

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

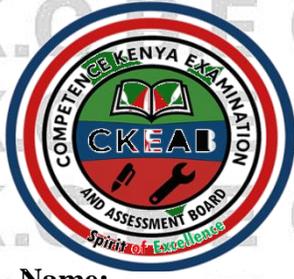
GRADE 10

AVIATION TECHNOLOGY (Theory)

TERM 1

JANUARY 2026

Time: 1 Hour 30 Minutes



COMPETENCE ASSESSMENT EXAMINATION CKEAB 001

LEARNER'S DETAILS

Name: _____

School: _____

Assessment Number: _____ Date: _____

School Code: _____ Signature: _____

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

Question Number	Maximum Marks	Learner Score
1	4 marks	
2	4 marks	
3	2 marks	
4	3 marks	
5	2 marks	
6	2 marks	
7	2 marks	
8	2 marks	
9	2 marks	
10	2 marks	
11	2 marks	
12	2 marks	
13	2 marks	
14	2 marks	
SECTION A SUBTOTAL	40 marks	
15	12 marks	
16	12 marks	
17	10 marks	
18	14 marks	
19	12 marks	
SECTION B SUBTOTAL	60 marks	
GRAND TOTAL	100 MARKS	

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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Turn over

SECTION A: (60 Marks)

Answer all questions in this section.

1. The school Aviation Club watched a documentary on the evolution of flight.

(a) Name two pioneers in the field of aviation (2 marks)

i. _____

ii. _____

(b) Identify **the following**. (2 marks)



B

A. _____

B. _____

2. A learner launched a simple hot air balloon model using a candle and a plastic bag.

Explain **two principles** that allowed the balloon to rise. (4 marks)

i. _____

ii. _____

3. The Aviation Club teacher brought a hand glider model to class.

State **two characteristics** of gliders that help them stay airborne without engines. (2 marks)

i. _____

ii. _____



4. During a lesson about aircraft categories, you observed pictures of an airplane, a helicopter, and a hot air balloon.

Match each to its correct type: (3 marks)

- | | |
|-------------------------------|-----------------|
| (a) Fixed-wing aircraft | Helicopter |
| (b) Rotary-wing aircraft | Hot air balloon |
| (c) Lighter-than-air aircraft | Aeroplane |

5. A pilot was required to choose an aircraft for search and rescue operations in mountainous areas.

Give **two reasons** why a helicopter is suitable for this task. (2 marks)

- i. _____
- ii. _____

6. State two functions of cargo aircraft in air transport. (2 marks)

- i. _____
- ii. _____

7. Give two contributions of the Wright Brothers to modern aviation. (2 marks)

- i. _____
- ii. _____



8. Identify two roles of aerodromes in the aviation industry. (2 marks)

- i. _____
- ii. _____

9. List two safety gears commonly used by aviation technicians while working on aircraft. (2 marks)

- i. _____
- ii. _____

10. Give two common causes of electrical shocks in an aviation workshop. (2 marks)

- i. _____
- ii. _____

11. State two reasons why first aid is important in an aviation workplace. (2 marks)

- i. _____
- ii. _____



12. A student tripped over a toolbox and suffered a cut on the hand.

State **two first aid steps** the responder should take. (2 marks)

- i. _____
- ii. _____

13. Identify **two hazards** associated with personal safety in an aircraft hangar. (2 marks)

- i. _____
- ii. _____

14. State **two signs** that show a person may require CPR. (2 marks)

- i. _____
- ii. _____

SECTION B (60 MARKS)

Answer ALL questions

15. Learners at Sunrise Secondary School visited an aviation museum that showcased early flight inventions.

(a) Describe how the Montgolfier Brothers' hot air balloon (1783) contributed to the understanding of lighter-than-air flight. (3 marks)

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



(b) Explain two key ideas introduced by Sir George Cayley that shaped modern aircraft design. (4 marks)

- i. _____
- ii. _____

(c) The museum guide demonstrated the difference between heavier-than-air and lighter-than-air aircraft.

