THE 47 COUNTIES C1 SCHOOLS' JOINT NATIONAL SBA ASSESSEMENT

KENYA CERTIFICATE OF BASIC EDUCATION

SENIOR SCHOOL ASSESSMENT

TERM 2: MIDTERM ASSESSMENT 2026

GRADE 10 – MARINE TECHNOLOGY

Time: 2 Hours

LEARNER'S DETAILS

Name: _____. **School:** _____.

Assessment Number: _____. **Date:** _____.

School Code: _____. **Signature:** _____.

INSTRUCTIONS TO CANDIDATES

1. Write your details as required above
2. This paper consists of two sections: A and B.
3. Answer all questions in section A and section B.
4. Answer the questions in English.
5. All answers MUST be written in the spaces provided in the paper.
6. 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											

Answer ALL questions in this section.

1. **Grade 10 learners were shown a documentary about marine life. They saw the following images of Kenyan aquatic ecosystems.**



Q



R

(a)Name the ecosystem and state one physical characteristic. (5 Marks)

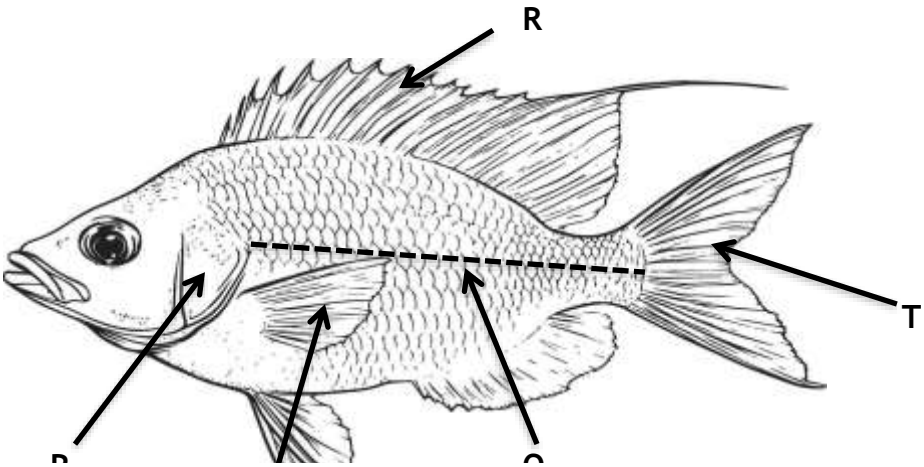
Image	Name of Ecosystem	One Physical Characteristic
(Q)		
(R)		

(b) State one physical characteristic of an estuary. (1 Mark)

_____

_____

2. During a Marine Technology lesson, learners were studying the structure of fish commonly found in Kenya. Below is a diagram of a common Kenyan fish, the Tilapia.



(a) Identify the parts labeled P, Q, R, S and state the function of part T.

P: _____

Q: _____

R: _____

S: _____

(b)What is the Function of the part labeled T:

_____

_____

3. During a career guidance lesson, learners explored different professions related to fisheries and marine science in Kenya.

Column A (Career)	Column B (Work Environment/Role)
(a) Aquaculturist	(i) Studies the chemical composition of seawater.
(b) Marine Biologist	(ii) Manages fish processing factories in Kisumu.
(c) Fish Quality Assurance Officer	(iii) Designs and manages fish cage systems in Lake Victoria.
(d) Oceanographer	(iv) Researches coral reef conservation in Diani.
(e) Fisheries Extension Officer	(v) Educates farmers on pond management in Sagana.

4. Learners were revising aquatic environments and fish characteristics in Kenya. State whether the following statements are TRUE or FALSE:

(a) High salinity is a biological characteristic of marine water. [_____]

(b) Lake Turkana is an example of a fresh water environment in Kenya. [_____]

(c) Cartilaginous fish, like sharks, possess a swim bladder for buoyancy. [_____]

(d) Mangroves act as breeding grounds for many marine fish species. [_____]

(e) The Nile Perch is an indigenous species of Lake Victoria. [ ]

5. A group of learners from Baraka Senior School visited a local fish farm as part of their Agriculture and Environmental Studies project. During the visit, they observed how fish are reared in earthen ponds and how different conditions affect fish growth and survival. They were later asked to apply what they learned in class.

