **Column B**. (3 marks)

	Column A	**Column B**
i.	Botany	Study of microorganisms such as bacteria and fungi
ii.	Zoology	Study of plants
iii.	Microbiology	Study of animals

b) Using the situation above, explain **THREE ways Biology can be applied to solve the problems faced by the community**. (3 marks)

i) _____.

ii) _____.

iii) _____.

c) State **TWO reasons** why learning Biology is important to learners in everyday life. (2 marks)

i) _____.

ii) _____.

2. A career guidance teacher asks learners to research different fields of Biology and link them to possible careers.

a) Complete the table below: (8 marks)

Field of Biology	**Area of Study**	**One Related Career**
otany		
oology		
Iicrobiology		
iotechnology		

b) Explain **TWO ways** in which studying Biology prepares learners for future career opportunities. (2 marks)

i) _____.

ii) _____.

3. During a class discussion, some learners believe that certain Biology-related careers are only suitable for men or people without disabilities.

a) Identify **TWO factors** that should influence career choice in Biology. (2 marks)

i) _____.

ii) _____.

b) Explain **TWO factors** that should **NOT** influence career choice and give reasons. (2 marks)

i) _____.

ii) _____.

c) State **TWO Biology-related careers** suitable for learners regardless of gender or disability.**(2 mks**

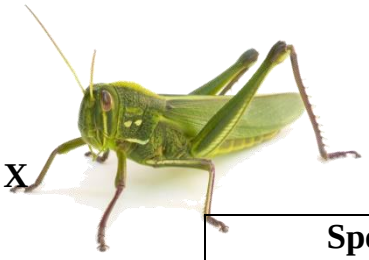
i) _____.

ii) _____.

4. Learners on a field trip are instructed to collect insects and plant specimens for biological study.

a) Identify the following animals used as specimen in biology

X



Y



Specimen	Name
X	
Y	

a) Identify the apparatus used for collecting the following specimens:

i) Small crawling insects on the soil surface_____ (1 mark)

ii) Flying insects such as butterflies _____ (1 mark)

b) State **FOUR precautions** to observe when collecting biological specimens. (4 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

c) Explain **TWO reasons** why proper labeling of specimens is important. (2 marks)

i) _____.

ii) _____.

5. A learner preserved insects using ethanol while another mounted butterflies in envelopes.

a) Name **TWO preservatives** used in animal specimen preservation. (2 marks)

i) _____.

ii) _____.

b) Describe the steps used in **wet preservation of animal specimens**. (3 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

c) State **FOUR components** that must appear on a specimen label. (4 marks)

i) _____.

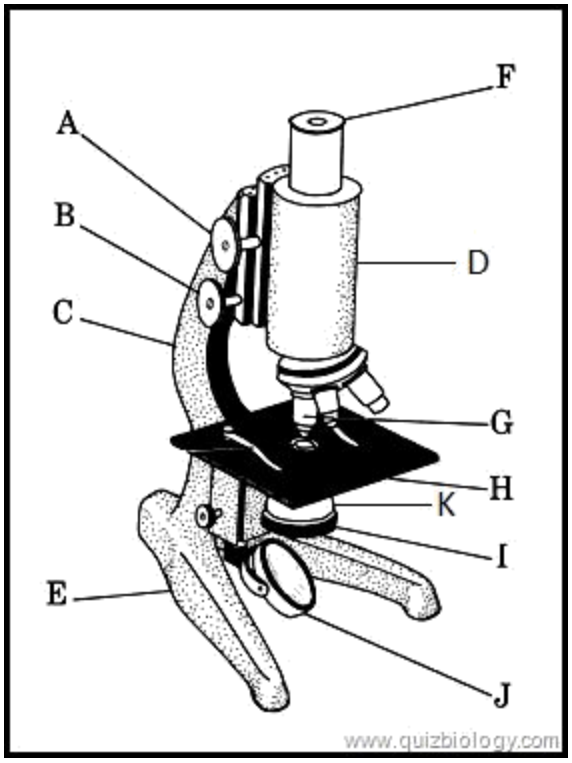
ii) _____.

iii) _____.

iv) _____.

6. During a laboratory lesson, learners observed onion epidermal cells using a light microscope.

a) Identify the parts of a microscope shown below**.(2 marks)**



C: _____.

J: _____.

b) State **TWO differences** between a light microscope and an electron microscope. **(4 marks)**

Light microscope	Electron microscope

c) Explain the meaning of:

i) Magnification **(1 mark)**

_____

_____

ii) Resolution **(1 mark**)

_____

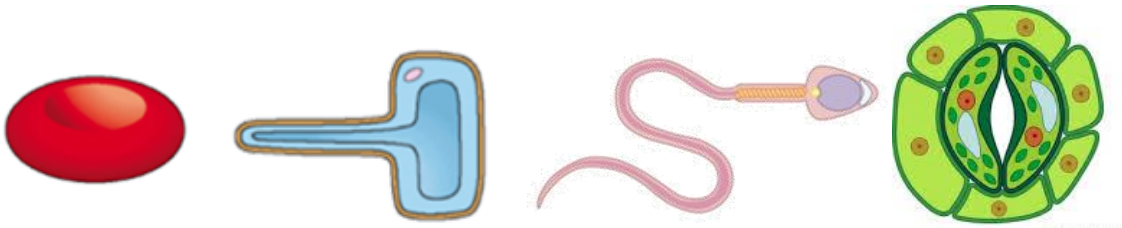
_____

c) Give **TWO reasons** why electron microscopes are not commonly used in schools. (2 marks)

i) _____.

ii) _____.

7. The diagrams below show specialized cells found in plants and animals.



m **n** **o** **p**

a) Identify **TWO specialized plant cell** and **TWO specialized animal cell**. (4 marks)

specialized plant cell	**specialized animal cell**

b) Describe **TWO structural adaptations** of a root hair cell to its function. (2 marks)

i) _____.

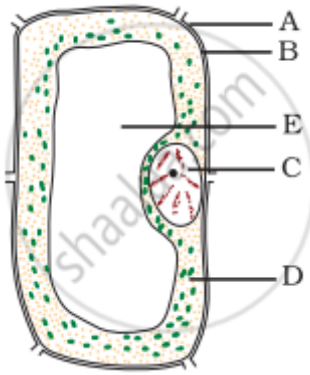
ii) _____.

c) Explain **TWO ways** in which the structure of a nerve cell is adapted to its function. (2 marks)

i) _____.

ii) _____.

d) Identify the parts of a cell below**. (4 marks)**



Part **Name**

B: _____.

C: _____.

D: _____.

E: _____.

8. During a Biology lesson, learners discussed the levels of organization in a multicellular organism. Match each level of organization in Column A with the correct example in Column B**. (5 marks)**

Column A:	**Column B:**
i. Organelle	**Heart**
ii. Cell	**Digestive system**
iii. Tissue	**Mitochondrion**
iv. Organ	**Muscle tissue**
v. Organ system	**Red blood cell**

9. During a Biology practical lesson, learners prepared temporary slides of an onion epidermis for observation under a light microscope.

State ONE reason for each of the following procedures used when preparing temporary slides:

a) Sectioning (1 mark)

_____

_____

b) Staining (1 mark)

_____

_____c

) Mounting (1 mark)

_____

_____

d) Fixation (1 mark)

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

BIOLOGY Practical

TIME: 1½ HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

ITEM	Q1 (Practical)	Q2 (Project)	TOTAL
Number	1	2	—
Question Marks	15	15	**30**
Learner's Score			
Performance Level			

SECTION B: PRACTICAL AND PROJECT (30 MARKS)

QUESTION 1: PRACTICAL – Specimen Collection and Preservation (15 Marks)

You are provided with improvised and conventional apparatus for specimen collection.

a) Identify the **FIVE shown materials** used in the study of biological specimens. (5 marks)

Apparatus	Apparatus name
Q	
R	
S	
T	
U	

b) Describe how you would **improvise a pitfall trap using locally available materials**. (5 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

v) _____.

c) Explain **FIVE reasons** why specimen collection and preservation is important in Biology. (5 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

v) _____.

QUESTION 2: PROJECT – Biological Specimen Portfolio (15 Marks)

You are required to carry out a project on collecting, processing, and preserving biological specimens.

a) State **THREE activities** involved in planning the project. (3 marks)

i) _____.

ii) _____.

iii) _____.

b) Explain how **budgeting and financial planning** were applied in the project. (3 marks)

i) _____.

ii) _____.

iii) _____.

c) Describe the steps followed in **preparing a herbarium specimen**, from collection to storage. (4 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

d) Present your project work in plenary**. (5 marks)**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

CHEMISTRY Theory

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

INSTRUCTIONS TO LEARNERS

1. Write your name, assessment number, class and date on all the answer sheets provided.
2. Answer all the questions in the spaces provided.
3. Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.

SCORE GRID

Performance Levels Grid

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

No.	Question No.	Marks	Learner's Score	Performance Level
1	1a	2		
2	1b	4		
3	1c	3		

4	2a	8		
5	2b	3		
6	3a	8		
7	3b	2		
8	4a(i)	1		
9	4a(ii)	1		
10	4a(iii)	1		
11	4b	6		
12	4c	1		
13	5a	2		
14	5b	2		
15	5c	2		
16	6a(i)	0.5		
17	6a(ii)	0.5		
18	7a(i)	1		
19	7a(ii)	1		
20	7b	4		
21	7c	2		
22	7d	2		
23	8a(i)	1		
24	8a(ii)	1		
25	9a(i)	1		
26	9a(ii)	1		
27	9b	1		
28	9c	1		
29	9d(i)	1		
30	9d(ii)	1		
31	9e(i)	1		
32	9e(ii)	1		
33	9e(iii)	1		
34	10a(i)	2		
35	10a(ii)	2		
36	10b(i)	2		
37	10b(ii)	2		
38	10c	2		

SECTION A: Theory (70 Marks)

Answer all questions in this section.

1. A Grade 10 learner of Mang'u Senior School notices that fertilisers improve crop yields, medicines cure diseases, fuel produces energy and plastics are used in daily life.

a) Using the above scenario: Define **Chemistry** as a field of science. (2 marks)

_____

_____

b) Explain **four roles of Chemistry in daily life** shown in the scenario. (4 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

b) State **three reasons** why learning Chemistry is important to society. (3 marks)

i) _____.

ii) _____.

iii) _____.

2. During a career guidance session, learners research different careers related to Chemistry using books and the internet.

a) Name and describe **four branches of Chemistry**. (8 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

b) State **three career opportunities** related to Chemistry. (3 marks)

i) _____.

ii) _____.

iii) _____.

3. Grade 10 learners of Kilgoris Boys Senior School discovered that Chemistry plays a major role in different industries such as agriculture, pharmaceuticals, food processing, energy and entertainment.

a) Explain **four applications of Chemistry** in the following areas: (8 marks)

	Area	**Application of chemistry**
i.	Agriculture	
ii.	Pharmaceutical industry	
iii.	Manufacturing industry	
iv.	Entertainment industry	

b) State **two benefits** of Chemistry to economic development. (2 marks)

i) _____.

ii) _____.

4. A health officer warns learners about the dangers of drug and substance abuse in schools.

a) Define the following terms:

i) Drug (1 mark)

_____

_____

ii) Prescription (1 mark)

_____

_____

iii) Dosage (1 mark)

_____

_____

b) Explain **three effects of drug and substance abuse** on learners. (6 marks)

i) _____.

ii) _____.

iii) _____.

c) State **one responsibility** of learners in promoting a safe and healthy learning environment. (1 mark)

_____.

_____.

5. Learners at Litein Girls Senior School watched a simulation of Rutherford's Gold Foil experiment during a Chemistry lesson.

a) Describe **two observations** made in Rutherford's experiment. (2 marks)

i) _____.

ii) _____.

b) State **two conclusions** drawn from the experiment. (2 marks)

i) _____.

ii) _____.

c) Name **two sub-atomic particles** found in an atom. (2 marks)

i) _____.

ii) _____.

6. The table below shows PH values of solutions A, B, C and D.

Solution	PH
A	3.0
B	13.0
C	8.5
D	7.0

(a) Identify a solution which is. (2 marks)

(i) Strongly acidic. (½ mark)_____.

(ii) Strongly basic (½ mark)_____.

7. A teacher at Maranda Senior School stated that Element X has two isotopes:

i. X_1 has mass number 35 and abundance 75%

ii. X_2 has mass number 37 and abundance 25%

a) Define:

i) Atomic number (1 mark)

_____

_____

ii) Mass number (1 mark)

_____

_____

b) Calculate the **relative atomic mass** of element X. (4 marks)

c) Define the term **isotopes**. (2 marks)

_____

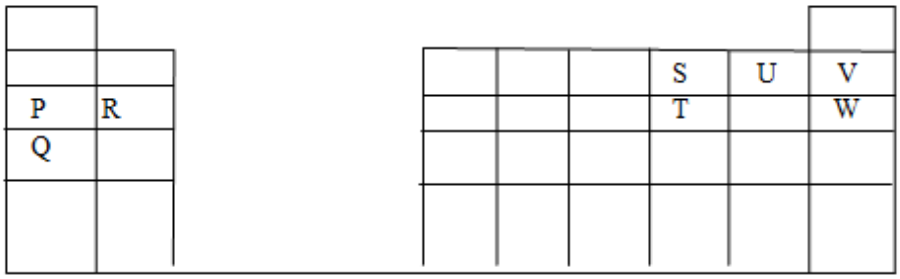
_____

d) State **two uses of isotopes**. (2 marks)

i) _____.

ii) _____.

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



(a) Give the name of: (2 marks)

(i)Element S

(ii)Element W

9. The electron arrangement of an element Y is:

2.8.8.1

a) Identify the **period** and **group** of element Y. (2 marks)

i. Period: _____.

ii. Group: _____.

b) Identify the element. (1 mark)

_____.

c) State the **chemical family** to which element Y belongs. (1 mark)

_____

d) Predict the **type of ion** formed by element Y and explain why. (2 marks)

_____

_____

_____

d) State **two reasons** why noble gases are chemically stable. (2 marks)

i) _____.

ii) _____.

e) Give an example of an element under the following category. (3 marks)

	Category	Element
i.	*Alkaline earth metal*	
ii.	*Halogen*	
iii.	*Noble gas*	

10. a) Write the **electron arrangement (s and p notation)** for the following ions:

i) Na^+ (2 marks)

ii) O^{2-} (2 marks)

b) Using valency or oxidation numbers, write the chemical formula of:

i) Magnesium chloride (2 marks)

ii) Aluminium oxide (2 marks)

c) Balance the following chemical equation:

$\mathbf{Fe + O_2 \rightarrow Fe_2O_3}$ (2 marks)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

CHEMISTRY Practical

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

SCORE GRID

Number	1	2	3	4	5	6	7
Question No	Task 1a(i)	Task 1a(ii)	Task 1b – Alkali metal	Task 1b – Halogen	ask 1b – Noble gas	Task 2a	Task 2b
Marks	3	6	2	2	2	3	5
Learner's Score							
Performance Level							

TASK 1: PRACTICAL – ATOMIC STRUCTURE AND PERIODICITY (15 MARKS)

You are provided with a periodic table.

a) Select **any three elements** from the first 20 elements and:

i) Write their **atomic numbers**. (3 marks)

_____

_____

_____

ii) Write their **electron arrangement using s and p orbitals**. (6 marks)

_____

_____

_____

b) Identify **one alkali metal, one halogen and one noble gas** from the first 20 elements and state **one property** of each. (6 marks)

	Halogen	**Alkali metal**	**Noble gas**
Example			
Property			

TASK 2: PROJECT – DRUG AND SUBSTANCE USE AWARENESS (15 MARKS)

Project Activity:

Develop a **poster** to sensitise learners or the community on the **risks of drug and substance use**. Your poster should include:

a. Definition of drugs and substance use (3 marks)
b. Effects of drug and substance abuse (5 marks)
c. Consumer rights and protection related to drug prescription and side effects (4 marks)
d. Creativity, clarity and relevance of information (3 marks)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

PHYSICS (Theory)

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……..

