

AP Biology Final Exam – Fall Term 2017–2018

Mr. Sprague

Topics
Required Calculator

Hillis Chapters 1–14, Chapter 41, and Appendix B (statistics)
Four-function with square root, scientific, or graphing calculator

Section I

Thursday, January 18, 2018

Time
Number of Questions
Percent of Exam Grade
Writing Instrument

45 minutes
27 multiple choice questions and 3 grid-in mathematics questions
50%
Pencil required

Section II

Friday, January 19, 2018

Reading Time
Writing Time
Number of Questions
Percent of Exam Grade
Writing Instrument
Suggested Writing Time

10 minutes (to read the questions and plan your answers)
1 hour and 20 minutes
2 essay questions and 6 short free response questions
50% (25% essay questions and 25% short questions)
Pen with black or dark blue ink
22 minutes per essay and 6 minutes per short question

Concepts to Review since Exam 5 (Hillis chapters 12, 13, 14):

- Biotechnology and Evolutionary-Developmental Biology
 - Understand stand the terms *recombinant DNA* and *restriction enzyme* and those they are used in labs.
 - Be able to describe the processes of *gene sequencing*, *genetic engineering*, *cloning*, and *gel electrophoresis*.
 - Be able to interpret data and diagrams of bacterial transformation experiments.
 - Be able to discuss the benefits to society and concerns about genetic technology.
 - Be able to explain how changes in gene expression leads to *cell differentiation*.
 - Be able to explain how the spatial location of cells influences gene expression.
 - Be able to explain the role of developmental genes in evolutionary history.

Sample Answer Sheet for Grid-In Questions:

Integer answer: 5024
(either position is correct)

	5	0	2	4	
(−)	⋅	/	/	/	⋅
	⋅	⋅	⋅	⋅	⋅
	0	●	0	0	0
	1	1	1	1	1
	2	2	●	2	2
	3	3	3	3	3
	4	4	4	●	4
	●	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9

Decimal answer
−4.13

	−	4	.	1	3
●	⋅	/	/	/	⋅
	⋅	⋅	●	⋅	⋅
	0	0	0	0	0
	1	1	1	●	1
	2	2	2	2	2
	3	3	3	3	●
	4	●	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9

Fraction answer: −2/10
(does not have to be reduced)

	−	2	/	1	0
●	⋅	/	●	/	⋅
	⋅	⋅	⋅	⋅	⋅
	0	0	0	0	●
	1	1	1	●	1
	2	●	2	2	2
	3	3	3	3	3
	4	4	4	4	4
	5	5	5	5	5
	6	6	6	6	6
	7	7	7	7	7
	8	8	8	8	8
	9	9	9	9	9