Practice Test – Biology Answer Key

Item Number	Item Type	TEKS	Maximum Number of Points	Correct Answer(s)
1	Multiple Choice	1.B.4.A	1	B
2	Multiple Choice	3.B.7.B	1	C
3	Multiple Choice	4.B.10.A	1	C
4	Multiple Choice	5.B.12.A	1	A
5	Multiple Choice	2.B.6.C	1	C
6	Multiple Choice	1.B.4.B	1	A
7	Text Entry	5.B.11.A	1	See Appendix 1.1
8	Multiple Choice	4.B.10.B	1	D
9	Multiple Choice	2.B.6.E	1	C
10	Multiple Choice	1.B.4.C	1	D
11	Short Constructed Response	5.B.12.C	2	See Appendix 1.2
12	Multiple Choice	3.B.7.F	1	B
13	Multiple Choice	1.B.5.C	1	C
14	Multiple Choice	2.B.6.D	1	B
15	Multiple Choice	3.B.8.B	1	C
16	Multiple Choice	4.B.9.C	1	B
17	Multipart	3.B.7.A	2	A, B
18	Multiple Choice	5.B.12.B	1	A
19	Drag and Drop	2.B.6.C	2	See Appendix 1.3
20	Multiple Choice	1.B.5.B	1	A
21	Multiple Choice	5.B.11.A	1	D
22	Short Constructed Response	1.B.4.C	2	See Appendix 1.4
23	Multiple Choice	3.B.7.E	1	C
24	Multiple Choice	1.B.4.A	1	B
25	Multiple Choice	2.B.6.A	1	C
26	Hot Spot	4.B.10.B	2	2, 3
27	Multiple Choice	5.B.12.E	1	A
28	Multiple Choice	2.B.6.B	1	C
29	Multiple Select	2.B.6.G	2	B, D
30	Multipart	4.B.10.C	2	D, C
31	Multiple Choice	3.B.7.A	1	C
32	Multiple Choice	5.B.11.B	1	C
33	Multiple Choice	3.B.7.C	1	D
34	Drag and Drop	4.B.9.A	2	See Appendix 1.5
35	Multiple Choice	3.B.8.A	1	C
36	Multiple Choice	5.B.12.D	1	C

37	Text Entry	2.B.6.E	1	5
38	Multiple Choice	4.B.9.A	1	A
39	Multiple Choice	5.B.12.A	1	B
40	Multiple Select	1.B.5.A	2	C, F
41	Multiple Choice	3.B.7.D	1	D
42	Multiple Choice	4.B.9.B	1	C
43	Multiple Choice	1.B.5.A	1	D
44	Multiple Choice	2.B.6.F	1	B
45	Multiple Choice	5.B.12.C	1	C

Practice Test – Biology Science

Appendix

1.1

Leguminous plants, such as bean plants, share a mutualistic relationship with certain rhizobium bacteria. The plants develop harmless nodules on their roots, where the bacteria live. In return, the bacteria convert an important element from the atmosphere into a nutrient form that the plants can use.

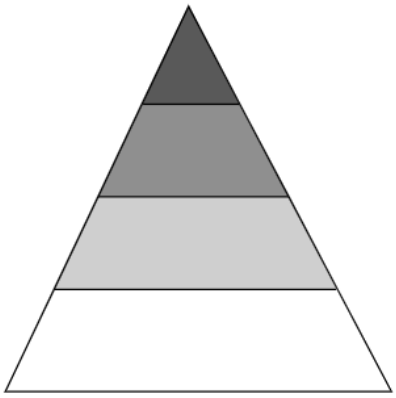
What essential element is converted to a useable form by the rhizobium bacteria?

Enter your answer in the box.

nitrogen **OR** Nitrogen **OR** N **OR** N_2

1.2

A student is drawing an energy pyramid.



Examine the diagram and answer these questions:

- What is the original source of all energy for the energy pyramid?
- How does the amount of energy available at each level of the pyramid change from the bottom to the top?

Read the questions carefully. Then enter your answers in the box provided.

The student states that the sun is the source of all energy for the energy pyramid AND that energy is lost as you move from one trophic level to the next (from the bottom of the pyramid to the top).

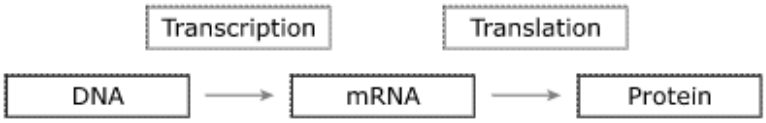
1.3

A student makes a diagram to demonstrate how DNA encodes traits for organisms.

Complete the diagram to accurately show the relationship among the structures and processes.

Move the correct answer to each box. Not all answers can be used in all boxes.

Protein
DNA
mRNA
Transcription
Translation



1.4

A bacteriophage uses the lysogenic cycle to replicate itself. Describe the bacteriophage's replication process. Be sure to include information about what happens to the host cell during and as a result of this cycle.

Read the question carefully. Then enter your answer in the box provided.

Bacteriophages reproduce using the lysogenic cycle by inserting their nucleic acid into a host cell and reproducing without destroying the cell. This process results in each daughter cell containing the viral genome.

1.5

A Venn diagram comparing the functions of proteins and nucleic acids is shown.

Which functions **BEST** complete the Venn diagram?

Move the correct answer into each box. Not all answers will be used.

Provide energy
Are involved in translation
Encode genetic information
Transport substances
Provide insulation
Are stored as glycogen