INSTRUCTIONS TO LEARNERS

a) *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
b) *Answer all the questions in the spaces provided.*
c) ***Read each question carefully*** *before writing your answer.*
d) *Ensure your answers are* ***clear, neat, and well-organized****.*
e) ***Check your work*** *before submitting the exam.*
f) *Manage your time well to complete all questions.*

Performance Levels Grid

No.	ai	aii	aiii	aiv	ai	aii	aiii	bi	bii	biii	biv	bvi	ai	aii	bi	bii	biii	biv	bv	ai	aii	ai	aii	bi	bii	Total
Max	1	1	2	2	2	2	1	5	5	5	5	5	2	2	2	2	2	4	4	2	2	2	2	3	3	**68**
Score																										
Level																										

Section	Max Marks	Learner Score
A	40	
B	60	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (40 Marks)

Answer all questions in this section.

1. A student is exploring career opportunities in science and wants to understand how Physics relates to other fields.

a) i) Define Physics as a branch of science. (1 mark)

_____

_____

ii) List **two branches of Physics**. (1 mark)

_____.

_____.

iii) Give **two examples of how Physics is applied in day-to-day life**. (2 marks)

_____

_____

iv) Mention **two careers related to Physics**. (2 marks)

_____.

_____.

2. A syringe is used to demonstrate how pressure is transmitted in liquids.

a) i) Define **atmospheric pressure**. (2 marks)

_____

_____

ii) State **two factors affecting pressure in fluids**. (2 marks)

_____

_____

iii) State **one application of fluid pressure in daily life**. (1 mark)

_____

_____

b)i) calculate the pressure at the bottom of a tank containing water 1.5 m deep. (Take ρ=1000 kg/m^3 g=10 N/kg). (5 marks)

ii) Explain **the principle of transmission of pressure in fluids** and give one example of its application. (5 marks)

_____

_____

_____

_____

_____

_____

vi) Using a well labelled diagram Describe an experiment to **demonstrate atmospheric pressure using a glass and water**. (5 marks)

3. A student wants to design a spring system for a small machine.

a) i) Define **elasticity** and **ductility**. (2 marks)

elasticity:

_____

_____

Ductility:

_____

_____

ii) State **two other mechanical properties of materials**. (2 marks)

_____

_____

b) A wire of original length L_0=2.0 m stretches by ΔL=4 mm under a force of F=200 N and cross-sectional area A=2×10−6 m² Calculate:

i. Tensile stress (σ=F/A) (2 marks)

ii. Tensile strain (ϵ=ΔL/L0) (2 marks)

iii. Young's modulus (Y=σ/ϵY) (2 marks)

iv) State two **applications of elasticity of materials in industry and daily life**. (4 marks)

_____

_____

_____

_____

v) Using a well labelled diagram, describe **a simple experiment to demonstrate Hooke's Law using a spring and weights**. (4 marks)

4. a)

i) Give **two examples of how Physics is related to other sciences**. (2 marks)

physics and chemistry:

_____

_____

_____

_____

Physics and biology:

_____

_____

_____

_____

ii) Explain briefly **the importance of Physics in technological innovations**. (2 marks)

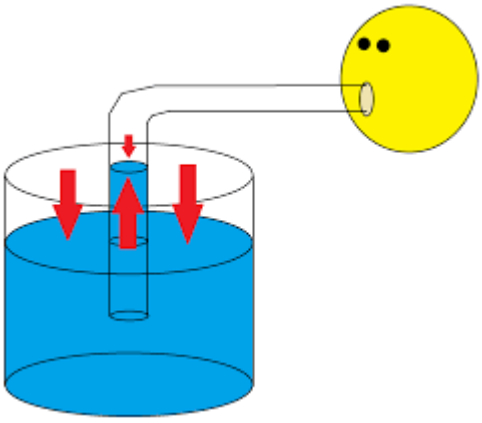
_____

_____

_____

_____

5. During a science demonstration, a student observes a drinking straw in a glass of water.



a)

i) Explain why water rises in the straw when pressure is applied. (2 marks)

_____

_____

ii) Name **two other applications of atmospheric pressure**. (2 marks)

_____

_____

b) i)using a well labelled diagram show an experiment to show **air pressure can support a card on a glass of water when inverted**. (3 marks)

ii) Explain **the effect of atmospheric pressure on human body in high-altitude conditions**.(3 mks)

_____

_____

_____

_____

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

PHYSICS (Practical)

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	Exp1a: Measure height & calculate pressure	Exp1b: Show effect of changing fluid depth	Exp1c: Demonstrate transmission of pressure	Exp2a: Measure extension & plot force vs extension	Exp2b: Determine stress, strain & Young's modulus	Exp2c: Explain deviations from Hooke's law	ccuracy of calculations	Correct procedure	Graphs & data presentation	pplication & explanation	leatness & organization	bservation & interpretation
Marks	5	5	5	5	5	5	8	7	5	5	5	5
earner's Score												
erformance Level												

SECTION B: PRACTICAL (30 MARKS)

QUESTION 6: PRACTICAL – MEASUREMENT OF PRESSURE AND ELASTICITY (30 MARKS)

TASK: Conduct experiments to investigate **pressure in fluids** and **mechanical properties of materials**.

TOOLS AND APPARATUS

i. Glass tube / syringe
ii. Water or other safe fluid
iii. Spring / wire with known cross-sectional area
iv. Weights (mass set)
v. Ruler / meter scale
vi. Clamp stand
vii. Notebook / graph paper

GUIDING QUESTIONS

Experiment 1 – Pressure in Fluids:

a) Measure the height of water in a tube and **calculate the pressure at the bottom**. (5 marks)

b) Show **how changing the fluid depth affects pressure**. (5 marks)

c) Demonstrate and explain **transmission of pressure using a syringe**. (5 marks)

Experiment 2 – Mechanical Properties:

a) Measure the extension of a wire or spring under varying loads and **plot a force vs extension graph**. (5 marks)

b) Determine **tensile stress, tensile strain, and Young's modulus** using your measurements. (5 marks)

c) Explain **any observed deviations from Hooke's law**. (5 marks)

ASSESSMENT RUBRIC

Criteria	Marks
Accuracy of calculations	8
Correct experimental procedure	7
Graphs and data presentation	5
Application and explanation	5
Neatness and organization	5
Observation and interpretation	5
Total	30

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

APPLIED AGRICULTURE (Theory)

TIME: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

a) *Write your name, assessment number, class and date on all the answer sheets provided.*
b) *Answer all the questions in the spaces provided.*
c) *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*

SCORE GRID

ITEM	Q1	Q2	Q3	Q4	Q5	Q6	TOTAL
Number	1	2	3	4			–
Question Marks	15	18	10	8		0	0
Learner's Score							
Performance Level							

Section	Max Marks	Learner Score
A: THEORY	70	
B: PRACTICAL	30	
TOTAL	100	

Score Range	Performance Level
60 – 70	Exceeds Expectations (EE)
45 – 59	Meets Expectations (ME)
30 – 44	Approaching Expectations (AE)
0 – 29	Below Expectations (BE)

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

CBC CBE SE

SECTION A: THEORY (70 Marks)

Answer all questions in this section.

1. A group of young farmers in your community plans to start a vegetable farming project to supply the local market.

a) Explain FOUR ways **through which the group can legally access land for agricultural use. (4 marks)**

i. _____.

ii. _____.

iii. _____.

iv. _____.

b) Before settling on a piece of land, the group evaluates different parcels of land in the area.

i) Identify **THREE factors** they would consider when evaluating the **utility of land** for agricultural production. (3 marks)

_____

_____

_____

ii) Explain **TWO reasons** why some land may not be suitable for crop farming. (4 marks)

_____

_____

_____

_____

_____

c) Describe FOUR natural factors **that determine the productivity of land in agriculture. (4 marks)**

i. _____.

ii. _____.

iii. _____.

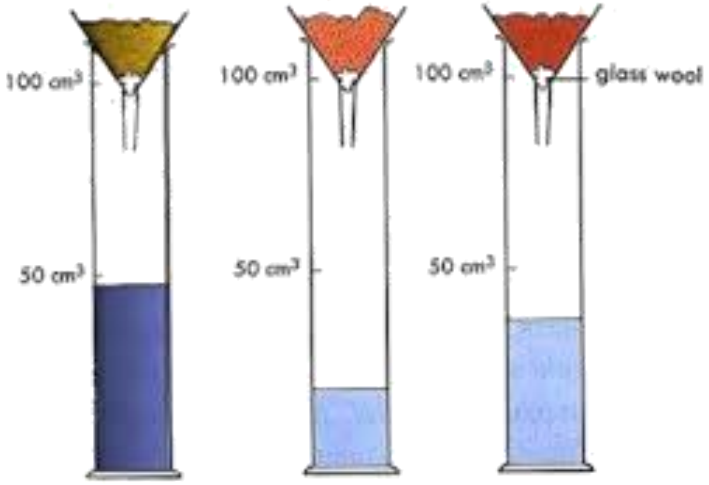
iv. _____.

2. During a field excursion, learners collect soil samples from different farms to test their suitability for crop production.

a) Describe ONE physical**,** ONE chemical**, and** ONE biological **property of soil that affects crop production.(6 marks)**

Property of soil	Description
Physical property	
Chemical property	
Biological property	

b) Agriculture learners from Precious Blood Senior School conducted the following experiment.



X **Y** **Z**

i) Identify the physical property of soil being investigated above. (1 mark)

_____

ii) State two factors influencing the above factor. (2 marks)

_____

_____

_____

iii) Identify the soils labelled XYZ. (3 marks)

X: _____.

Y: _____.

Z: _____.

c) Using a well-labeled diagram, illustrate a soil profile and explain the importance of ANY TWO layers to crop production**. (3 marks)**

3. A farmer leaves a piece of land fallow for three years before deciding to plant maize.

a) List FOUR activities **carried out when preparing fallow land to achieve an appropriate seedbed. (4 marks)**

i. _____.

ii. _____.

iii. _____.

iv. _____.

b) Different land preparation methods are used depending on soil condition.

i) Distinguish between **primary cultivation** and **secondary cultivation**. (4 marks)

_____

_____

_____

_____

_____

c) State TWO reasons **why proper land preparation is important in crop production. (2 marks)**

i. _____.

ii. _____.

4. In areas prone to soil erosion, farmers are encouraged to adopt conservation tillage practices.

a) Define conservation tillage**. (2 marks)**

_____

_____

b) Describe TWO conservation tillage practices **used in crop production. (2 marks)**

i. _____.

ii. _____.

c) Explain FOUR benefits **of conservation tillage to the farmer and the environment. (4 marks)**

i. _____.

ii. _____.

iii. _____.

iv. _____.

5. A tomato farmer observes poor yields due to improper crop management.

a) Describe the process of pruning tomato plants**. (3 marks)**

i. _____.

ii. _____.

iii. _____.

b) State TWO benefits **of pruning vegetables. (2 marks)**

i. _____.

ii. _____.

b) Explain TWO reasons **why perennial crops require pruning. (2 marks)**

i. _____.

ii. _____.

iii. _____.

c) State TWO importance **of top dressing crops using appropriate fertilizers. (2 marks)**

i. _____.

ii. _____.

6. A school agriculture club decides to grow cabbages starting from a nursery bed.

a) Identify THREE crops **that are commonly established through a nursery. (3 marks)**

i. _____.

ii. _____.

iii. _____.

b) Describe THREE nursery bed management practices **that ensure healthy seedlings. (3 marks)**

i. _____.

ii. _____.

iii. _____.

c) Explain FOUR field management practices **carried out after transplanting seedlings. (4 marks)**

i. _____.

ii. _____.

iii. _____.

iv. _____.

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KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

APPLIED AGRICULTURE (Project)

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

ITEM	TASK 1	TASK 2	TOTAL
Number	1	2	—
Question Marks	15	15	**30**
Learner's Score			
Performance Level			

Score Range (30)	Performance Level
25 – 30	Exceeds Expectations (EE)
18 – 24	Meets Expectations (ME)
10 – 17	Approaching Expectations (AE)
0 – 9	Below Expectations (BE)

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SECTION B: PRACTICAL (30 MARKS)

TASK 1: SOIL INVESTIGATION (15 MARKS)

You are provided with:

i. Soil sample
ii. Water
iii. Transparent container

a) Identify the soil texture **present in the sample and give a reason for your answer. (5 marks)**

Soil texture

_____

_____

_____

Reason

_____

_____

_____

b) Carry out a simple test to determine soil porosity **and record your observations. (5 marks)**

c) State TWO conclusions **you can make about the suitability of the soil for crop production. (5 marks)**

i. _____.

ii. _____.

TASK 2: CROP MANAGEMENT PRACTICE (15 MARKS)

You are provided with:

i. A tomato or capsicum plant
ii. Pruning tools
iii. Fertilizer sample

a) Demonstrate correct pruning **of the plant provided. (6 marks)**

b) Identify the type of fertilizer suitable for top dressing **the crop and state the** method of application**. (5 marks)**

_____

_____

_____

_____

_____

c) Explain FOUR safety precautions **to observe when carrying out field management practices. (4 marks)**

i. _____.
ii. _____.
iii. _____.
iv. _____.

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

GENERAL SCIENCE (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***f)*** *Use relevant* ***Biblical references*** *where necessary.*
- ***g)*** *Do* ***not*** *write in the margin.*
- ***h)*** ***Check your work*** *before submitting the exam.*
- ***i)*** *Manage your time well to complete all questions.*

Performance Levels Grid

ROW / QN	1a(i)	1a(ii)	1b	1c	1d	2a	2b	2c	2d	3a(i)	3a(ii)	3b(i)	3b(ii)	3c	3d	4a	4b	4c	4d	5a	5b
Marks	2	2	6	3	2	2	2	2	4	1	2	3	6	6	5	2	2	6	3	4	6
Learner's Score																					
erformance Level																					

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: THEORY (70 MARKS)

Answer all questions in this section.

1. A local radio station is running a programme titled **"Science in Our Daily Lives."** During the show, students are invited to explain how science affects society, the environment, and future careers.

a) i) Define **General Science** as a learning area. (2 marks)

_____

_____

ii) State **two main branches** of General Science. (2 marks)

_____

_____

b) Explain **three ways** General Science contributes to: (6 marks)

	Field	How general science contributes to the field
i.	Human Life	
ii.	Environmental Conservation	
iii.	Technological Development	

c) A learner claims that *"General Science is only useful for people who want to become doctors."*
Do you agree?
Give **three reasons** to justify your answer. (3 marks)

i. _____

ii. _____

iii. _____

d) Identify **two career opportunities** related to General Science and briefly describe what each career involves. (2 marks)

i. _____

ii. _____

2. During a science club investigation, learners noticed that plants near a window grew taller than those placed in a dark cupboard.

a) What is meant by the **principle of inference** in science education? (2 marks)

_____

_____

b) Identify **two observations** made in this investigation. (2 marks)

i. _____

ii. _____

c) State the **inference** that can be drawn from the observations. (2 marks)

_____

_____

d) Describe **two methods of collecting evidence** that scientists may use when drawing valid conclusions. (4 marks)

_____

_____

_____

_____

_____

3. A laboratory technician prepared photomicrographs of plant and animal cells using both a **light microscope** and an **electron microscope** for students to study.

a) State **one difference** between a light microscope and an electron microscope in terms of:

i. Source of illumination

_____

_____

_____

_____

ii. Magnification power. (2 marks)

_____

_____

_____

_____

b) i) Name **three structures** seen in an animal cell under an electron microscope but not clearly seen under a light microscope. (3 marks)

i. _____

ii. _____

iii. _____

ii) Explain the functions of the following cell components: (6 marks)

i. Nucleus,

_____

ii. Mitochondrion,

_____

iii. Cell membrane.

_____

c) Outline **three structural differences** between a plant cell and an animal cell. (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

d) During a General Science lesson, learners discussed the levels of organization in a multicellular organism.

Match each level of organization in Column A with the correct example in Column B. (5 marks)

	Column A:	**Column B:**
i.	Organelle	**Heart**
ii.	Cell	**Digestive system**
iii.	Tissue	**Mitochondrion**
iv.	Organ	**Muscle tissue**
v.	Organ system	**Red blood cell**

4. A student eats a meal consisting of **ugali, beans, sukuma wiki, and milk**.

a) Identify **two nutrients** found in this meal. (2 marks)

i. _____

ii. _____

b) Describe how **carbohydrates** are digested in the: (2 marks)

i. mouth,

_____

_____

_____

ii. Small intestine.

