

Biology I

Pre-Test

Introduction

Introduction

The pre-test that follows is designed to identify areas where you, the student, can improve your skills before or after taking the Biology I end-of-course test. This pre-test will be similar in format to the multiple-choice section of the Mississippi end-of-course SATP test for Biology I. However, this pre-test does not include open-ended written response questions. It contains more multiple-choice questions than the actual Biology I SATP end-of-course test (100 instead of 85).

Directions

Read the directions on the following page. These directions should be similar to what you will see on the actual SATP end-of-course test for Biology I. Once you have completed this pre-test, circle the questions you answered incorrectly on the pre-test evaluation chart on page 24. For each question that you missed on the pre-test, review the corresponding sections in the book as given in the evaluation chart. Read the instructional material, do the practice exercises, and take the section review tests at the end of each section.

Purpose of the Pre-Test

The following pre-test can be used as practice for the multiple-choice part of the actual SATP Biology I test, but it is primarily a diagnostic tool to help you, the student, identify which content areas you can improve in order to prepare better for the actual test. Any pre-test question answered incorrectly may identify content you need to review. Review the corresponding content(s) indicated in the Pre-Test Evaluation Chart by reading the instructional material on the given pages and completing the practice exercises and reviews. By reviewing the content material, you will improve mastery of the material to be tested on the SATP Biology I test and potentially increase the score you receive on that test. (The practice tests, which are given in separate booklets, are provided to give you, the student, additional practice taking tests similar to the actual SATP Biology I test.)

Scoring on the Actual SATP for Biology I

The actual test that you will take to pass the Biology I course will consist of 85 multiple-choice questions and 2 open-ended response questions. Out of these 85 multiple-choice questions, only 70 questions will be scored. Only one of the constructed response questions will be scored. The scorable questions are pre-determined. The other 15 multiple-choice questions embedded throughout the test are field-test questions that will not be scored. You will not know which questions will be scored and which ones will not, so you should answer each and every question as if it will be scored. The same is true for the two constructed response questions. One is pre-determined as scorable, and the other is an experimental question. You will not know which one is which, so answer them both as though they will be scored. (There are no constructed response questions on the pre-test in this review guide.)

You must obtain a scale score of 300 or higher on the actual SATP Biology I test. This scale score is determined by taking the questions you answered correctly (your raw score) and statistically converting them by taking into account the difficulty of the test questions. This statistical conversion will vary from test to test, so there is no set formula for converting a raw score into a scale score. Your raw score is determined by one point for each multiple-choice question you answer correctly and a maximum score of four on the scorable constructed response question. You may score 0 to 4 points on the constructed response depending on how completely and accurately you answered the question.

Scoring the Pre-Test

Since there is no set formula for converting a raw score into a scale score, this pre-test cannot be scored on a scale score. However, on this pre-test, you can approximate your score. On this pre-test, there are no open-ended constructed response questions, but there are 15 additional multiple-choice questions. Count each multiple-choice question as one point for a total of 100 possible points. A raw score of 50 out of 100 on this pre-test would approximate a scale score of 300 on the actual test and may indicate that you have the minimum knowledge necessary to pass the end-of-course test. However, by identifying areas needing improvement in this pre-test, you have the opportunity to review and master the content before taking or re-taking the test. Reviewing the content now may improve your score on the actual test.

9. Carson tested reaction times for 10 classmates and 2 teachers. He had each test subject separate his or her index finger and thumb exactly one inch apart. He then dropped a ruler between the index finger and thumb and measured the distance on the ruler. The quicker the reaction time, the smaller the measurement on the ruler. From his data, he concluded that it takes the average person 24 millimeters to react.

All of the following would be effective added controls for his experiment EXCEPT —

- A limiting the experiment to one age group.
- B increasing the number of subjects tested.
- C increasing the width between the finger and thumb to two inches.
- D testing all of the subjects at the same time of the day such as right when they wake up in the morning.

