

KENYAPLEX EXAMS

KENYA CERTIFICATE OF BASIC EDUCATION

SENIOR SCHOOL ASSESSMENT

TERM 2 ENDTERM ASSESSMENT 2026

GRADE 10 – METAL TECHNOLOGY

Time: 2 Hours

LEARNER'S DETAILS

Name: _____ . School: _____ .

Assessment Number: _____ . Date: _____ .

School Code: _____ . Signature: _____ .

INSTRUCTIONS TO CANDIDATES

1. Write your name in the spaces provided above.
2. Write the name of your school and your stream in the spaces provided.
3. Write your admission number and the date of the assessment in the spaces provided.
4. This paper consists of two sections: A and B.
5. Answer all questions in section A and section B.
6. Answer the questions in English.
7. All answers MUST be written in the spaces provided in the paper.
8. Do NOT remove any page from this question paper.

FOR OFFICIAL USE ONLY (EXAMINER'S USE)

SECTION	SECTION A	SECTION B	% SCORE	EE1	EE2	ME1	ME2	AE1	AE2	BE1	BE2
SCORE RANGE	30 MARKS	50 MARKS		90-100	75-89	58-74	41-57	31-40	21-30	11-20	1-10
	POINTS			8 POINTS	7 POINTS	6 POINTS	5 POINTS	4 POINTS	3 POINTS	2 POINTS	1 POINT
LEARNER'S TOTAL SCORE											

SECTION A (30 MARKS)

Answer ALL questions in this section.

1. A student at **Ulanda Girls Senior School** is categorizing terms used in the workshop.

(a) **Define** the term "Personal Protective Equipment. (2 marks)

(b) **Identify** the tool shown in the image below and state its category. (2 marks)



Name: _____ .

Category: _____ .

(c) **State** one business opportunity related to metal technology found in Kenyan towns. (1 mark)

2. During a lesson at **Kiriaini Girl Senior School**, learners discussed OSHA regulations. Use the diagram below to answer.



X



Y

(a) **Identify** the two safety instructions given in the signs above. (2 marks)

X: _____.

Y: _____.

(b) **Outline** the first aid procedure for a minor burn sustained in the workshop. (2 marks)

i. _____

ii. _____

(c) **State** whether the following is **TRUE** or **FALSE**:

Running in the workshop is allowed if you are in a hurry to pick up a tool. [_____] (1 mark)

3. **Metal Classification (5 Marks)** Three learners from **Mang'u High School** are sorting materials.

☒ **Ali:** "This metal is attracted to a magnet; it must be iron-based."

☒ **Kamau:** "This shiny sheet is lightweight and does not rust; I think it is Aluminum."

☒ **Chebets:** "This bar is very hard and used to make cutting tools; it is High Carbon Steel."

(a) **Identify** which learner is describing a **Non-ferrous** metal. _____ (1 mark)

(b) **Distinguish** between Ferrous and Non-ferrous metals. (2 marks)

(c) **Name** the furnace used in the process of producing iron from its ore. (2 marks)

4. **Match** the tool shown in Column A with its correct name in Column B.



Q



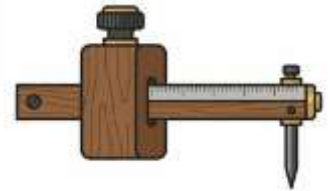
R



S



T



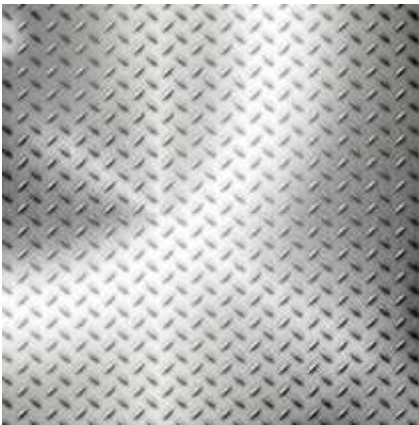
U

Q: _____ . R: _____ .