_____

_____

_____

c) State **three adaptations** of the small intestine that make it efficient for digestion and absorption. (6 marks)

i. _____

ii. _____

iii. _____

d) Explain why proper digestion is essential for good health. (3 marks)

i. _____

ii. _____

iii. _____

5. During a dry season, farmers notice that some plants wilt faster than others.

a) Name the **two main transport tissues** in plants and state the substance each transports. (4 marks)

i. _____

ii. _____

b) Explain **three importance of transpiration** to a flowering plant. (6 marks)

i. _____

ii. _____

iii. _____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

GENERAL SCIENCE (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

ROW / ITEM	1a(i)	1a(ii)	1a(iii)	1b	1c	1d
Question / Area	Benedict's nutrient	Iodine nutrient	Biuret nutrient	Procedure (Benedict's test)	Results table	Importance of food tests
Marks	1	1	1	4	4	4
Learner's Score						
Performance Level						

SECTION B: PRACTICAL (30 MARKS)

TASK 1: FOOD TESTS PRACTICAL – NUTRITION IN ANIMALS (15 MARKS)

You are provided with the following:

Apparatus and materials

i. Test tubes
ii. Test tube rack
iii. Dropper
iv. Benedict's solution
v. Iodine solution
vi. Biuret solution
vii. Hot water bath
viii. Food samples labelled A and B

a) State the **nutrient tested** using:

i) Benedict's solution _____(1 mark)

ii) Iodine solution _____(1 mark)

iii) Biuret solution_____ (1 mark)

b) Describe the **procedure** for testing reducing sugars using Benedict's solution. (4 marks)

_____

_____

_____

_____

_____

_____

c) Complete the table below: (4 marks)

Test reagent	Observation	Nutrient present
odine		
iuret		

d) Explain why food tests are important in understanding human nutrition. (4 marks)

i. _____

ii. _____

TASK 2: TRANSPIRATION EXPERIMENT (10 MARKS)

Apparatus

i. Potted plant
ii. Polythene bag
iii. Thread
iv. Balance
v. Vaseline

a) Describe how you would set up an experiment to show that **leaves lose water through transpiration**. (5 marks)

i. _____
ii. _____
iii. _____
iv. _____
v. _____

b) State **two environmental factors** that affect transpiration and explain how each factor influences the rate of transpiration. (5 marks)

_____
_____
_____
_____

TASK 3: CELL ORGANISATION PROJECT (5 MARKS)

Learners are asked to make a **model of a plant or animal cell** using locally available materials.

Assess the project based on the following criteria:

Criteria	Marks
Correct identification of cell type	1
Accurate representation of cell parts	2
Proper labelling	1
Creativity and neatness	1
Total	**5**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

HOME SCIENCE (Theory)

Time: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *Do* ***not*** *write in the margin.*
- ***f)*** ***Check your work*** *before submitting the exam.*
- ***g)*** *Manage your time well to complete all questions.*

Performance Levels Grid

No.	Q1a(i)	Q1a(ii)	Q1b(i)	Q2a(i)	Q2b	Q3a(i)	Q3a(ii)	Q3b(i)	Q3b(ii)A	Q3b(ii)B	Q3b(ii)C	Q3b(iii)	Q3b(iv)Plastic	Q3b(iv)Ceramic	Q4a(i)	Q4a(ii)	Q4b(i)	Q4b(ii)	Q4b(iii)	Q5a(i)	Q5a(ii)	Q5b(i)	Q5b(ii)
Marks																							
Learner's Score																							
Performance Level																							

Section	Max Marks	Learner Score
A	60	
B	40	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

SECTION A: (60 Marks)

Answer all questions in this section.

1. During a school **Career and Health Awareness Day**, learners discuss the importance of foods and nutrition in everyday life.

a) i) Define **nutrition** as an area of study in Home Science. (2 marks)

_____

_____

ii) State **two reasons** why foods and nutrition are important in day-to-day life. (2 marks)

_____

_____

b)

i) Explain **three importance of studying foods and nutrition** in promoting healthy families and communities. (6 marks)

_____

_____

_____

_____

_____

_____

2. A Home Science teacher invites a nutritionist to talk to learners about career opportunities.

a) i) Identify **three careers** related to foods and nutrition. (3 marks)

_____.

_____.

_____.

b) Choose **one career** identified above and explain **two roles** performed by professionals in that career. (2 marks)

_____

_____

_____

3. A family is building a new house and wants to design a safe and efficient kitchen.

a) i) Name **three types of kitchen layouts** used in homes. (3 marks)

_____.

_____.

_____.

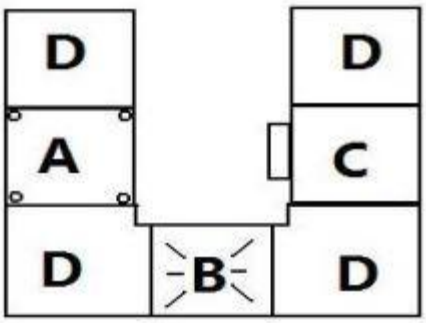
ii) State **two factors** considered when choosing a kitchen layout. (2 marks)

_____

_____

b)

i) identify the kitchen layout below. (1 mark)



_____.

ii. Identify the sections labelled AB and C. (3 marks)

A: _____.

B: _____.

C: _____.

ii) State the advantages of the kitchen layout in (i) above. (2 marks)

_____

_____

_____

_____

iii) Identify the following kitchen equipment. (1 mark)



_____

iv) Explain **five ways of caring for kitchen tools and equipment** according to their materials. (4 marks)

Plastic tools

_____

_____

Ceramic tools

_____

_____

4. A family falls sick after eating food that had been poorly stored.

a) i) What is meant by **food hygiene**? (2 marks)

_____

_____

ii) State **two causes** of food spoilage. (2 marks)

_____

_____

b) i) Differentiate between **food spoilage** and **food poisoning**. (4 marks)

_____

_____

_____

_____

ii) Identify **four symptoms of food poisoning**. (4 marks)

_____

_____

_____

_____

iii) Outline **three hygiene and safety practices** that should be observed when handling food. (6 marks)

_____

_____

_____

5. Learners prepare meals using different cooking methods during a practical lesson.

a) i) State **two reasons** for cooking food. (2 marks)

_____

_____

ii) Classify the following as **moist heat** or **dry heat** methods :(Put a tick ✓ where appropriate) (4 marks)

	Moist heat	**Dry heat**
Boiling		
Baking		
Steaming		
Grilling		

b)

i) Describe **three moist heat methods of cooking**, explaining how each is carried out. (6 marks)

_____

_____

_____

_____

_____

_____

ii) Explain **three safety precautions** to observe when cooking food. (3 marks)

_____

_____

_____

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

HOME SCIENCE (Practical)

Time: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	Task 1a	Task 1b	Task 1c	Task 1d	Task 1e	Task 2a	Task 2b	Task 2c	Task 2d
Question / Sub-question	List ingredients used	State method of cooking for each food	Describe procedure followed during preparation & cooking	Observe hygiene & safety practics	Assess appearance, taste & presentation	Identify citizenship issue	Explain importance of issue	escribe 3 actions citizens can take	Assess creativity neatness & presentation
Marks	3	4	8	6	4	3	4	5	3
Learner's Score									
Performance Level									

SECTION B: PRACTICAL and PROJECT (40 MARKS)

Task 1: PRACTICAL COOKERY – METHODS OF COOKING (25 MARKS)

You are required to prepare a **simple nutritious meal** using **ONE moist heat method** and **ONE dry heat method**.

TOOLS AND APPARATUS

i. Cooker or stove
ii. Saucepan / frying pan
iii. Knife
iv. Chopping board
v. Mixing bowl
vi. Spoon / ladle
vii. Plate
viii. Cleaning materials (soap, water, cloth)

TASK REQUIREMENTS

a) List the **ingredients** used. (3 marks)

b) State the **method of cooking** used for each food prepared. (4 marks)

c) Describe the **procedure** followed during preparation and cooking. (8 marks)

d) Observe **hygiene and safety practices** during preparation and cooking. (6 marks)

e) Assess the **appearance, taste and presentation** of the food. (4 marks)

Total: 25 marks

Task 2:– PROJECT:FOOD HYGIENE AND RESPONSIBILITY (15 MARKS)

Learners are required to carry out the **project** focusing on **responsible food handling and healthy living**.

PROJECT TASK

Design and present a project on **ONE** of the following themes:

i. Promoting food hygiene and safety in the community
ii. Responsible use of kitchen equipment
iii. Reducing food wastage at home and school
iv. Healthy eating habits for good citizenship

TOOLS AND MATERIALS

i. Manila papers / chart papers
ii. Markers or pens
iii. Notebook for field notes
iv. Digital device or phone (optional)
v. Camera (optional)

GUIDING QUESTIONS

a) Identify the **citizenship issue** addressed in your project. (3 marks)

b) Explain **why the issue is important** to families and the community. (4 marks)

c) Describe **three actions** citizens can take to address the issue. (5 marks)

d) Assess **creativity, neatness and presentation** of the project. (3 marks)

ASSESSMENT RUBRIC

Criteria	Marks
Relevance to citizenship	5
Accuracy of content	5
Practical application	3
Creativity and presentation	2
Total	**15**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

COMPUTER STUDIES (Theory)

Time: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

a) Write your name, assessment number, class and date on all the answer sheets provided.

b) Answer all the questions in the spaces provided.

c) Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.

SCORE GRID

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	100	

Performance Levels Grid

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: Theory (70 Marks)

Answer all questions in this section.

1. A learner in Elimu Bora Senior School researching the history of computers finds information about ancient and medieval computing devices.

a) Identify **four early computing devices** and state **one function** of each. (8 marks)

	Early computing device	Function
i.		
ii.		
iii.		
iv.		

b) Explain **one reason** why early computing devices led to the development of electronic computers. (1 mark)

_____

_____

C) What is a computer? (1 mark)

_____

_____

2. During a class discussion, learners matched computer generations with their defining technologies.

a) State the **principal technology** used in each of the following computer generations: (5 marks)

i) First generation: _____.

ii) Second generation: _____.

iii) Third generation: _____.

iv) Fourth generation: _____.

v) Fifth generation: _____.

b) Describe **three technological advancements** that improved computers across generations. (3 marks)

_____

_____

_____

_____

_____

_____

_____

c) State **two ways** computer development has impacted modern society. (2 marks)

i) _____.

ii) _____.

iii) _____.

3. A museum displays computers from different generations.

a) Compare **first and fifth generations of computers** based on: (8 marks)

i) Size

ii) Speed

iii) Reliability

iv) Power consumption

	First generation computers	*Fifth generation computers*
Size		
Speed		
Reliability		
Power consumption		

b) State **two reasons** why fifth generation computers are considered intelligent. (2 marks)

i) _____.

ii) _____.

4. A teacher demonstrates the **von Neumann computer architecture** using a chart.

a) Identify **five functional components** of a von Neumann computer. (5 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

v) _____.

b) Describe the **relationship between the CPU, memory and input/output units**. (3 marks)

_____

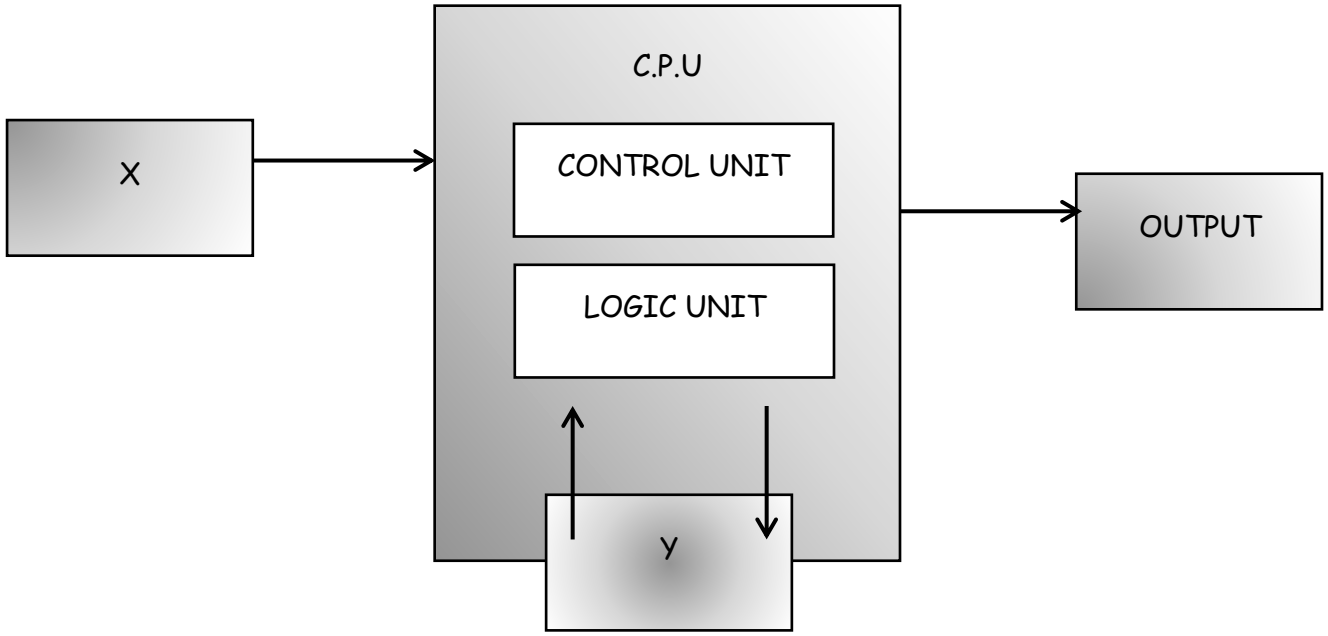
_____

_____

_____

_____

c) Fill the blank components appropriately: (2 marks)



X: _____. Y: _____.

d) State **two importance** of computer architecture in computing. (2 marks)

i) _____.

ii) _____.

5. Learners watch a video showing how instructions are processed in a computer.

a) Define the **fetch–execute cycle**. (2 marks)

_____

_____

b) Describe **four stages** of the fetch–execute cycle. (8 marks)

_____

_____

_____

_____

_____

_____

_____

_____

6. A system developer compares two processor designs.

a) Define: (4 marks)

i) RISC architecture

_____

_____

ii) CISC architecture

_____

_____

b) State **three differences** between RISC and CISC architectures. (6 marks)

_____

_____

_____

_____

_____

_____

7. A computer stores data using different number systems.

a) Convert the following: (8 marks)

i) 25_{10} to binary

ii) 101101_2 to decimal

iii) 72_8 to decimal

iv) $2F_{16}$ to decimal

b) State **two reasons** why computers use binary number system. (2 marks)

i) _____.

ii) _____.

8. **Isaboke** Senior School plans to equip a computer laboratory.

a) Classify the following as **input devices** and state their category: (5 marks)

i. Keyboard: _____.

ii. Mouse: _____.

iii. Scanner: _____.

iv. Monitor: _____.

v. Touch pad: _____.

b) Explain **three criteria** used when selecting input devices. (3 marks)

i) _____.

ii) _____.

iii) _____.

c) State **two advantages** of touch screen technology. (2 marks)

i) _____.

ii) _____.

9. A media company uses various output devices.

a) Identify **four output devices** and state **one use** of each. (8 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

b) State **two differences** between soft copy and hard copy output. (2 marks)

i) _____.

ii) _____.

10. A learner saves class notes using different storage devices.

a) Differentiate between:

i) Primary storage and secondary storage

_____

_____

_____

ii) RAM and ROM (4 marks)

_____

_____

_____

b) Identify **four secondary storage devices** and classify them as internal or external. (4 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

c) State **two safety precautions** when handling storage media. (2 marks)

i) _____.

ii) _____.

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

COMPUTER STUDIES (Practical)

Time: 2 HOURS

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

SCORE GRID

tem No.	Question / Task & Marks	Max Marks	earner's Score	erformance Level
1	Task 1(a): Identify input & output devices	5		
1.1	Task 1(a)(i): Input device 1	1		
1.2	Task 1(a)(ii): Input device 2	1		
1.3	Task 1(a)(iii): Input device 3	1		
1.4	Task 1(a): Output device 1	1		
1.5	Task 1(a): Output device 2	1		
2	Task 1(b)(i): Scan a document	2		
3	Task 1(b)(ii): Save document to USB	2		
4	ask 1(b)(iii): Retrieve saved document	2		
5	Task 1(c): Print two copies and file	2		
6	Task 1(d)(i): Safety practice 1	2		
7	Task 1(d)(ii): Safety practice 2	2		
—	**TASK 1 TOTAL**	**15**		
8	Task 2(i): Accuracy of content	6		
9	Task 2(ii): Creativity & organisation	4		
10	Task 2(iii): Application of ICT skills	3		
11	Task 2(iv): Presentation & communication	2		
—	**TASK 2 TOTAL**	**15**		
—	**SECTION B GRAND TOTAL**	**30**		

SECTION B: PRACTICAL / PROJECT (30 Marks)

Answer all questions in this section.

