

Feedback — Quiz 1: Overview and Molecular Biology

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You submitted this quiz on **Mon 3 Aug 2015 4:26 PM PDT**. You got a score of **10.00** out of **10.00**.

Question 1

The central dogma of molecular biology tells us that information is passed from

Your Answer	Score	Explanation
<input type="radio"/> DNA to methylation to RNA to protein		
<input type="radio"/> DNA to epigenetics to protein		
<input type="radio"/> RNA to DNA to protein		
<input checked="" type="radio"/> DNA to RNA to protein	✓ 1.00	
Total	1.00 / 1.00	

Question 2

Which of the following is one of the major drivers of the sequencing revolution that began after 2008?

Your Answer	Score	Explanation
<input type="radio"/> Increased sample collection		
<input type="radio"/> Improved Sanger sequencing		
<input checked="" type="radio"/> Decreased cost of sequencing	✓ 1.00	

☐ Sequencing for precision medicine

Total

1.00 / 1.00

Question 3

Which of the following is an exclusive characteristic of genomics compared to traditional biology?

Your Answer	Score	Explanation
<input checked="" type="radio"/> Massive amounts of data	✓ 1.00	
<input type="radio"/> Clever experimental design		
<input type="radio"/> Sequencing		
<input type="radio"/> Low throughput experiments		
Total	1.00 / 1.00	

Question 4

Genomic data science involves techniques from which of these disciplines?

Your Answer	Score	Explanation
<input type="radio"/> Molecular Biology		
<input checked="" type="radio"/> All of the these options	✓ 1.00	
<input type="radio"/> Statistics		
<input type="radio"/> Computer Science		
Total	1.00 / 1.00	

Question 5

Which of the following is an activity that genomic data scientists do not perform?

Your Answer	Score	Explanation
<input type="radio"/> Population genomics		
<input checked="" type="radio"/> Pipetting	✓ 1.00	
<input type="radio"/> Integrative genomics		
<input type="radio"/> Statistics and machine learning		
Total	1.00 / 1.00	

Question 6

Which of these is not one of the DNA nucleic acids?

Your Answer	Score	Explanation
<input type="radio"/> Cytosine		
<input checked="" type="radio"/> Alanine	✓ 1.00	
<input type="radio"/> Guanine		
<input type="radio"/> Adenine		
Total	1.00 / 1.00	

Question 7

Transcription is a process that converts DNA to

Your Answer	Score	Explanation
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☐ genes☒ RNA  1.00☐ Any other molecule☐ polymerases

Total 1.00 / 1.00

Question 8

The cost to sequence a human genome today, in U.S. dollars, is approximately

Your Answer	Score	Explanation
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☐ \$30 million☐ \$3 billion☒ \$1000  1.00☐ None of these options

Total 1.00 / 1.00

Question 9

DNA encodes instructions for

Your Answer	Score	Explanation
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☒ Creating an entire human being from scratch  1.00☐ Regulating body temperature☐ Enveloping viruses that infect a cell☐ Helping us to see objects

Total

1.00 / 1.00

Question 10

One major difference between humans and bacteria is

Your Answer**Score****Explanation**

☐ The human genome is made of DNA, while bacteria are made of RNA.

☐ Human genes are first transcribed to RNA, while bacterial genes are not.

☒ Human cells contain separate organelles called mitochondria, and bacterial cells do not.  1.00

☐ Human proteins are made of combinations of 20 amino acids, while bacterial proteins use a smaller set of 12 amino acids.

Total

1.00 /
1.00