Practice Test

Biology

HIGH SCHOOL

Student Name

School Name

District Name

MASSACHUSETTS DEPARTMENT OF
ELEMENTARY AND SECONDARY
EDUCATION

This is a practice test. Your responses to practice test questions must be recorded on your Practice Test Answer Document.

Mark only one answer for each multiple-choice question. If you are not sure of the answer, choose the answer you think is best.

HOW TO ANSWER OPEN-RESPONSE QUESTIONS

- Read all parts of each question carefully.
- Make each response as clear, complete, and accurate as you can.
- Support your responses.
- Check your answers.

Biology

DIRECTIONS

This practice test contains two multiple-choice questions and one open-response question. Mark your answers to these questions in the spaces provided on page 4 of your Practice Test Answer Document.

1 The bones that make up the forelimbs of monkeys, cats, whales, and birds are similar. Which of the following statements **best** supports the evolutionary relationship of these animals?

A. The animals have different ancestries but have adapted to similar environments.

B. The animals share a common ancestry but have adapted to different environments.

C. The animals at one time lived in different environments but now share an environment.

D. The animals use their forelimbs for identical activities but live in different environments.

2 Red lionfish have been introduced into the Caribbean Sea and the Gulf of Mexico. The red lionfish are predators that compete with native fish for space and food, causing coral reef fish population sizes to decrease. Government and environmental groups are encouraging coastal communities to catch red lionfish and serve them at restaurants.

Which of the following best explains how catching and eating red lionfish could help preserve coral reefs?

A. Reef fish will learn that red lionfish are no longer dangerous.

B. Red lionfish will return to their native habitats to avoid being caught.

C. Humans will fill the role of predator and control the red lionfish population.

D. Restaurants that serve red lionfish will attract more tourists to visit coral reefs.

Question 3 is an open-response question.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations) in your Practice Test Answer Document.**
- **If you do the work in your head, explain in writing how you did the work.**

Write your answer to question 3 in the space provided on page 4 of your Practice Test Answer Document.

3 The box below shows a list of supplies that are available in a laboratory.

- four flasks with stoppers
- floodlight
- tap water
- graduated cylinders
- small aquarium plants
- four small fish
- bromthymol blue (a chemical indicator that changes color from blue to yellow as the level of carbon dioxide in a solution increases)

The class sets up an experiment with the four flasks as shown.

Flask 1: 100 mL water, 1 mL bromthymol blue, plant
Flask 2: 100 mL water, 1 mL bromthymol blue, 2 small fish
Flask 3: 100 mL water, 1 mL bromthymol blue, 2 small fish, plant
Flask 4: 100 mL water, 1 mL bromthymol blue

Flask 1 Flask 2 Flask 3 Flask 4

All four flasks are stoppered and placed under the floodlight.

a. What color would the solution in **each** flask be after a few hours?

b. Explain how the processes that have occurred in **each** flask result in the observed color of the bromthymol blue solutions.

STOP!

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM

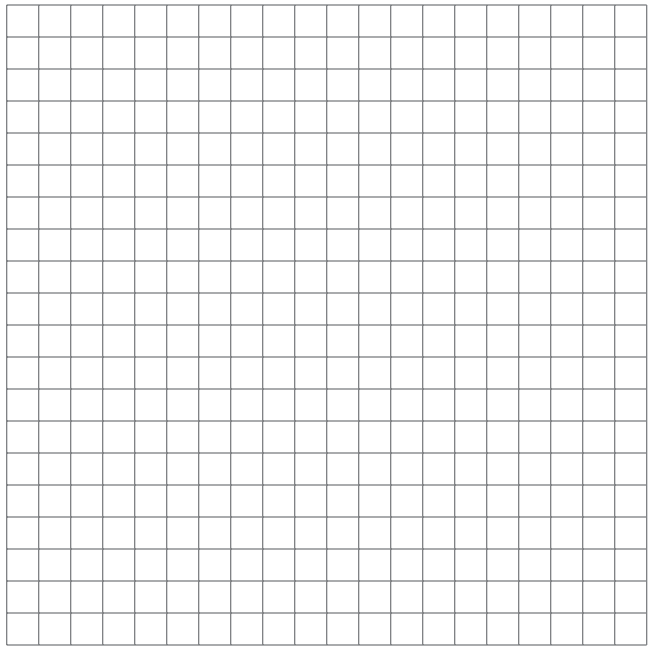
High School Biology

Practice Test Answer Document

School Name:_____ District Name:_____ Last Name of Student: _____ First Name of Student:_____	**Marking Instructions** • Use a No. 2 pencil only. • Do not use ink, ballpoint, or felt tip pens. • Make solid marks that fill the circles completely. • Erase cleanly any marks you wish to change. • Make no stray marks on this form. • Do not fold, tear, or mutilate this form.

1. Ⓐ Ⓑ Ⓒ Ⓓ
2. Ⓐ Ⓑ Ⓒ Ⓓ

3. _____



STOP!

NO TEST MATERIAL
ON THIS PAGE