TASK 1: PRACTICAL (15 MARKS)

Learners visit a computer user environment.

a) Identify **three input devices and two output devices** observed. (5 marks)

	Input devices	Output devices
i.		
ii.		
iii.		

b) Demonstrate how to:

i) Scan a document. (2 marks)

ii) Save it to a USB flash disk. (2 marks)

iii) Retrieve the saved document (2 marks)

c) Print (**DO NOT PHOTOCOPY**) two copies of the scanned document and file it in your computer portfolio. (2 marks)

d) State **two safety practices** observed during the activity. (4 marks)

i) _____.

ii) _____.

TASK 2: PROJECT COMPUTER ARCHITECTURE OR DIGITAL TECHNOLOGY15 MK

Choose ONE project:

Option A: Model of Computer Architecture. (15 marks)

i. Create a **model of a von Neumann computer architecture** using locally available materials.
ii. Label all functional components clearly.

OR

Option B: QR Code Project. (15 marks)

i. Create a **QR code** containing information on computer generations or storage devices.
ii. Share and explain the content to peers.

Assessment Criteria (15 marks):

i. Accuracy of content – 6 marks
ii. Creativity and organisation – 4 marks
iii. Application of ICT skills – 3 marks
iv. Presentation and communication – 2 marks

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

GEOGRAPHY (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***f)*** *Manage your time well to complete all questions.*

Performance Levels Grid

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Marks	2	2	6	2	2	2	4	4	4	2	2	1	1	2	4	6	6	3	2	2	6	3	2	2	2	3	3
Learner's Score																											
Performance Level																											

Section	Max Marks	Learner Score
A	80	
B	20	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: THEORY (80 Marks)

Answer all questions in this section.

1. A school is organizing a **Career and Sustainable Development Day**. Learners are asked to explain how Geography contributes to sustainable development and career choices.

a) Define **Geography** as a discipline. (2 marks)

_____

_____

b) State **two main branches of Geography**. (2 marks)

i. _____

ii. _____

c)Describe **three importance of studying Geography** in promoting sustainable development. (6 marks)

i. _____

ii. _____

iii. _____

d) Explain **the relationship between Geography and the following disciplines**. (6 marks)

i) Geography and Chemistry

_____

_____

_____

ii) Geography and Computer studies

_____

_____

_____

iii) Geography and Mathematics

_____

_____

_____

e) A learner argues that *"Geography is only about maps."*

Using relevant examples, **justify why this statement is misleading**. (4 marks)

_____

_____

_____

_____

_____

_____

2. During a class discussion, a resource person explains that Geography offers diverse career opportunities.

a) Identify **four careers** related to Geography. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

b) Choose **one career** you have identified and explain **two factors** you would consider before choosing it. (4 marks)

_____

_____

_____

_____

_____

_____

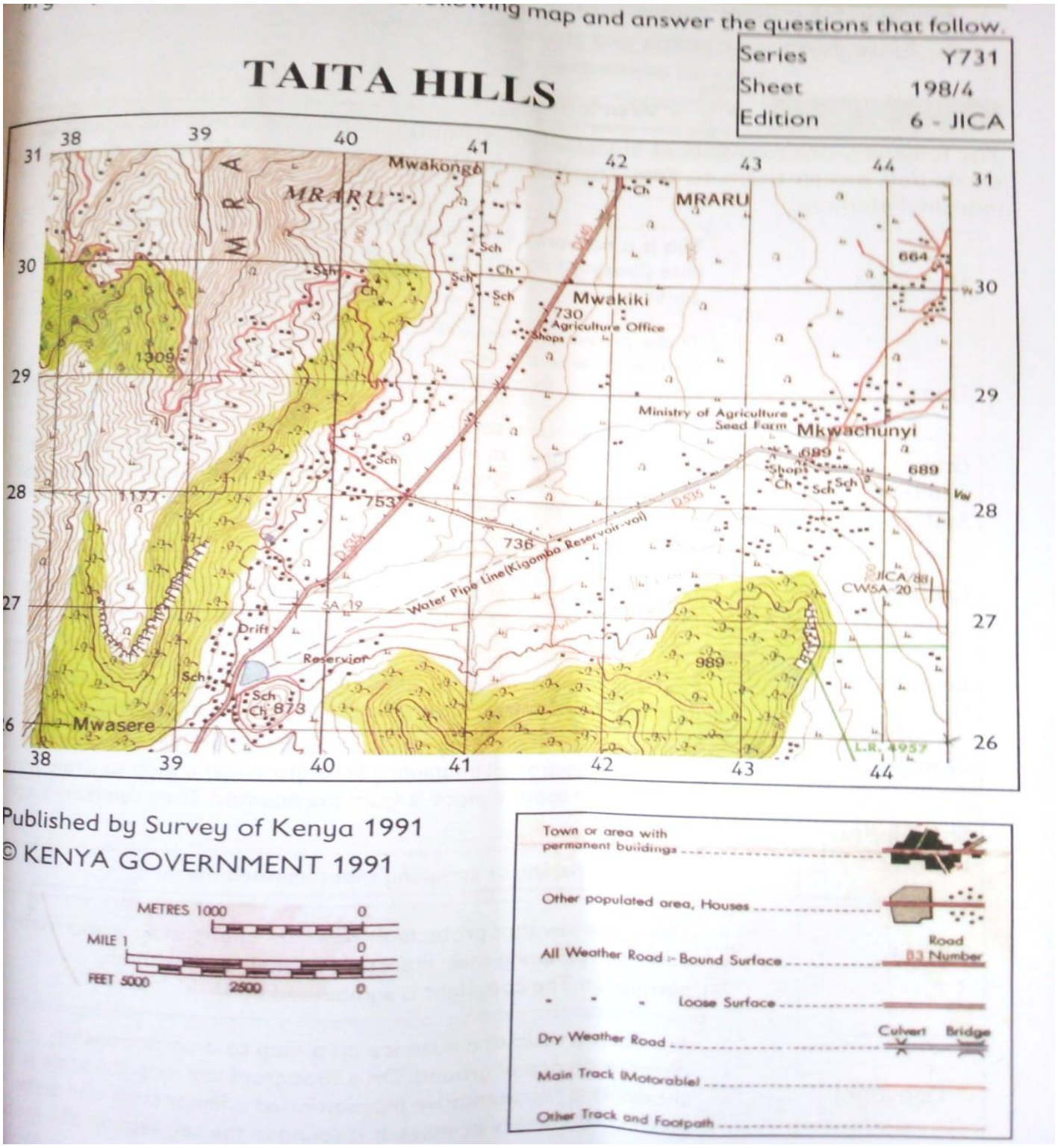
c) Explain **two ways Geography skills are useful in day-to-day life**. (2 marks)

i. _____

ii. _____

3. You are provided with a **topographical map extract** of Taita Hills.

Study the map of Taita Hills below and answer the questions that follow.



a) Identify two different methods used to represent relief on this map. (2marks)

i. _____

ii. _____

b) Using the provided scale, convert the Representative Fraction (R.F.) scale of 1:50,000 into a statement scale in kilometres. (1mark)

_____

_____

c) What type of settlement pattern is described in **Taita Hills** Area? (1mark)

_____

d) Describe the **relief** of the area covered by the map. (2 marks)

_____

_____

e) Identify four marginal information found in the map given.(4 marks)

_____

_____

f) Explain **three ways vegetation has been represented** on the topographical map. (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

g) Using evidence from relief, drainage and vegetation, explain **three economic activities** that can be carried out in the mapped area. (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

h) State **one importance of map reading skills** in national development. (3 marks)

_____

_____

_____

_____

4. A Geography student collected data on **daily rainfall amounts** recorded in a nearby town over one week.

a) i) Define **statistics** as used in Geography. (2 marks)

_____

_____

ii) State **two methods of data collection** used in geographical studies. (2 marks)

_____

_____

b) i) Explain **three importance of statistics** in Geography. (6 marks)

_____

_____

_____

_____

_____

_____

_____

ii) Identify **three limitations of statistics** in explaining geographical facts. (3 marks)

i. _____

ii. _____

iii. _____

c) Explain why accurate data analysis is important when making geographical decisions. (2 marks)

i. _____

ii. _____

5. A county government uses digital maps to plan road construction and locate health facilities.

a) Define the following geospatial technologies:

i) Geographic Information Systems (GIS) (2 marks)

_____

_____

ii) Global Positioning System (GPS) (2 marks)

_____

_____

b) Describe **three components of GIS**. (3 marks)

i. _____

ii. _____

iii. _____

c) Explain **three importance of GIS** in geographical studies and day-to-day life. (3 marks)

i. _____

ii. _____

iii. _____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

GEOGRAPHY (Project)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	6a	6b	6c	7a	7b	8 (GIS / Career Project)
Question / Sub-question	Draw sketch section A–B	Describe relief using sketch	Uses of sketch sections (2)	Draw combined bar & line graph	Interpret graph (2 conclusions)	GIS/Career project: Relevance, Accuracy, Neatness, Creativity
Marks	5	3	2	3	2	5
Learner's Score						
Performance Level						

SECTION B: PRACTICAL / PROJECT (20 MARKS)

QUESTION 6: MAP WORK PRACTICAL (10 MARKS)

You are provided with the following:

Tools and Apparatus

i. Topographical map extract. (teacher to provide one available in school)

ii. Pencil

iii. Ruler

iv. Eraser

v. Graph paper

a) Draw a **sketch section** across the map between points A and B. **(5 marks)**

b) Using the sketch section, describe the **relief of the area**. (3 marks)

i. _____

ii. _____

iii. _____

c) State **two uses of sketch sections** in Geography. (2 marks)

i. _____

ii. _____

QUESTION 7: STATISTICAL DATA PRESENTATION (5 MARKS)

You are provided with rainfall data collected within the school environment.

Tools and Materials

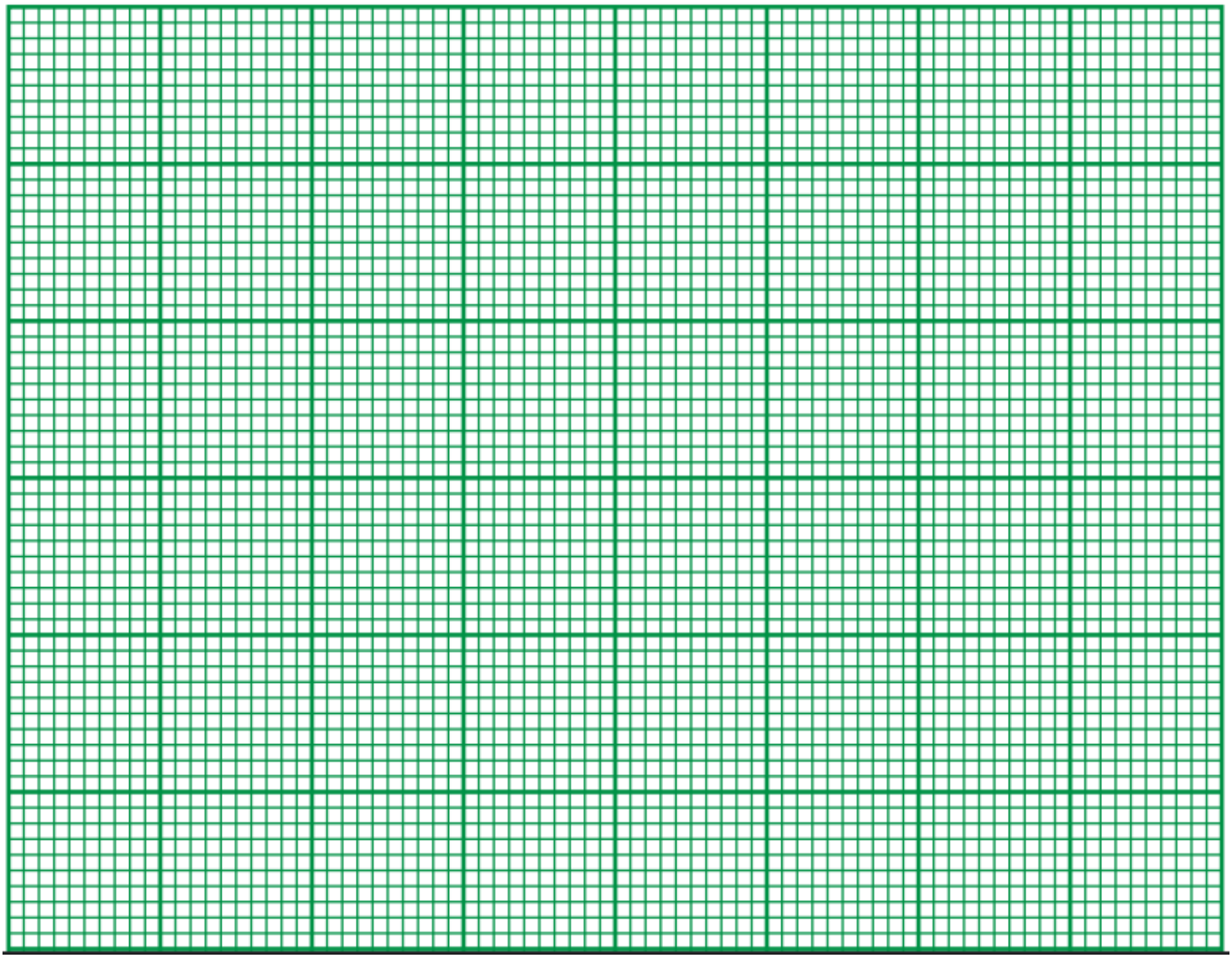
i. Graph paper

ii. Pencil

iii. Ruler

iv. Calculator

a) Draw a **combined bar and line graph** to represent the given data. (3 marks)



b) Interpret the graph by stating **two conclusions** drawn from it. (2 marks)

i. _____

ii. _____

QUESTION 8: GIS / CAREER PROJECT (5 MARKS)

Learners are required to conduct a **mini GIS-based or career-related Geography project**.

Project task (choose ONE):

i. Use a digital device (authorized by the school/teacher) or digital map to **locate and record coordinates of three key features** in your locality, OR

ii. Create a **poster showing careers related to Geography** and their roles in society.

Assessment Criteria

Criteria	Marks
Relevance to Geography	1
Accuracy of information	2
Neatness and presentation	1
Creativity / originality	1
Total	**5**

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KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

ICT (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *The exam has two sections SECTION A and SECTION B*
- ***c)*** ***SECTION A (40 marks)****: Answer all questions.*
- ***d)*** ***SECTION B (60 marks)****: Answer any six questions.*
- ***e)*** ***Read each question carefully*** *before writing your answer.*
- ***f)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***g)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***h)*** *Do* ***not*** *write in the margin.*
- ***i)*** ***Check your work*** *before submitting the exam.*
- ***j)*** *Manage your time well to complete all questions.*

PERFORMANCE LEVELS AND SCORE GRID

ROW / QN	1a(i)	a(ii)	a(iii)	b	c	d	a	b	c	a	b	c	a(i)	a(ii)	b(i)	b(ii)	b(iii)	b(iv)	b(v)	OTAL
NUMBER	1	2	3	4	5	6	7	8	9	0	1	2	13	14	15	16	17	18	19	
QUESTION MARKS	1	1	1	2	5	5	2	2	6	4	6	5	2	4	5	2	2	2	3	**60**
LEARNER'S SCORE																				
ERFORMANCE LEVEL																				

Section	Max Marks	Learner Score
	0	
	0	
OTAL	00	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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ICT: Theory (80 Marks)

Answer all questions in this section.