S: _____ . T: _____ .

U: _____ .

5. (a) **Identify** the forms of material supply shown below. (3 marks)



(i)



(ii)



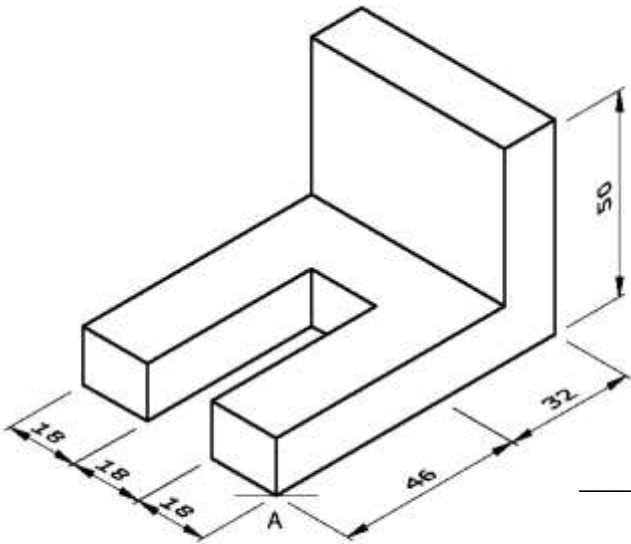
(iii)

(i) _____

(ii) _____

(iii) _____

(b) **Name** the type of pictorial drawing shown in the diagram below. (2 marks)



(c) **Explain** the difference between Isometric and Oblique projections. (3 marks)

Isometric projection	Oblique projection

(d) **State** the importance of dimensioning a drawing before fabrication. (2 marks)

- i. _____
- ii. _____

SECTION B (50 MARKS)

6. Chief Wanyama in **Bungoma** wants to set up a small metal fabrication workshop for the youth. He has provided the following layout plan.

(a) **Identify** two critical components of a workshop layout shown in the plan. (2 marks)

- i. _____
- ii. _____

(b) **Describe** two safety rules regarding the "Welding Bay" area to protect other workers. (4 marks)

- i. _____
- ii. _____

(c) **Explain** the "Three Es" of safety in the context of this workshop. (6 marks)

- i. _____
- ii. _____
- iii. _____

(d) **Suggest** three ways to maintain hand tools to ensure they last long in the Chief's workshop. (3 marks)

- i. _____
- ii. _____
- iii. _____

7. A learner at **Kisumu Boys High School** is tasked to mark out a 100mm×100mm square on a mild steel plate.



(a) **Identify** the tool being used to make the visible line in the image. (1 mark)

(b) **Describe** the steps the learner should follow to ensure the corners of the square are exactly 90°. (4 marks)

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

(c) **Identify** the tool used to make a permanent indentation at the center of a hole before drilling. (2 marks)

(d) The learner needs to join two pieces of sheet metal. **Sketch a Lap Joint.** (5 marks)

(e) **List** three tools required for a **Riveting** process. (3 marks)

- i. _____
- ii. _____
- iii. _____

9. Grade 10 learners were constructing a Blast Furnace

(a) **Identify** the three raw materials fed into the top of the furnace. (3 marks)

- i. _____
- ii. _____
- iii. _____

(b) **Explain** the function of the "Hot Air Blast" in this process. (3 marks)

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

(c) **Compare** the physical properties of **Mild Steel** and **Cast Iron.** (4 marks)

Mild steel	Cast iron

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10. Learners at **Lenana School** noticed that the local market in **Dagoretti** lacks proper waste bins. They decide to fabricate a heavy-duty metal bin.

(a) **Suggest** the most suitable form of material supply for the body of the bin. (2 marks)

(b) **Outline** the process of "Edge Treatment" and explain why it is important for a waste bin. (4 marks)

(c) **Identify** the most appropriate method of joining the heavy metal plates for this project and give a reason. (4 marks)