Explain **two differences** between them. (4 marks)

	<i>Heavier than air aircraft</i>	<i>Lighter than air aircraft</i>
i		
ii		



(d) State one reason why early gliders were important in aviation evolution. (1 mark)

i. _____

ii. _____

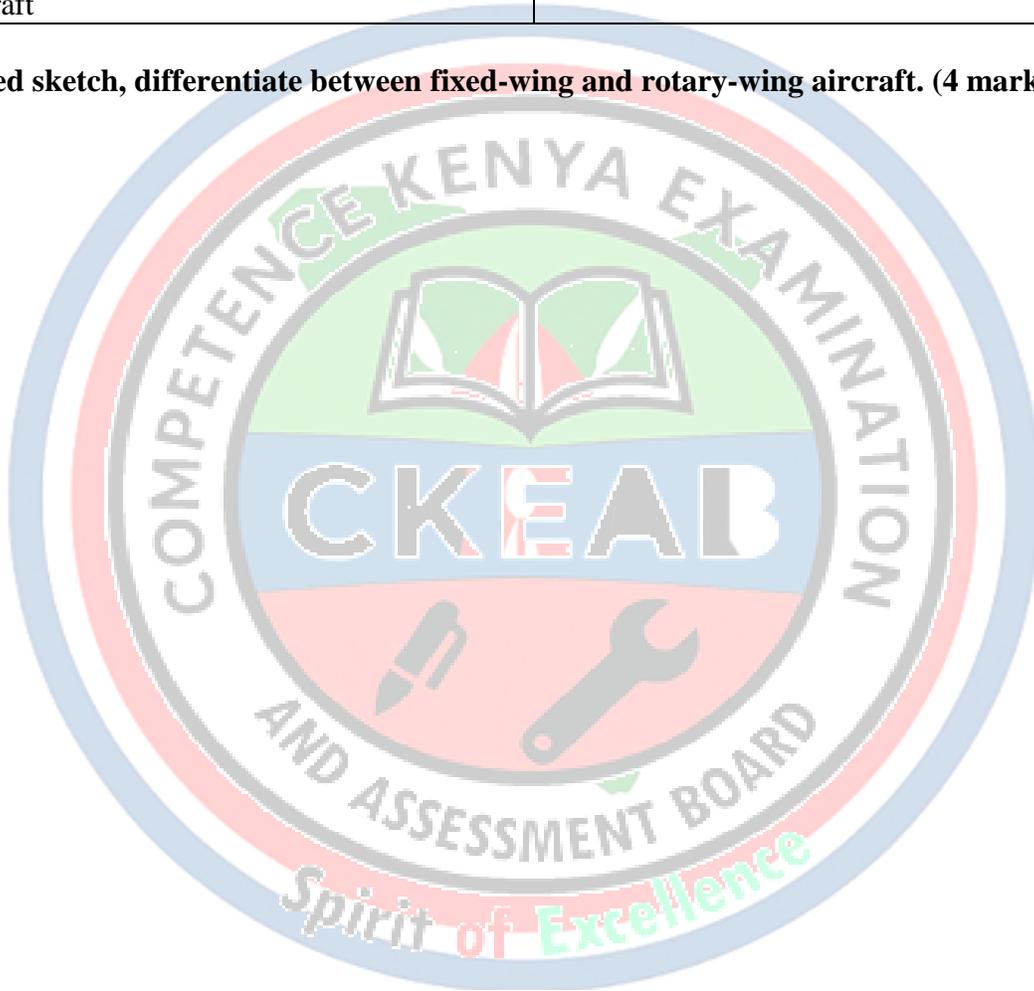
16. During an aviation exhibition, different aircraft were displayed for learners.

(a) A military jet, a passenger airliner, and a crop-spraying aircraft were exhibited.

State one function of each. (3 marks)

Aircraft	Function
Military jet	
Passenger airliner	
Crop spraying aircraft	

(b) Using a labelled sketch, differentiate between fixed-wing and rotary-wing aircraft. (4 marks)



(c) Explain three advantages of fixed-wing aircraft over rotary-wing aircraft in commercial aviation. (3 marks)

i. _____

ii. _____

iii. _____

(d) Identify two reasons why lighter-than-air aircraft are rarely used for passenger transport today. (2 marks)

i. _____

ii. _____

17. The county government plans to build a new airstrip to improve economic activities.

(a) Explain three ways the airstrip will contribute to economic development in the region. (6 marks)

i. _____

ii. _____

(b) State two reasons why aviation is important in emergency response. (2 marks)

i. _____

ii. _____

(c) List two disadvantages of air transport. (2 marks)

i. _____

ii. _____

18. In an aviation workshop simulation, students practiced identifying hazards and following safety procedures.

(a) State four general rules related to personal safety in the aviation workplace. (4 marks)

i. _____

ii. _____

iii. _____

iv. _____

(b) Explain three hazards that may lead to accidents when working around aircraft. (3 marks)

i. _____

ii. _____

iii. _____



(c) A student accidentally touched a live electrical wire and received an electric shock.