1. The village of **Tumaini** has been experiencing slow communication between the local clinic and the main referral hospital. This has caused delays in patient care. To solve this problem, the local council has decided to invest in **Information and Communication Technology (ICT) infrastructure**.

a) Define the following terms as used in ICT: (4 marks)

i. **Information:**

_____

_____

_____

ii. **Technology:**

_____

_____

_____

b) In the table below, identify FOUR ICT devices that could be used in Tumaini village. For each device, state its function, one advantage, and one disadvantage. (8 marks)

ICT Device	Function	One Advantage	One Disadvantage
xample: Smartphone	*ommunication*	*ortable*	*xpensive data*

c) Explain THREE ways ICT can be used to solve community problems like the one faced in Tumaini village. (6 marks)

i._____

_____.

ii._____

_____.

iii._____

_____.

2. The picture below *shows a learner using a computer with an incorrect sitting posture.*



a) Identify THREE physical strains or challenges the user may experience due to poor sitting posture. (3 marks)

i. _____
_____.

ii. _____
_____.

iii. _____
_____.

b) List FOUR components that make up the ICT infrastructure of a modern organization. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____
_____.

3. You have been employed as a **Computer Lab Assistant** in your school. On your first day, you notice that files are poorly organized, folders are missing, and there are no security controls on the computers.

a) Define an Operating System (OS). (2 marks)

_____
_____

_____
_____

b) Identify the Operating System or interface described below: (4 marks)

i. GUI used on iPhones: _____

ii. Open-source operating system commonly used on servers: _____

iii. Most common operating system for desktop computers: _____

iv. Interface where users type text commands: _____

c) Write the following abbreviations in full: (3 marks)

i. CPU: _____

ii. GUI: _____

iii. OS: _____

d) Outline FOUR steps used to create a new folder named "ICT_Project" on the desktop. (4 marks)

i. _____

_____.

ii. _____

_____.

iii. _____

_____.

iv. _____

_____.

e) Explain TWO security control measures that can be applied to files using an Operating System to prevent unauthorized access. (4 marks)

i. _____

_____.

ii. _____

_____.

f) List FOUR basic Operating System manipulations used to customize a computer interface. (8 marks)

i. _____

ii. _____

iii. _____

iv. _____

4. You are required to prepare a **formal report** for your school's **Green Environment Club**. The report must be well formatted, include images, and be easy to read and navigate.

a) Name THREE word processing applications you can use to prepare the report. (3 marks)

i._____

ii._____

iii._____

b) Explain the importance of the cursor in a word processor. (2 marks)

i._____

_____.

ii._____

_____.

c) Match the following word processing icons with their functions: (5 marks)

- **[B]** : _____
- **[Diskette Icon]** : _____
- **[Centered Lines Icon]** : _____

5. a) Describe FOUR steps followed when saving a document for the first time. (4 marks)

i._____

_____.

ii._____

_____.

iii._____

_____.

iv._____

_____.

b) Name THREE editing tools in a word processor that helps correct spelling and grammar errors. (3 marks)

i._____

ii._____

iii._____

c) Explain the meaning of the following terms: (4 marks)

i. **Character Formatting:**

_____

_____

_____

ii. **Page Layout:**

_____

_____

_____

6. a) Describe FOUR steps used to insert an automatic Table of Contents in a word processor. (4 marks)

i._____

_____.

ii._____

_____.

iii._____

_____.

iv._____

_____.

b) Briefly explain the purpose of the following advanced word processing features: (5 marks)

i. **Mail Merge:**

_____

_____

ii. **Track Changes:**

_____

_____

iii. **Hyperlink:**

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

I.C.T (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

NO.	a	b	c	d	e	f	g	h	i	j
uestion / Task	reate main folde r	reate sub-folder s	reate Word docume nt	love file to Note s folde r	raw comput er in Word	ave in Assignme nts folder	reate Exce l table	ave Excel file in Projec ts folder	pply securit y contro ls	ransfer folder to removab le device
larks										
earner's Score										
erforman ce Level										

SECTION B: PRACTICAL AND PROJECT (40 MARKS)

Task 1: PRACTICAL – FILE AND FOLDER MANAGEMENT (25 MARKS)

You are required to demonstrate **basic operating system operations** on a computer.

TOOLS AND APPARATUS

i. Desktop or laptop computer
ii. Installed operating system (Windows / Linux / macOS)
iii. Mouse
iv. Keyboard
v. Power supply

TASKS

a) Create a folder named **"Grade10 ICT 2026"** on the desktop. (3 marks)

b) Inside the folder, create **three sub-folders** named: (3 marks)

i. Notes
ii. Assignments
iii. Projects

c) Create a Microsoft word document and write uses of icd devices in school. Save the file as USES OF ICT IN SCHOOL. (2 marks)

d) Move file into the 'notes folder'. (4 marks)

e) draw a computer in Ms Word and save it as computer assignment. (3 marks)

f) save it in the assignment folder. (1 mark)

g) open Ms Excel and write a table with the following information. (2 marks)

ASSESSMENT NUMBER	FIRST NAME	SECOND NAME	GRADE
A000567345	OSCAR	MACHARIA	1O EAST
B057667384	IDRIS	KANCHUEL	10 WEST
B0000467663	MODRICK	ARASELI	10 NORTH
A354678854	PATEL	VAYUNA	10 SOUTH

h) Save it as grade 10 learners. Save it in the project folder. (2 marks)

i) Apply **two security control measures** (password, permissions, backup) to the files created . (2 marks)

j) Transfer the entire folder from the desktop to the removable storage device. (3 marks)

Total: 25 marks

Task 2: PROJECT – APPLICATION OF ICT IN SOCIETY (15 MARKS)

Learners are required to complete a **project on ICT use in solving community problems**.

PROJECT TASK

Choose **ONE** of the following:

i. Use of ICT in school administration
ii. Use of ICT in healthcare services
iii. Use of ICT in business or supermarkets
iv. Use of ICT in communication and media

TOOLS AND MATERIALS

i. Notebook
ii. Chart paper / manila paper
iii. Pens / markers
iv. Digital device (phone or computer)
v. Internet or print resources (if available)

GUIDING QUESTIONS

a) Identify the **application area of ICT** selected. (3 marks)

b) Describe **three ways ICT is used** in the selected area. (6 marks)

c) Explain **two benefits** of ICT in that area. (4 marks)

d) Assess **presentation, creativity and organisation** of the project. (2 marks)

ASSESSMENT RUBRIC

Criteria	Marks
Relevance of content	5
Accuracy and understanding	5
Practical application	3
Presentation and creativity	2
Total	**15**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

PHYSICAL EDUCATION (Theory)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……

INSTRUCTIONS TO LEARNERS

a) *Write your name, School, assessment number, signature and date on all the answer sheets provided.*

b) *Answer all the questions in the spaces provided.*

c) ***Read each question carefully*** *before writing your answer.*

Performance Levels Grid

No.	1a	1b	1c	1d	1e	2	3	4	5	6	7	8	9	10a	10b	11a	11b	12a	12b	13a	13b	Total
Max Marks	2	2	2	2	2	2	1	2	2	2	2	5	5	4	6	6	4	2	4	6	3	**70**
Learner's Score																						
Performance Level																						

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

KCPE CBE SE

SECTION A: THEORY (70 Marks)

Answer all questions in this section.

1. During a Grade 10 inter-class Football tournament, learners were involved in setting up the field, practising skills, and playing mini-games.

a. Identify **two facilities** required for playing a standard Football match. (2 marks)

i. _____.

ii. _____.

b. State **two pieces of equipment** used by a goalkeeper during a Football game. (2 marks)

i. _____.

ii. _____.

c. Define a **lofted pass** as used in Football. (2 marks)

_____

_____

d. Name **two basic safety rules** observed during a Football game. (2 marks)

i. _____.

ii. _____.

e. List **two roles** of a goalkeeper in a Football match. (2 marks)

i. _____.

ii. _____.

2. Explain why **proper stance** is important when executing a lofted pass. (2 marks)

i. _____.

ii. _____.

3. Identify the defense technique used in a game of football below



_____

4. State **two techniques** used by a defender when marking an opponent. (2 marks)

i. _____.

ii. _____.

5. Explain how **dodging** helps an attacker avoid defenders during a game. (2 marks)

i. _____.

ii. _____.

6. Give **two reasons** why proper marking of a Football field is important before play. (2 marks)

i. _____.

ii. _____.

7. Describe **two benefits** learners gain from playing Football for enjoyment. (2 marks)

i. _____.

ii. _____.

8. A player repeatedly fails to complete accurate lofted passes during a match.

Analyse **three possible mistakes** the player could be making and suggest **appropriate corrections**. (5 marks)

i. _____.

ii. _____.

iii. _____.

9. During a mini Football game, defenders are easily beaten by attackers.

Evaluate the **marking and dodging techniques** and suggest **three improvements** defenders should apply. (5 marks)

i. _____.

ii. _____.

iii. _____.

10. During a Physical Education lesson, learners observed a live Football match.

a) Name **four facilities** used in Football and their importance. (4 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

b) Explain the **three stages** of executing a lofted pass: (6 marks)

i. Stance

_____

_____

ii. Contact

_____

_____

iii. Follow-through

_____

_____

11. Marking and dodging are key skills in Football.

a) Describe **three marking techniques** used in defending. (6 marks)

i. _____.

ii. _____.

iii. _____.

b) Explain **two dodging strategies** attackers use to beat defenders. (4 marks)

i. _____.

ii. _____.

12. Goalkeeping requires alertness and technical skills.

a) Explain **four goalkeeping techniques** used during a match. (8 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

b) State **two safety precautions** a goalkeeper should observe. (2 marks)

i. _____.

ii. _____.

13. Football promotes physical, social, and emotional development.

a) Explain **four physical benefits** of playing Football. (4 marks)

i. _____.

ii. _____.

iii. _____.

iv. _____.

b) Discuss **three social values** developed through Football participation. (6 marks)

i. _____.

ii. _____.

iii. _____.

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

PHYSICAL EDUCATION (Practical)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	Task 1a: Identify FOUR facilities	Task 1b: Identify THREE equipment & state use	Task 2: Lofted pass – correct stance	Task 2: Lofted pass – proper foot contact	Task 2: Lofted pass – follow-through & accuracy	Task 3: Marking technique	Task 3: Dodging movements	Task 3: Goalkeeping skills
Marks	4	6	3	3	4	3	3	4
Learner's Score								
erformanc e Level								

SECTION B: PRACTICAL SECTION (30 MARKS)

ALL tasks are compulsory.

TASK 1: IDENTIFICATION OF FACILITY AND EQUIPMENT (10 MARKS)

Tools / Apparatus

A. Football

B. Cones or improvised markers

C. Goal posts or improvised goals

D. Whistle

E. Bibs / Reflectors

F. Measuring tape

Activity

Learners are taken to a Football field or shown charts/videos.

Assessment Criteria

a) Correctly identify **four Football facilities**. (4 marks)

b) Identify **three items of Football equipment** and state their use. (6 marks)

TASK 2: SKILL PERFORMANCE – LOFTED PASS (10 MARKS)

Tools / Apparatus

i. Football

ii. Cones

iii. Marked playing area

Activity

Learner performs a lofted pass to a teammate over a short distance.

Assessment Criteria

- ✓ Correct stance (3 marks)
- ✓ Proper foot contact with the ball (3 marks)
- ✓ Correct follow-through and accuracy (4 marks)

TASK 3: SKILL PERFORMANCE – MARKING, DODGING & GOALKEEPING (10 MARKS)

Tools / Apparatus

i. Football
ii. Goal post
iii. Cones
iv. Bibs

Activity

Learners participate in a mini Football game demonstrating defensive and offensive skills.

Assessment Criteria

a) Effective marking technique (3 marks)

b) Correct dodging movements (feinting, acceleration, turning) (3 marks)

c) Goalkeeping skills (positioning, catching, diving, punching) (4 marks)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

COMMUNITY SERVICE LEARNING

Time: 2 Hours

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all questions in Section A and any 4 questions from Section B.*
- ***c)*** *Write your answers clearly and provide examples where necessary.*
- ***d)*** *All questions are based on practical and theoretical aspects of Community Service Learning.*
- ***e)*** ***Read each question carefully*** *before writing your answer.*
- ***f)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***g)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***h)*** *Do* ***not*** *write in the margin.*

Performance Levels Grid

ITEM	1a(i)	1a(ii)	1b	1c	2a	2b	3a	3b	3c	4a	4b	4c	5a	5b	5c	5d	6a	6b	6c	7a	7b	7c	TOTAL
Marks	2	2	4	2	6	4	2	6	2	5	3	2	2	4	2	2	4	2	4				

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (70 Marks)

Answer all questions in this section.

1. A teacher explains to learners that CSL is different from ordinary community service.

a) Define the following terms:

i) Community (2 marks)

_____

_____

ii) Community Service Learning (CSL) (2 marks)

_____

_____

b) State **two differences** between **Community Service** and **Community Service Learning**. (4 mks)

_____

_____

_____

_____

c) State **two principles** of CSL as a learning strategy. (2 marks)

i. _____

ii. _____

2. During a school assembly, learners are encouraged to take part in CSL activities.

a) Explain **three reasons** why CSL is important in the learning process. (6 marks)

_____

_____

_____

_____

_____

_____

_____

_____

b) State **two ways** CSL promotes **responsible citizenship** among learners. (4 marks)

i. _____

ii. _____

3. A Grade 10 learner participates in a clean-up exercise in the neighbourhood.

a) What is meant by **civic identity**? (2 marks)

_____

_____

b) Identify **three roles** a learner can play as a responsible member of the community. (6 marks)

i. _____

ii. _____

iii. _____

c) State **one benefit** of CSL to the community. (2 marks)

_____

_____

4. Learners visit a nearby community to identify needs that can be addressed through CSL.

a) List **five categories of community needs**. (5 marks)

i. _____

ii. _____

iii. _____

iv. _____

b) Give **one example** of a need under **any three** categories listed above. (3 marks)

	Need Category	*Need Example*
i.		
ii.		
iii.		

c) State **two reasons** why it is important to identify community needs before planning CSL activities. (2 marks)

_____

_____

_____

_____

5. A CSL group plans to plant trees in the local area.

a) Define the term **community resource**. (2 marks)

_____

_____

b) Identify **four community resources** that can support CSL activities. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

c) Name **two community stakeholders** who can partner with learners in CSL activities. (2 marks)

i. _____

ii. _____

d) State **two roles** community stakeholders play in CSL projects. (2 marks)

i. _____

ii. _____

6. Learners elect leaders to manage their CSL group activities.

a) Identify **four qualities** of an effective leader. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

b) Name **two leadership styles** suitable for CSL activities. (2 marks)

i. _____

ii. _____

c) Explain **two reasons** why effective leadership is important in executing CSL activities. (4 marks)

i. _____

ii. _____

7. A school organises an intercultural day involving learners from different backgrounds.

a) Define **intercultural competence**. (2 marks)

_____

_____

b) State **three elements** of intercultural competence. (3 marks)

i. _____

ii. _____

iii. _____

c) Identify **three negative intercultural issues** that may affect social cohesion. (3 marks)

i. _____

ii. _____

iii. _____

d) State **two ways** learners can promote social cohesion among people of different cultures. (2 marks)

i. _____

ii. _____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

COMMUNITY SERVICE LEARNING (Practical)

Time: 2 Hours

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……..

ITEM	TASK 1a	TASK 1b	TASK 1c	TASK 1d	TASK 2a	TASK 2b	TASK 2c	TOTAL
Marks	3	4	4	4	3	4	8	30
Learner's Score								
Performance Level								

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION B: PRACTICAL / PROJECT (30 MARKS)

TASK 1: COMMUNITY NEEDS AND RESOURCES SURVEY (15 MARKS)

Learners work in groups to study their local community.

a) Identify **one community need** observed in your area. (3 marks)

b) State **two possible CSL activities** that can help address the identified need. (4 marks)

c) Identify **two community resources** that can support the activity. (4 marks)

d) Name **two community stakeholders** who can assist and state **one role** of each. (4 marks)

TASK 2: LIFE SKILLS – SELF-AWARENESS IN THE COMMUNITY (15 MARKS)

A learner reflects on their public image in school and the community.

a) Define **public self-awareness**. (3 marks)

b) State **four factors** that influence public self-awareness. (4 marks)

c) Explain **four ways** learners can maintain a positive public image in the community. (8 marks)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

AVIATION TECHNOLOGY (Theory)

Time: 1½ Hours

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

a) *Write your name, assessment number, class and date on all the answer sheets provided.*

b) *Answer all the questions in the spaces provided.*

c) *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*

SCORE GRID

ITEM	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	TOTAL
Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	—
Question Marks	2	2	2	2	2	2	2	2	2	2	10	10	15	15	15	**70**
Learner's Score																
Performance Level																

Section	Max Marks	Learner Scor
A: THEORY	70	
B: PRACTICAL	30	
TOTAL	**100**	

Performance Levels

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: THEORY (70 Marks)

Answer all questions in this section.