(a) Define Aquaculture. (2 marks)

_____

_____

(b) Outline three factors to consider when selecting a site for an earthen fish pond. (3 marks)

(i) _____

(ii) _____

(iii) _____

(c) Name two internal parts of a fish responsible for breathing and buoyancy. (2 marks)

(i) _____

(ii) _____

(d) Distinguish between Extensive and Intensive aquaculture systems. (3 marks)

_____

_____

_____

_____

SECTION B (50 MARKS)

6. Chief Mwalimu of Kwale County wants to start a community fish farm to improve food security. He has invited Mr. Okoth, a Marine Technology expert, to assess a piece of land near a seasonal river.

(a) Explain why topography and soil type are critical for Chief Mwalimu's earthen pond. (4 marks)

_____

_____

(b) Mr. Okoth recommends an Earthen Lined Pond. Describe the steps involved in constructing this type of pond. (6 marks)

(i) _____

(ii) _____

(iii) _____

(c) Calculate the area of a rectangular pond if the Chief decides to make it 20m long and 15m wide. (2 marks)



(d) Suggest three security measures the Chief should put in place for the farm. (3 marks)

(i) _____

(ii) _____

(iii) _____

7. Musa, a student at Lamu Senior School, is managing a school project involving a Fish Cage in the Indian Ocean. He has just received a batch of Tuna fingerlings.



(a) Identify the process shown in the description above: _____. (1 mark)

(b) Explain why the process mentioned in 7(a) above is done this way. (2 marks)

_____

_____

_____

(c) Musa notices some predators around the cage. Name two common predators in a marine aquaculture setup. (2 marks)

(i) _____

(ii) _____

(d) Explain the importance of Record Keeping in Musa's project. (3 marks)

(e) Why is Liming necessary before stocking a pond? (2 marks)

(i) _____

(ii) _____

8. During a field trip to the Watamu Marine National Park, Grade 10 learners observed a massive bleaching event in the coral reefs.



(a) Explain two biological or chemical factors that could lead to the condition shown in the "bleached" image. (4 marks)

(i) _____

(ii) _____

(b) Describe three ways in which the local community benefits economically from a healthy coral reef ecosystem. (3 marks)

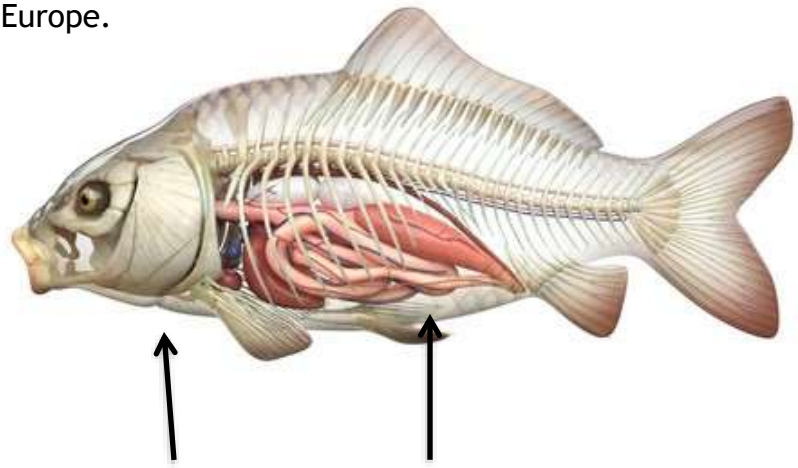
(i) _____

(ii) _____

(iii) _____

(c) Suggest three conservation efforts that can be implemented to protect Kenyan seagrass and mangroves. (3 marks)

9. Achieng works at a fish processing factory in Homa Bay. She is tasked with preparing Nile Perch for export to Europe.



G **H**

(a) Identify the parts labeled G and H of the Nile Perch. (2 marks)

G _____

H _____

(a) state their functions in the life of the Nile Perch. (4 marks)

G _____

H _____

(b) Compare the morphology of the Nile Perch with that of a Great White Shark in terms of skeleton and gills. (4 marks)

Nile perch	Great white shark

(c) Achieng needs to weigh the fish. If a batch of 50 fish weighs 125kg, what is the average weight of one fish in grams? (3 marks)

(d) Explain the role of Fish Processing Factories in the Kenyan economy. (4 marks)

(i) _____

(ii) _____

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