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The "Bioinformatics" Specialization

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### Feedback — Week 1 Quiz

Help Center

You submitted this quiz on **Sun 13 Sep 2015 10:56 PM PDT**. You got a score of **10.00** out of **10.00**.

#### **Question 1**

True or False: The human genome is the longest genome of any organism on Earth.

Your Answer		Score	Explanation
True			
<ul><li>False</li></ul>	<b>~</b>	1.00	
Total		1.00 / 1.00	

#### **Question 2**

What is a cycle that visits every node in a graph called?

Your Answer	Score	Explanation
<ul><li>Erdosian</li></ul>		
<ul><li>Hamiltonian</li></ul>	1.00	
<ul><li>Eulerian</li></ul>		
<ul><li>Nashlike</li></ul>		
ode Bruijnian		
Total	1.00 / 1.00	

## **Question 3**

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Below is the adjacency list of a graph. Which of the following is a Hamiltonian cycle in this graph? (Select all that apply.)

1 -> 2,3,5 2 -> 4,5 3 -> 1,2,5 4 -> 1,3 5 -> 2,4

Your Answer		Score	Explanation
1 -> 5 -> 4 -> 3 -> 2 -> 1	<b>~</b>	0.50	
<pre>2 -&gt; 4 -&gt; 3 -&gt; 5 -&gt; 2</pre>	<b>~</b>	0.50	
1 -> 5 -> 2 -> 4 -> 3 -> 1	<b>~</b>	0.50	
1 -> 3 -> 2 -> 5 -> 4 -> 1	<b>~</b>	0.50	
Total		2.00 / 2.00	

# **Question 4**

Which of the following are 3-universal linear binary strings? (Select all that apply.)

Your Answer		Score	Explanation
<b>1011100010</b>	~	0.50	
0101001101	~	0.50	
0111010010	~	0.50	
1000101110	<b>~</b>	0.50	
0011100100	<b>~</b>	0.50	
1101000111	<b>~</b>	0.50	
Total		3.00 / 3.00	

## **Question 5**

What is the outdegree of GCG in the de Bruijn graph constructed for the following collection of 4-mers? (Hint: how can you answer this question without having to construct the de Bruijn graph?)

GCGA CAAG  $\mathsf{A}\mathsf{A}\mathsf{G}\mathsf{A}$ GCCG ACAA AGTA TAGG AGTA ACGT AGCC TTCG AGTT AGTA CGTA GCGC GCGA GGTC GCAT AAGC TAGA ACAG TAGA TCCT CCCC GCGC ATCC AGTA AAGA GCGA CGTA

#### You entered:

5

Your Answer		Score	Explanation
5	<b>~</b>	3.00	
Total		3.00 / 3.00	

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