1. During a lesson on the **history of aviation**, learners watched a documentary on early flying machines.

(a) Name the **first successful lighter-than-air aircraft** used by humans. (2 marks)

_____

_____

2. A chart in the classroom shows pictures of aviation pioneers.



Identify **TWO contributions of the Wright brothers** to aviation technology. (2 marks)

i. _____.

ii. _____.

3. While categorising aircraft, a learner grouped a helicopter separately from an aeroplane.

State **ONE reason** why helicopters are classified as **rotary-wing aircraft**. (2 marks)

_____

_____

4. During a workshop session, learners discussed personal safety.

Define the term **hazard** as used in the aviation workplace. (2 marks)

_____

_____

5. A technician accidentally touches a live wire while repairing airport lighting.

Name the **type of injury** likely to occur. (2 marks)

_____

6. In a first aid lesson, a learner identified bandages, gloves, and antiseptic.

State the **purpose of a first aid kit** in an aviation workplace. (2 marks)

i. _____

ii. _____

7. An airport sign shows a **red circle with a diagonal line** over a cigarette. The sign is shown below



Identify the **category of this safety sign**. (2 marks)

_____

8. While touring a local aerodrome, learners observed restricted movement near aircraft.

Name the **airport area** where aircraft take off and land. (2 marks)

_____

9. A learner inflated a balloon to demonstrate a flight principle.

Identify whether this represents **heavier-than-air** or **lighter-than-air** flight. (2 marks)

_____

_____

10. State **ONE career** related to safety at an airport. (2 marks)

_____

11. Learners constructed simple flying models during a practical lesson.

(a) Distinguish between **heavier-than-air** and **lighter-than-air aircraft**. (4 marks)

_____

_____

_____

_____

(b) Give **TWO examples** of each category of aircraft. (4 marks)

eavier-than-air aircraft	**ghter-than-air aircraft**

(c) State **ONE reason** why aircraft development is important to the aviation industry. (2 marks)

_____

_____

12. During maintenance training at an aviation workshop, a student sustained a cut on the hand.

(a) Classify the injury above according to **severity**. (2 marks)

_____

(b) Describe **THREE first aid procedures** for handling cuts in an aviation workplace. (6 marks)

_____

_____

_____

_____

_____

_____

(c) State **ONE reason** why safety rules must be followed in aviation workshops. (2 marks)

_____

_____

13. Aviation has evolved from simple flying objects to modern aircraft.

(a) Apart from the Wright brothers, describe the **contributions of THREE other aviation pioneers** to the development of aircraft. (9 marks)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(b) Explain **THREE milestones** in the evolution of aviation technology. (6 marks)

14. Accidents in aviation environments can be costly and fatal.

(a) Explain **FOUR general personal safety rules** observed in aviation workplaces. (8 marks)

(b) Evaluate the **importance of safety practices** in the aviation industry. (7 marks)

15. An airport has different operational areas with strict safety controls.

(a) Describe **THREE main areas of an airport** and the safety measures observed in each. (9 marks)

(b) Explain **THREE safety rules related to movement** within airport areas. (6 marks)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

AVIATION TECHNOLOGY (PRACTICAL)

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

SCORE GRID

ITEM	TASK 1	TASK 2	TOTAL
Number	1	2	—
Question Marks	15	15	**30**
Learner's Score			
Performance Level			

Score Range	Performance Level
25 – 30	Exceeds Expectations (EE)
18 – 24	Meets Expectations (ME)
10 – 17	Approaching Expectations (AE)
0 – 9	Below Expectations (BE)

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SECTION B: PRACTICAL ASSESSMENT (30 MARKS)

PRACTICAL TASK 1: MODEL AIRCRAFT DEMONSTRATION (15 marks)

Tools and Apparatus

i. Inflated balloon
ii. Paper or plastic bag
iii. String
iv. Paper, sticks, glue or tape
v. Scissors

Task

Learners are required to demonstrate **lighter-than-air** or **heavier-than-air** flight using locally available materials.

(a) Identify the **type of aircraft model** you are constructing. (3 marks)

(b) Outline the **steps followed** to construct the model. (6 marks)

(c) Explain **how the model demonstrates flight principles**. (4 marks)

(d) State **ONE safety precaution** observed during the activity. (2 marks)

PRACTICAL TASK 2: SAFETY AND FIRST AID (15 marks)

Tools and Apparatus

i. First aid kit (bandages, gloves, antiseptic)
ii. Chart showing common airport safety signs

Task

A learner has suffered a burn while working in an aviation workshop.

(a) Identify **THREE items** from the first aid kit used to manage burns. (3 marks)

(b) Demonstrate **FOUR first aid procedures** for burns. (8 marks)

(c) Identify **TWO airport safety signs** and state their meanings. (4 marks)

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KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

BUILDING AND CONSTRUCTION (Theory)

Time: 1½ Hours

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO CANDIDATES

1. **This paper consists of TWO sections: Section A (Theory) and Section B (Practical).**
2. **Answer ALL questions in both sections.**
3. **Show all workings where applicable.**
4. **All drawings must be neat and well labelled.**
5. **Use of non-programmable drawing instruments is allowed.**

SCORE GRID **Performance Levels Grid**

ITEM	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	TOTAL
Number	1	2	3	4	5	6	7	8	9	—
Question Marks	6	6	6	6	6	10	10	10	10	**70**
Learner's Score										
Performance Level										

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: THEORY (70 Marks)

Answer all questions in this section.

PART I: (30 MARKS)

Answer ALL questions in this section.

1. A newly established community in a semi-urban area plans to construct several structures to support daily activities.

a) Define the term *building* as used in construction. (2 marks)

_____

_____

b) State TWO functions of a building in day-to-day life. (2 marks)

i. _____

ii. _____

c) Identify TWO ways buildings contribute to human safety and comfort. (2 marks)

i. _____

ii. _____

2. A county government intends to put up different buildings to serve its residents.

a) Classify buildings according to their use. (3 marks)

i. _____

ii. _____

iii. _____

b) Give ONE example of a building under each category identified in (a). (3 marks)

CATEGORY	EXAMPLE
i.	
ii.	
iii.	

3. Early human shelters have evolved into complex modern structures.

a) Identify TWO types of early buildings used by human beings. (2 marks)

i. _____

ii. _____

b) State TWO characteristics of traditional buildings. (2 marks)

i. _____

ii. _____

c) Give TWO features of modern buildings that show advancement in technology. (2 marks)

i. _____

ii. _____

4. A residential house is under construction in your neighbourhood.

a) Name THREE main components of a building. (3 marks)

i. _____

ii. _____

iii. _____

b) State ONE function of each component named in (a). (3 marks)

i. _____

ii. _____

iii. _____

5. Before construction begins, a site must be properly prepared.

a) Define the following terms:

i) Site selection (1 mark)

_____

_____

ii) Site clearing (1 mark)

_____

_____

iii) Site levelling (1 mark)

_____

_____

b) State THREE reasons why site preparation is important. (3 marks)

i. _____

ii. _____

iii. _____

PART II: (40 MARKS)

6. A contractor has been hired to construct a commercial building near a busy road.

a) Explain FIVE factors to consider when selecting a site for the building. (5 marks)

i. _____

ii. _____

iii. _____

iv. _____

v. _____

b) Describe THREE safety measures that should be observed during site preparation. (3 marks)

i. _____

ii. _____

iii. _____

c) Identify TWO dangers of dumping building waste in undesignated areas such as road reserves or water sources. (2 marks)

i. _____

ii. _____

7. During site clearing and levelling, various hand tools are used.

a) Name FIVE hand tools used in site clearing. (5 marks)

i. _____

ii. _____

iii. _____

iv. _____

v. _____

b) For ANY THREE tools named in (a), state ONE use and ONE maintenance practice for each. (5 marks)

Tool name	**Use of the tool**	**Maintenance practice on the tool**

8. A sloping site is prepared for construction.

a) Describe the following methods of site levelling:

i) Cut method (2 marks)

i. _____

ii. _____

ii) Fill method (2 marks)

i. _____

ii. _____

iii) Cut and fill method (2 marks)

i. _____

ii. _____

b) Explain TWO environmentally friendly methods of disposing building waste. (4 marks)

i. _____

ii. _____

9. A school plans to build new classrooms.

a) Describe the functions of the following parts of a building:

i) Floor (2 marks)

_____

_____

ii) Wall (2 marks)

_____

_____

iii) Roof (2 marks)

_____

_____

b) Explain TWO importance of doors and windows in buildings. (4 marks)

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

BUILDING AND CONSTRUCTION (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

ITEM	Q10	Q11	TOTAL
Number	10	11	—
Question Marks	15	15	**30**
Learner's Score			
Performance Level			

SECTION B: PRACTICAL (30 MARKS)

QUESTION 10: PRACTICAL – SITE PREPARATION TOOLS (15 MARKS)

You are provided with the following tools:

- **Panga**
- **Slasher**
- **Jembe**
- **Rake**
- **Spade**
- **Axe**
- **Wheelbarrow**

a) Identify ANY FIVE tools provided. (5 marks)

b) State ONE use of each tool identified in (a). (5 marks)

c) Describe ONE maintenance practice for each of the tools identified in (a). (5 marks)

QUESTION 11: PRACTICAL – ISOMETRIC DRAWING (15 MARKS)

a) Define isometric drawing. (2 marks)

b) State THREE characteristics of isometric drawings. (3 marks)

c) Using dimensions 60 mm × 40 mm × 30 mm, draw a rectangular block in isometric projection. (10 marks)

Marking guide for the drawing:

- **Correct use of isometric axes – 3 marks**
- **Accuracy of dimensions – 4 marks**
- **Neatness and clarity – 3 marks**

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

ELECTRICAL TECHNOLOGY (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***f)*** *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*

SCORE GRID

ITEM	.a	.b	2	3	4a	4b	4c	5a	5b	6	7	8	9a	9b	10	11a	11b	12a	12b	13a	13b	13c	14a	14b	14c	TOTAL
Marks	2	1	3	3	1	1	1	1	2	3	3	3	1	2	3	5	5	4	6	6	2	2	3	3	4	**70**
Learner's Score																										
Performance Level																										

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (70 Marks)

Answer all questions in this section.

1. A rural community has recently been connected to electricity for the first time.

a) State **two benefits** the community may experience due to electricity supply. *(2 marks)*

i. _____.

ii. _____.

b) Mention **one area of daily life** that will improve because of electricity. *(1 mark)*

_____.

2. During a career guidance session, a guest speaker talks about electrical technology.

Identify **three career opportunities** available in the electrical technology field. *(3 marks)*

i. _____.

ii. _____.

iii. _____.

3. A learner is asked to wire a simple DC circuit in a school workshop.

State **three safety regulations** the learner must observe before starting the task. *(3 marks)*

i. _____.

ii. _____.

iii. _____.

4. In an electrical workshop, several stakeholders are involved in ensuring safety.

Explain **one role each** played by:

a) Workers. (1 mark)

_____

_____

b) Employers. (1 mark)

_____

_____

c) Kenya Power and Lighting Company. (1 mark)

_____

_____

5. A resistor is connected in a DC circuit and begins to heat up when current flows.

a) Identify the **property of the resistor** responsible for this effect. (1 mark)

_____

_____

b) State **one practical use** of this property in electrical appliances. (2 marks)

_____

_____

6. A learner connects a 6 V battery across a resistor and measures a current of 0.5 A.

Using Ohm's Law, determine the **resistance of the resistor**.(3 marks)

7. In a home automation system, resistors are connected in parallel.

Give **three advantages** of connecting resistors in parallel instead of series. (3 marks)

i._____.

ii._____

iii._____

8. A torch fails to light even after new batteries are installed. (3 marks)

State **three possible faults** that could exist in the DC circuit.

i._____.

ii._____

iii._____

9. A capacitor is connected to a DC supply through a resistor.

a) What happens to the **current** as the capacitor charges? (1 mark)

_____

b) State **one reason** for this behaviour. (2 marks)

_____

_____

10. A learner wants to use a capacitor in a traffic-light timer circuit.

State **three factors** that should be considered when selecting a suitable capacitor. (3 marks)

i._____.

ii._____.

iii._____.

11. **A county government plans to establish a technical training centre.**

a) State **five importance of electrical technology in society**. *(5 marks)*

i._____.

ii._____.

iii._____.

iv._____.

v._____.

b) Outline **five career opportunities** that learners can pursue after studying electrical technology. *(5 marks)*

i._____.

ii._____.

iii._____.

iv._____.

v._____.

12. **An electrical technician was injured due to poor safety practices at work.**

a) Explain **four safety regulations** that should be followed in an electrical workshop. (4 marks)

i._____.

ii._____.

iii._____.

iv._____.

b) Discuss the **roles of the following electrical components**. *(6 marks)*

i. Battery

_____.

ii. Resistors

_____.

iii. Capacitors

_____.

iv. Connecting wires

_____.

v. Multimeter

_____.

vi. Switch

_____

13. **A DC circuit consists of a 12 V battery and two resistors of 4 Ω and 6 Ω connected in series.**

a) Calculate the **total resistance** of the circuit. (6 marks)

b) Determine the **current flowing** in the circuit. (2 marks)

c) Explain **two practical applications** of DC circuits in day-to-day life. (2 marks)

i._____.

ii._____.

14. **Capacitors are widely used in electrical appliances.**

a) Describe the **principle of operation of a capacitor**.(3 marks)

_____

_____

_____

_____

b) Explain **three characteristics** of capacitive circuits. (3 marks)

_____

_____

_____

_____

_____

___

c) Discuss **two importance of capacitors** in electrical appliances. *(4 marks)*

_____

_____

_____

_____

_____

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KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

ELECTRICAL TECHNOLOGY (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

NUMBER	1	2	3	4	5	6	7	8	9
QUESTION NO	ask 1a	ask 1b(i)	ask 1b(ii)	ask 1b(iii)	ask 1c	ask 1d	ask 2(i)	ask 2(ii)	Task 2(iii–iv)
MARKS	5	2	2	2	2	4	6	4	5
LEARNER'S SCORE									
PERFORMANCE LEVEL									

SECTION B: PRACTICAL / PROJECT (30 MARKS)*(Compulsory)*

QUESTION 15: DC CIRCUIT CONSTRUCTION AND TROUBLESHOOTING (30 MARKS)

A learner is required to construct and test a DC circuit used in a simple car safety alarm system.

A. Tools and Apparatus (5 marks)

List **five tools and apparatus** required for this task.

Expected items include:

i. DC power supply / battery
ii. Resistors
iii. Capacitors
iv. Connecting wires
v. Multimeter
vi. Breadboard / circuit board
vii. Switch

B. Circuit Construction (10 marks)

a) Draw a **neat and well-labelled circuit diagram** showing:

i. A DC source

ii. One resistor

iii. One capacitor

iv. A switch

b) Construct the circuit as drawn and demonstrate safe working practices.

C. Measurements and Observations (7 marks)

a) Measure and record the **voltage across the resistor**.

_____

b) Measure and record the **current in the circuit**.

_____

c) Observe and explain what happens when the capacitor is charging and discharging.

_____

_____

_____

_____

D. Fault Finding and Safety (5 marks)

a) Introduce **one fault** in the circuit (open or short circuit).

b) Describe the **steps used to identify and correct the fault** using a multimeter.

_____

_____

_____

_____

_____

E. Application and Reflection (3 marks)

Explain **one real-life application** of the constructed RC circuit in electrical appliances.

_____

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

MARINE TECHNOLOGY (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***f)*** *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*

SCORE GRID

NO.	1a	1b	1c	2d	2e	2f(i)	2f(ii)	3a	3b	3c	4a	4b	4c	5a	5b	5c	6a	6b	6c	7a	7b	7c	8	9	10
Marks																									
Learner's Score																									
Performance Level																									

SECTION	TOTAL MARKS	LEARNER'S SCORE	PERFORMANCE LEVEL
Section A	70		

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (70 Marks)

Answer all questions in this section.