Describe **three first aid steps** that should be taken. (3 marks)

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

(d) Outline two safety measures for preventing burns in an aviation environment. (2 marks)

- i. _____
- ii. _____

(e) Explain two reasons why proper housekeeping is important in an aircraft hangar. (2 marks)

- i. _____
- ii. _____

19. Aviation learners were conducting practical work when different accidents happened.

(a) A student dropped a metal bar on the leg of a classmate causing a fracture.

State **three signs** of a fracture. (3 marks)

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



(b) Explain three steps for administering first aid to a person with a suspected fracture. (3 marks)

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

(c) During a wiring exercise, a learner sustained a burn on the arm.

Describe **three first aid steps** the class should take to treat the burn. (3 marks)

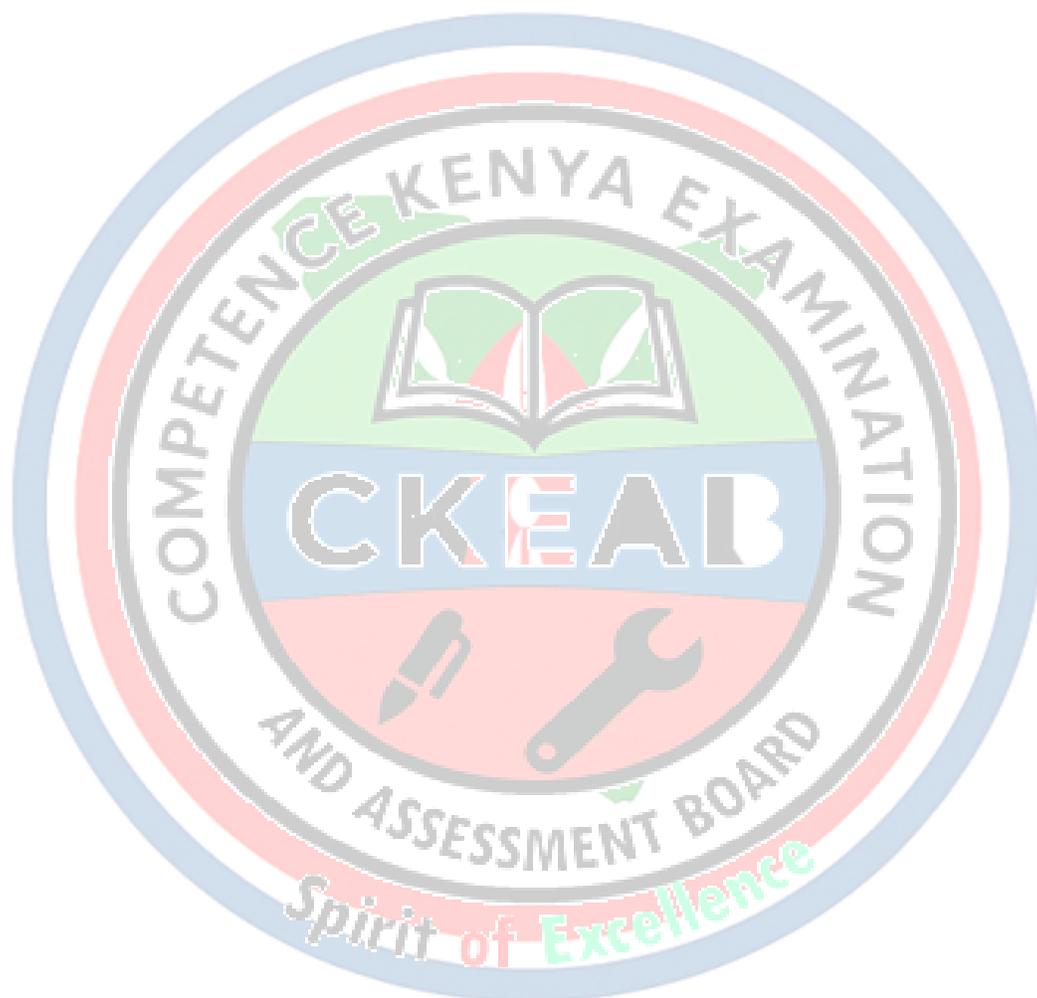
- i. _____
- ii. _____
- iii. _____



(d) A student collapsed and stopped breathing during the lesson.

State **three steps** of performing CPR. (3 marks)

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



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