(A) (B) (C) (D)

10. Dionna and Tiffany were conducting an experiment to determine the effects of exercise on heart rate and blood pressure. After discussing different methods of exercising, they decided to have each test subject climb up and down the steps outside the classroom. Dionna wrote down that they would have each person go up and down exactly three steps as quickly as possible for three minutes. Why did Dionna need to be this specific when she wrote out the procedure for the experiment?

- A Dionna wanted to have everything her way.
- B Dionna didn't want the subjects going too far from the testing station.
- C Dionna wanted to make sure that the subjects could follow directions.
- D Dionna wanted to control all of the possible variables.

(A) (B) (C) (D)

11. Dr. Kildare has studied the increase of asthma among children ages 6-12 and ages 13-18 over the past 25 years. What type of graph would BEST show the results of his study?

- A bar graph
- B line graph
- C pie graph
- D pictograph

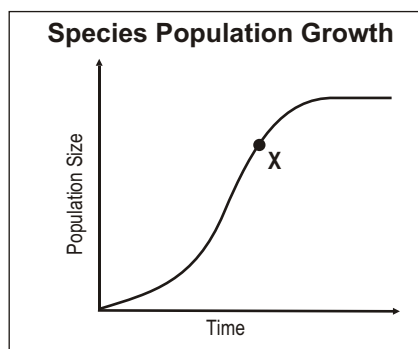
(A) (B) (C) (D)

12. A national study was conducted to compare the results of tenth grade males and tenth grade females on standardized science tests in the years 2002, 2003, and 2004. What type of graph would BEST show the results of this study?

- A bar graph
- B line graph
- C pie graph
- D diagram

(A) (B) (C) (D)

13. Look at the graph below:



Which of the following is correct based on the information in the graph?

- A At point X, the population is decreasing.
- B At point X, the population is increasing.
- C At point X, the population is stable.
- D At point X, the species has become extinct.

(A) (B) (C) (D)

Biology I Pre-Test

Evaluation Chart

Circle the questions you answered incorrectly on the chart below, and review the corresponding sections in the book. Read the instructional material, do the practice exercises, and take the section review tests at the end of each section.

If you missed question #:	Go to section(s):	If you missed question #:	Go to section(s):	If you missed question #:	Go to section(s):
1	1.3	35	5.2	69	9.4
2	1.4	36	5.2	70	9.4, 9.5
3	1.2	37	5.2	71	11.1
4	1.5	38	5.4	72	11.1
5	1.6	39	5.4	73	11.4
6	2.2	40	6.1	74	11.6, 16.2
7	2.2	41	6.4	75	12.1
8	1.5	42	6.2	76	12.2
9	2.2	43	6.3	77	12.3
10	2.2	44	8.1	78	12.2
11	2.4	45	8.1	79	13.3
12	2.4	46	8.1	80	11.3, 11.4
13	2.4	47	8.1, 8.2	81	11.4
14	2.4	48	8.1	82	14.1
15	3.1	49	8.2	83	14.1
16	3.2	50	8.3	84	14.3
17	3.2	51	8.3	85	14.3
18	3.3	52	7.1	86	15.5
19	3.3	53	7.1	87	15.6
20	3.3	54	7.1	88	16.2
21	3.4	55	7.2	89	16.2
22	3.4	56	7.3	90	16.1
23	4.2	57	7.4	91	16.1
24	4.3	58	7.2	92	16.1
25	4.5	59	7.2	93	16.1
26	4.4	60	10.1	94	16.1
27	3.6, 4.6	61	10.2	95	15.1
28	4.6	62	10.4	96	15.1
29	5.1	63	10.3	97	16.4
30	5.1	64	10.3	98	16.5
31	5.3	65	9.1, 9.2	99	16.3
32	5.3	66	9.4	100	16.5
33	5.3	67	9.2		
34	5.2	68	9.1, 9.2		