1. Kenya has vast marine and freshwater resources such as the **Indian Ocean, Lake Victoria, rivers, and fish ponds**.

a) Define **Marine Technology**. *(2 marks)*

_____

_____

b) Define the term **fishing**. *(2 marks)*

_____

_____

c) State **two opportunities** available in marine and freshwater fisheries in Kenya. *(2 marks)*

_____

_____

2. A student visits a coastal area and observes coral reefs, mangroves, and seagrass beds.

d) Identify **one characteristic** of a marine environment. *(2 marks)*

_____

_____

e) Identify **one characteristic** of a freshwater environment. *(2 marks)*

_____

_____

f) Name **two aquatic ecosystems** found in marine environments. *(2 marks)*

i. _____.

ii) _____.

3. Fish from lakes and oceans support food security and employment.

a) Define **marine fisheries**. *(2 marks)*

_____

_____

b) Define **freshwater fisheries**. *(2 marks)*

_____

_____

c) Define **aquaculture**. *(2 marks)*

_____

_____

4. A fisheries officer studies water quality in a lake and the Indian Ocean.

a) State **one physical characteristic** of oceans. *(2 marks)*

_____

_____

b) State **one chemical characteristic** of freshwater bodies. *(2 marks)*

_____

_____

c) State **one biological characteristic** common to aquatic environments. *(2 marks)*

_____

_____

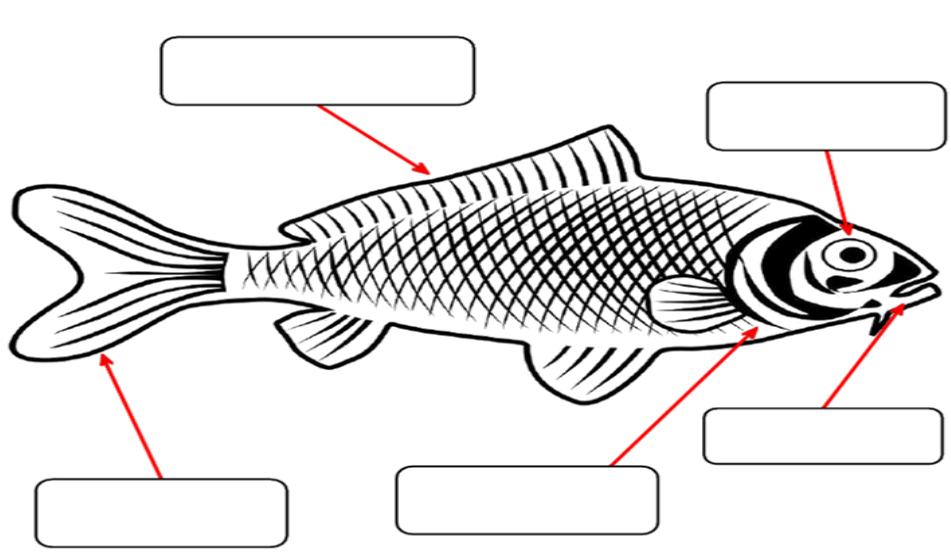
5. A learner examines a fish caught from a nearby river.

a) What is meant by **fish morphology**? *(2 marks)*

_____

_____

b) Mkulima bought a fish for a Marine study. Identify **the external parts** of a fish



c) Name any **three internal parts** of a fish. *(3 marks)*

i._____

ii._____

iii._____

6. Different fish species show unique adaptations to their environments.

a) State the function of the **lateral line** in fish. *(2 marks)*

_____

_____

b) State the function of the **swim bladder**. *(2 marks)*

_____

_____

c) Give **one function** of fish gills. *(2 marks)*

_____

_____

7. Fish can be classified based on skeletal structure.

a) Name **two bony fish** species. *(2 marks)*

_____

_____

b) Name **two cartilaginous fish** species. *(2 marks)*

_____

_____

c) Explain the importance of the following in marine ecosystems. *(9 marks)*

Coral reefs

_____

_____

_____

_____

Mangrove trees

_____

_____

_____

_____

Sea grass

_____

_____

_____

8. Fiona wants to begin a fish farm in Kenya. Outline three six factors she should consider before starting the fish farm project. (6 marks)

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

9.

10. Name any five major rivers in Kenya where fishing is done. (5 marks)

i. _____

ii. _____

iii. _____

iv. _____

v. _____

11. Fardosa saw the fish shown below.



Name the type of fish. _____(1 mark)

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

MARINE TECHNOLOGY (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

NO.	C-a-i	C-a-ii	C-a-iii	C-b-i	C-b-ii	C-b-iii-fins	C-b-iii-eyes	C-b-iii-barbels	C-c-scales	C-c-mouth	C-c-operculum	C-c-lateral line	C-d-draw	C-d-adaptations-i	C-d-adaptations-ii
Question / Task	Identify bony/cartilaginous	Example of same group	Observable feature supporting classification	Measure total length	Measure weight	Count fins	Count eyes	Count barbels	Scales: identification & function	Mouth: identification & function	Operculum: identification & function	Lateral line: identification & function	Draw fish (external)	State 2 adaptations	Environment & reason
Marks	2	2	2	3	3	2	2	2	2	2	2	2	5	2	2
Learner's Score															
Performance Level															

TOTAL SUMMARY

SECTION	TOTAL MARKS	LEARNER'S SCORE	PERFORMANCE LEVEL
Section C	35		

SECTION C: PRACTICAL AND PROJECT (35 MARKS)

Attempt ALL questions

Practical Task: Fish Identification, Measurement, and Observation

Tools and Apparatus (Provided)

i. Fresh or preserved fish specimen *(any locally available fish)*
ii. Measuring tape or ruler
iii. Digital or mechanical weighing scale
iv. Hand lens
v. Dissection tray
vi. Gloves
vii. Data recording sheet
viii. Pencil

You are provided with a fish specimen obtained from a **river, lake, fish pond, or marine environment**. Study it carefully and answer the questions below.

a) Identification and Classification ***(6 marks)***

i) Identify the fish as **bony or cartilaginous**. *(2 marks)*

ii) Give **one example** of a fish in the same group. *(2 marks)*

iii) State **one observable feature** that supports your classification. *(2 marks)*

b) Measurement and Recording ***(8 marks)***

i) Measure and record the **total length** of the fish. *(3 marks)*

ii) Measure and record the **weight** of the fish. *(3 marks)*

iii) Count and record the number of:

- Fins *(2 marks)*
- Eyes *(2 mark)*
- Barbels (if present) *(2 marks)*

c) External Morphology Observation ***(8 marks)***

Observe and identify the following parts and state **one function** of each:

Part	dentification	Function
Scales		
Mouth		
Operculum		
Lateral line		

(8 marks total)

d) Draw the fish (external) and label properly (5 marks)

d) Adaptations and Environment ***(4 marks)***

i) State **two adaptations** of the fish that help it survive in water. *(2 marks)*

ii) Identify whether the fish is adapted to **marine or freshwater** environment and give **one reason**. *(2 marks)*

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

MEDIA TECHNOLOGY (Theory)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** *The* ***marks for each question*** *are indicated at the end of the question.*
- ***f)*** *Use a blue or black pen for writing. Pencils should be used only for drawings and diagrams.*

Total Summary

SECTION	TOTAL MARKS	LEARNER'S SCORE	PERFORMANCE LEVEL
Section A	**70**		

Section	Max Marks	Learner Score
70	70	
B	30	
TOTAL	**100**	

Performance Levels Grid

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (70 Marks)

Answer all questions in this section.

1. A Grade 10 learner watches news on TV, reads a newspaper, and streams videos online.

a) Define the term

i) **Media**. *(2 marks)*

_____

_____

ii) Media technology. *(2 marks)*

_____

_____

b) Identify **one difference** between traditional media and new media. *(2 marks)*

Traditional media	*New media*

2. A radio station broadcasts live news which is later shared online as a podcast.



a) What is meant by **media broadcast**? *(2 marks)*

_____

_____

b) Define **media distribution**. *(2 marks)*

_____

_____

c) State **one advantage** of multimedia streaming. *(2 marks)*

_____

_____

3. A media student studies different ways information is presented to audiences.

a) What is a **media form**? *(1 mark)*

_____

_____

b) Give **two examples** of print media formats. *(2 marks)*

i. _____

ii. _____

b) Give **two examples** of electronic media formats. *(2 marks)*

i. _____

ii. _____

4. A company uses posters and brochures to advertise a new product.

a) Identify **two print media forms** used in advertising. *(2 marks)*

i. _____

ii. _____

b) State **one role** of newspapers in society. *(1 mark)*

i. _____

ii. _____

c) State **one advantage of electronic media to print media**. *(1 mark)*

_____

_____

5. A teenager watches reels, TV drama, and listens to radio shows.

a) Identify **two electronic media programs**. *(2 marks)*

i. _____

ii. _____

b) State **one feature** of new media. *(2marks)*

_____

_____

c) State **one limitation** of electronic media. *(2 marks)*

_____

_____

6. A learner wants to pursue a career in the media industry.

a) Name **two careers** in media technology. *(2 marks)*

i. _____

ii. _____

b) State **one skill** required in media careers. *(1 mark)*

_____

_____

7. Media has changed from print to digital platforms.

a) Identify **one early form** of media. *(1 mark)*

_____

_____

b) Identify **one modern media platform**. *(1 mark)*

_____

_____

c) State **two reasons** for the evolution of media. *(4 marks)*

i. _____

ii. _____

8. A media club is preparing a presentation on media in society.

a) Describe **four print media forms** and their uses. *(4 marks)*

Print media form	Use

b) Identify the following types of media. (4 marks)



Q



R



S



T

Q: _____.

R: _____.

S: _____.

T: _____.

b) State four **electronic media formats**. *(4 marks)*

i. _____

ii. _____

iii. _____

iv. _____

c) Discuss **two roles of media in society**. *(4 marks)*

i. _____

ii. _____

9. Media technology has transformed communication over time.

a) Explain the **evolution of media**. *(8 marks)*

i. _____

ii. _____

iii. _____

iv. _____

b) Discuss **four importance of media** in modern society. *(8 marks)*

i. _____

ii. _____

iii. _____

iv. _____

c) Distinguish between **traditional media and new media**. *(4 marks)*

Traditional media	Modern media

10. A television station plans to produce a youth talk show.

a) Describe the **three phases of media production**. *(6 marks)*

_____

_____

_____

_____

_____

_____

b) Explain the **roles of personnel** in the pre-production phase: *(8 marks)*

i. Producer

_____

_____

ii. Director

_____

_____

iii. Creative Writer

_____

_____

iv. Production Manager

_____

_____

c) Describe **six steps** involved in the pre-production phase. *(6 marks)*

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

MEDIA TECHNOLOGY (Practical)

Time: 1 Hour 50 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

SECTION C: MEDIA TECHNOLOGY – PRACTICAL & PROJECT (30 MARKS)

NO.	C-a-i	C-a-ii	C-a-iii	C-a-iv	C-b-i	C-b-ii	C-c-i	C-c-ii	C-d-i	C-d-ii
escription	Program title & media format	Target audience	heme & time period	stribution channel	Pre-production personnel (4)	ole of each personnel	Script (intro + 1 question/scene)	Layout & structure (opening, main content, closing)	Pre-production activities (3)	Research factors (3)
Marks	2	2	2	2	4	4	5	3	3	3
Learner's Score										
erformance Level										

TOTAL SUMMARY

SECTION	TOTAL MARKS	LEARNER'S SCORE	PERFORMANCE LEVEL
Section C	30		

SECTION C: PRACTICAL and PROJECT (30 MARKS)

Attempt ALL questions

Practical Task: Media Pre-production Planning

Tools and Apparatus (Provided)

i. Writing pad
ii. Pen/pencil
iii. Sample TV or radio program brief
iv. Smartphone or computer (optional)
v. Internet access (if available)

Task

You are tasked with planning a **TV talk show or radio infomercial** aimed at teenagers.

a) Media Research and Concept Development ***(8 marks)***

i) State the **program title** and **media format** chosen. *(2 marks)*

ii) Identify the **target audience**. *(2 marks)*

iii) State the **theme** and **time period** of the program. *(2 marks)*

iv) Identify the **distribution channel** to be used. *(2 marks)*

b) Pre-production Personnel and Roles ***(8 marks)***

i) Identify **four personnel** involved in pre-production. *(4 marks)*

ii) State **one role** for each personnel identified. *(4 marks)*

c) Script Writing and Layout ***(8 marks)***

i) Write a **short script** (introduction and one question/scene) for the program. *(5 marks)*

ii) Outline the **layout and structure** of the program (opening, main content, closing). *(3 marks)*

d) Planning and Scheduling ***(6 marks)***

i) List **three activities** carried out during pre-production. *(3 marks)*

ii) State **three factors** that inform research in media production (story, market trends, audience, setting, characters). *(3 marks)*

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

METAL TECHNOLOGY (Theory)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** *Ensure your answers are* ***clear, neat, and well-organized****.*
- ***e)*** ***Check your work*** *before submitting the exam.*
- ***f)*** *Manage your time well to complete all questions.*

Performance Levels Grid

No.	1a	1b	1c	1d	2a	2b	2c	2d	3a	3b	3c	3d	4a	4b	4c	5a	5b	5c	5d	6a	6b	6c	6d	6e	6f	7a	7b	7c	7d	7e
Marks	2	4	2	2	2	4	2	2	2	2	4	2	6	6	8	6	3	3	8	8	6	3	2	3	3	4	3	3	3	8
Learner's Score																														
Performance Level																														

Section	Max Marks	Learner Score
	0	
	0	
OTAL	00	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: THEORY (70 Marks)

Answer all questions in this section.

1. A Grade 10 learner visits a roadside welding workshop in the local market and observes various metal products being fabricated.

a) Define the term **metal technology** as a learning area. (2 marks)

_____

_____

b) Identify **TWO tools** and **TWO machines** likely to be found in the workshop visited. (4 marks)

Workshop tools	Workshop machines

c) Explain **TWO reason** why metal technology skills are important in everyday life. (2 marks)

_____

_____

d) State **TWO metal-related business activities** found within your community. (2 marks)

i. _____

ii. _____

2. After completing junior secondary school, a learner wants to pursue metal technology.

a) State **TWO career opportunities** related to metal technology. (2 marks)

i. _____

ii. _____

b) Explain **TWO ways** metal technology contributes to community development. (4 marks)

i. _____

ii. _____

c) Give **ONE reason** why metal technology is considered a practical career. (2 marks)

_____

_____

d) State **ONE personal quality** required for a successful metal technologist. (2 marks)

_____.

3. During a practical lesson, a learner operates a hacksaw without protective gear.

a) Define **workshop safety**. (2 marks)

_____

_____

b) Identify **TWO personal protective equipment (PPE)** that the learner should wear. (2 marks)

i. _____

ii. _____

c) State **TWO possible causes of accidents** in a metal workshop. (4 marks)

i. _____

ii. _____

d) State **TWO reasons** why safety rules should be followed in the workshop. (2 marks)

i. _____

ii. _____

SECTION B: (40 MARKS)

Answer ANY THREE (3) questions.

4. A learner accidentally cuts their finger while filing a metal piece.

a) Explain **THREE general workshop safety rules** that could prevent such an accident. (6 marks)

i. _____

ii. _____

iii. _____

b) Describe **THREE causes of accidents** in a metal workshop. (6 marks)

i. _____

ii. _____

iii. _____

c) Outline **FOUR first aid procedures** to be followed for a minor cut in the workshop. (8 marks)

i. _____

ii. _____

iii. _____

iv. _____

5. A learner is assigned to cut, hold, and fasten a metal work piece.

a) Give **TWO examples of the following tools**: (6 marks)

	Cutting tools	Holding tools	Driving tools
i.			
ii.			

b) State the use of the following metalwork tools. (3 marks)



_____.

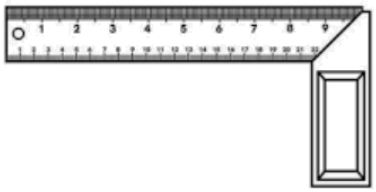


_____.



_____.

c) Identify the following workshop tools. (3 marks)

d) Describe **FOUR methods of maintaining hand and bench tools** in a metal workshop. (8 marks)

i. _____

ii. _____

iii. _____

iv. _____

6. Accurate marking out is required before cutting a metal plate.

a) Identify **FOUR measuring tools** and **FOUR marking out tools** used in metal technology. (8 marks)

Measuring tools	Marking tools

b) State the use of the following workshop area. (6 marks)

a) **Fitting area** –

_____

_____

b) **Welding area** –

_____

_____

c) **Tool storage area** –

_____

_____

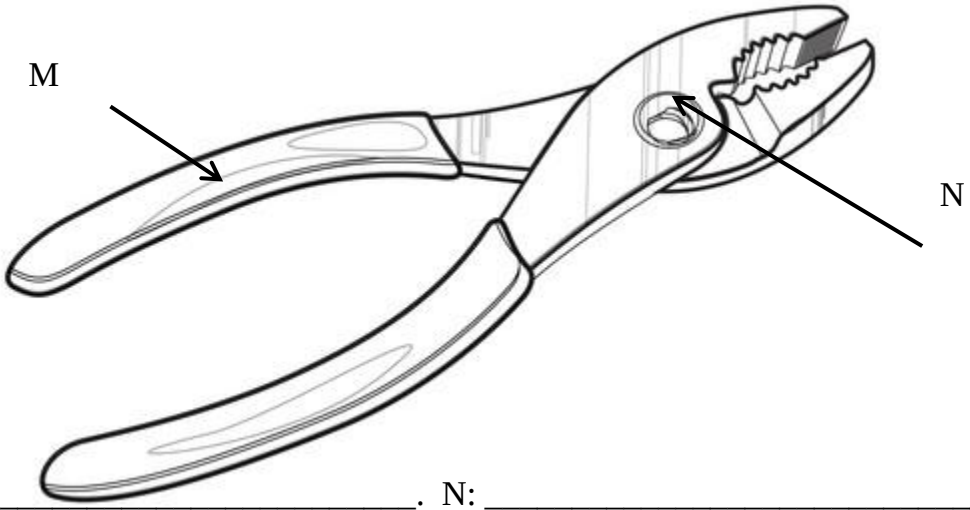
c) Explain the **use of a Try square** in workshop practice. (3marks)

i) _____.

ii) _____.

iii) _____.

d) Name the parts of the tool below marked MN. (2 marks)



M: _____. N: _____.

e) Explain **THREE reasons** why accurate measuring and marking out is important in metalwork. (3 marks)

i) _____.

ii) _____.

iii) _____.

f) Identify three forms of injuries that can occur at the metal workshop. (3 marks)

i) _____.

ii) _____.

iii) _____.

7. A school plans to construct a metal technology workshop.

a) Describe **FOUR components** of a standard metal workshop layout. (4 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

b) Explain **THREE ways** a good workshop layout enhances safety. (3 marks)

i) _____.

ii) _____.

iii) _____.

c)Draw the following safety gear found in the workshop. (3 marks)

Hand gloves	Worker's helmet	Overall

d) Explain **THREE reasons** why learners should observe safety in metal workshops. (3 marks)

i) _____.

ii) _____.

iii) _____.

e) State the daily management practice of the following areas or tool in the workshop. (8 marks)

i) Floor:

_____

_____

ii) Work bench:

_____

_____

iii) Pliers:

_____

_____

iv) Clamp:

_____

_____

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

METAL TECHNOLOGY (Practical)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	Task 1: Correct identification & safe handling of tools	sk 2: Accurate measuring using steel rule & try square	sk 3: Prope marking out using scriber & punch	sk 4: Correct cutting technique using hacksaw	Task 5: Observance of safety rules & PPE use	) Identify FOUR tools & state the function	Mark out & recor measurements	Observe safety precautions	) Explain TWO ways tools should be store
Marks	6	6	6	6	6	8	6	8	8
Learner's Score									
rformance Level									

SECTION C: PRACTICAL ASSESSMENT (30 MARKS)

Attempt ALL tasks.

PRACTICAL TASK: MEASURING, MARKING OUT AND CUTTING A METAL STRIP

You are provided with a mild steel strip. Measure, mark out, and cut the metal to the specified dimensions.

Tools and Apparatus Provided

i. Mild steel strip
ii. Steel rule
iii. Try square
iv. Scriber
v. Centre punch
vi. Ball pein hammer
vii. Bench vice
viii. Hacksaw

ix. File
x. Safety goggles and apron

TASKS AND MARKING GUIDE

Task	Assessment Area	Marks
1	Correct identification and safe handling of tools	6
2	Accurate measuring using steel rule and try square	6
3	Proper marking out using scriber and punch	6
4	Correct cutting technique using hacksaw	6
5	Observance of safety rules and PPE use	6
TOTAL		**30**

PRACTICAL QUESTIONS

a) Identify **FOUR tools** used during the practical task and state their function. (8 marks)

i) _____.

ii) _____.

iii) _____.

iv) _____.

b) **Mark out** the metal strip and record measurements. (6 marks)

i) _____.

ii) _____.

iii) _____.

c) Observe **safety precautions** observed during the practical exercise. (8 marks)

d) Explain **TWO ways** tools should be stored after use. (8 marks)

i) _____.

ii) _____.

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

POWER MECHANICS (Theory)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… **SCHOOL;** ……

CLASS…… **SIGN**……..

INSTRUCTIONS TO LEARNERS

1. *Answer **all questions** in both Section A and Section B.*
2. *Write your answers clearly in the spaces provided.*
3. *Use diagrams where necessary.*
4. *Ensure you observe safety and cleanliness during practical-related discussions.*

No.	1ai	1aii	1aiii	1b	2ai	2aii	2bi	2bii	3ai	3aii	3biii	3biv	4ai	4aii	4aiii	4bi	4bii	5ai	5aii	5bi	5bii
Marks	2	2	2	4	2	2	5	3	3	2	5	2	2	2	2	4	4	2	2	4	4
Learner's Score																					
Performance Level																					

Section	Max Marks	Learner Score
A	70	
B	30	
TOTAL	**100**	

Level	Level	% Range	Points	Learner's score	Remarks
Exceeding (EE)	EE1	90–100%	8		Exceptional mastery; exceeds expectations
	EE2	75–89%	7		Very strong performance
Meeting (ME)	ME1	58–74%	6		Solid understanding
	ME2	41–57%	5		Partial achievement
Approaching (AE)	AE1	31–40%	4		Limited achievement
	AE2	21–30%	3		Very limited
Below (BE)	BE1	11–20%	2		Poor performance
	BE2	1–10%	1		Extremely weak

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SECTION A:THEORY (70 Marks)

Answer all questions in this section.

1. A student wants to explore career opportunities in the field of power mechanics.

a)

i) Define Power Mechanics as a learning area. (2 marks)

_____

_____

__

ii) List **two career opportunities** in the field of Power Mechanics. (2 marks)

_____

_____

__

iii) Identify **two activities related to power mechanics in your community**. (2 marks)

_____

_____

b) Explain **the importance of studying Power Mechanics as a learning area**. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

2. A student is researching how the automobile has changed over time.

a)

i) Outline **two historical developments in the evolution of the automobile**. (2 marks)

_____

_____

ii) State **two benefits of innovation in automobile development**. (2 marks)

_____

_____

b)

i) Describe **the global trends in the development of automobiles from early models to modern cars**. (5 marks)

_____

_____

_____

_____

____

ii) Name **three automobile car companies you know**. (3 marks)

_____

_____

_____

3. During a field visit, learners observe a standard power mechanics workshop.

a) i) Name **three main areas of a power mechanics workshop**. (3 marks)

_____

_____

_____

_____

_

ii) State **two purposes of having separate workshop areas**. (2 marks)

_____

_____

_____

_____

_

b) iii) Draw and label a **standard layout of a power mechanics workshop**, showing storage, work benches, office, and passageways. (5 marks)

iv) Explain **the importance of proper workshop layout in improving efficiency and safety**. (2 marks)

_____

_____

_____

_____

_

4. While working in a workshop, a student notices warning signs and uses PPE.

a) i) List **two general safety rules in a power mechanics workshop**. (2 marks)

_____

_____

ii) Name **two types of PPE used in a power mechanics workshop**. (2 marks)

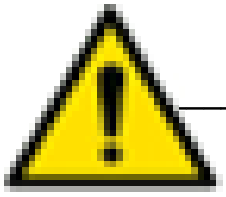
_____

_____

iii) Identify **the workshop safety signs and their meanings**. (2 marks)



_____



_____

b) i) Explain **the importance of observing workshop safety rules while working with machinery**. (4 marks)

_____

_____

_____

_____

____

ii) Discuss **the consequences of ignoring workshop safety regulations in a power mechanics environment**. (4 marks)

_____

_____

_____

_____

_

5. A student wants to pursue a career in power mechanics and understand its relevance in the community.

a)

i) Identify **two areas where power mechanics knowledge is applied in the community**. (2 marks)

_____

_____

ii) State **two skills a power mechanic should have**. (2 marks)

_____

_____

b) i) Explain **how acquiring skills in power mechanics can improve employment opportunities and entrepreneurship**. (4 marks)

_____

_____

_____

_____

____

ii) Discuss **the role of local automotive workshops for power mechanics students**. (4 marks)

_____

_____

_____

_____

_

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

POWER MECHANICS (Practical)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	ractical 1a: Correct PPE usage	Practical 1b: Safe handling & storage of tools	ractical 1c: Identify hazards & mitigation	ractical 2a: Design & draw plan for mechanical assembly	Practical 2b: Execute task safely	actical 2c: Present finished project (neatness & accuracy)	orrect PPE & safety adherence (rubric)	Accuracy & correctness of task (rubric)	leatness & finish (rubric)	Proper handling & maintenance of tools (rubric)	esentation & project plan (rubric)
Marks	5	5	5	5	10	10	10	10	10	5	5
earner's Score											
erformanc e Level											

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SECTION B: PROJECT (40 MARKS)

TASK: Conduct practical activities on **safe handling of tools, PPE usage, and simple automotive maintenance or mechanical project** (e.g., assembling a small engine component, checking engine parts, or a simple vehicle maintenance task).

TOOLS AND APPARATUS

i. Workbench
ii. Hand tools: spanners, screwdrivers, pliers, hammers, wrenches
iii. PPE: gloves, goggles, apron, boots
iv. Small engine components or vehicle parts (spark plugs, belts, screws, etc.)
v. Lubricants and cleaning materials
vi. Measuring tools: tape measure, ruler, vernier caliper
vii. Notebook / graph paper for project plan and observations

GUIDING QUESTIONS

Practical Activity 1 – Workshop Safety:

a) Identify and demonstrate the **correct PPE** for specific workshop tasks. (5 marks)

b) Demonstrate **safe handling and storage of hand tools**. (5 marks)

c) Identify **safety hazards in the workshop and propose mitigation measures**. (5 marks)

Practical Activity 2 – Simple Mechanical Project:

a) Design and draw a **plan for a simple mechanical assembly** or maintenance task, including dimensions and materials. (5 marks)

b) Execute the task safely using **correct hand tool techniques**. (10 marks)

c) Present the **finished project for assessment**, showing neatness, accuracy, and adherence to safety standards. (10 marks)

ASSESSMENT RUBRIC

Criteria	Marks
Correct use of PPE and adherence to safety	10
Accuracy and correctness of mechanical task	10
Neatness and finish of project	10
Proper handling and maintenance of tools	5
Presentation of work and project plan	5
Total	40

KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

WOOD TECHNOLOGY (Theory)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

INSTRUCTIONS TO LEARNERS

- ***a)*** *Write your name, School, assessment number, signature and date on all the answer sheets provided.*
- ***b)*** *Answer all the questions in the spaces provided.*
- ***c)*** ***Read each question carefully*** *before writing your answer.*
- ***d)*** ***Check your work*** *before submitting the exam.*
- ***e)*** *Manage your time well to complete all questions.*

Performance Levels Grid

No.	1a i	a ii	a iii	b	a i	a ii	b i	b ii	a i	a ii	b i	b ii	b iii	a i	a ii	b i	b ii	a i	a ii	b i	b ii
Marks																					
Learner's Score																					
Performance Level																					

Section	Max Marks	Learner Score
A	60	
B	40	
TOTAL	100	

Level	Level	% Range	Points	Learner's score
Exceeding (EE)	EE1	90–100%	8	
	EE2	75–89%	7	
Meeting (ME)	ME1	58–74%	6	
	ME2	41–57%	5	
Approaching (AE)	AE1	31–40%	4	
	AE2	21–30%	3	
Below (BE)	BE1	11–20%	2	
	BE2	1–10%	1	

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SECTION A: (60 Marks)

Answer all questions in this section.

1. A student is researching career opportunities in woodworking and wants to understand the relevance of wood technology in economic development.

a) i) Define Wood Technology as a field of study. (2 marks)

_____

_____

ii) List **two benefits of studying Wood Technology**. (2 marks)

_____

_____

iii) Identify **two careers related to Wood Technology**. (2 marks)

_____

_____

b) Explain **how Wood Technology contributes to economic development in Kenya**. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

2. During a school tour of a local wood workshop, learners observed the layout and safety measures.

a) i) List **three features of a wood workshop**. (3 marks)

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ii) State **two reasons why safety must be observed in a wood workshop**. (2 marks)

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b) i) Draw and label a **simple layout of a wood workshop**, showing the positions of key features such as

i. Workbenches,
ii. Tool storage, and
iii. Safety equipment. (5 marks)

ii) Explain **the importance of proper layout and organization in a wood workshop**. (2 marks)

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3. A student is learning to use hand tools safely and maintain them.

a) i) Identify **four classes of hand tools** used in woodworking. (2 marks)

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ii) Name **two equipment items** found in a wood workshop. (2 marks)

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b) i) Describe **safe procedures for using a saw and a chisel** in the workshop. (4 marks)

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ii) Explain **how to care for and maintain hand tools after use**. (4 marks)

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iii) Discuss **the importance of selecting the correct tool for a specific woodworking task**. (6 marks)

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4. A carpenter wants to improve efficiency in production by applying knowledge from wood technology.

a) i)State **two ways in which understanding wood properties can improve product quality**. (2 mk

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ii) Mention **two tools used for marking and measuring wood**. (2 marks)

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b) i) Explain **how proper handling and use of equipment can prevent accidents in the workshop**. (3 marks)

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ii) Describe **the relationship between wood technology skills and potential income generation**. (3 marks)

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5. While working in a wood workshop, a learner cuts a piece of wood and notices splinters on the workbench.

a) i) Identify **two personal protective equipment (PPE)** the learner should use. (2 marks)

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ii) State **two hazards present in wood workshops**. (2 marks)

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b) i) Explain **the steps to ensure safety when using a bench plane and a hammer**. (3 marks)

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ii) State **three careers related to the study of wood technology**. (3 marks)

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KENYA SENIOR SCHOOL EDUCATION

GRADE 10 MIDTERM 1 ASSESMENT

SERIES 1 EXAMINATIONS – (STEM PATHWAY)

WOOD TECHNOLOGY (Practical)

Time: 1 Hour 30 Minutes

NAME……

ASSESSMENT NO; …… SCHOOL; …….

CLASS…… SIGN……..

No.	Task 1a: Tool selection	Task 1b: Safe handling	Task 1c: Tool maintenance & storage	Task 2a: Project plan & design	Task 2b: Project execution	Task 2c: Project presentation
Marks	5	5	5	5	10	10
Learner's Score						
Performance Level						

SECTION B: PROJECT (40 MARKS)

PROJECT – HAND TOOL USAGE AND WORKSHOP SAFETY

TASK: Conduct practical activities on the **use, maintenance, and safe handling of woodworking hand tools** and prepare a **simple woodworking project** (e.g., small wooden shelf, birdhouse, or toolbox).

TOOLS AND APPARATUS

i. Workbench
ii. Hand tools: saw, chisel, hammer, plane, marking gauge, try square
iii. Measuring tools: ruler, tape measure
iv. PPE: gloves, goggles, apron
v. Wood pieces (softwood or hardwood)
vi. Clamps and vices
vii. Sandpaper
viii. Notebook / graph paper for recording

GUIDING QUESTIONS

Practical Activity 1 – Hand Tools:

a) Select **appropriate hand tools** for cutting, shaping, and smoothing wood. (5 marks)

b) Demonstrate **safe handling procedures for a saw, chisel, and hammer**. (5 marks)

c) Show **proper maintenance and storage of tools after use**. (5 marks)

Practical Activity 2 – Workshop Project:

a) Design and draw a **simple woodworking project plan** including dimensions. (5 marks)

b) Execute the project using **safe hand tool techniques**. (10 marks)

c) Present the **finished product for assessment**, noting smoothness, accuracy, and adherence to the plan. (10 marks)

ASSESSMENT RUBRIC

Criteria	Marks
Correct tool selection and safe handling	10
Accuracy of measurements and workmanship	10
Neatness and finish of the project	10
Maintenance and care of tools	5
Presentation of work and project plan	5
Total	40

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