Feedback — Quiz 3: Computing Technology

Authentication is not required for this quiz.

You submitted this quiz on **Tue 4 Aug 2015 9:59 PM PDT**. You got a score of **8.00** out of **10.00**.

Question 1

A computer algorithm is

Your Answer		Score	Explanation
⊙ A precise specification of all the steps needed to compute a solution to a problem	✔	1.00	
○ A protocol for transmitting data over a network			
○ A description of the memory organization within a computer			
○ A description of the hardware and software capabilities of a computer			
Total		1.00 / 1.00	

Question 2

You can make a program more efficient by

Your Answer	Score	Explanation
○ Replacing your hard drives with faster solid state drives		
○ Recompiling it on a different computer		

○ Running it on the Amazon cloud

⦿ Re-designing the algorithm to require fewer steps   ✔   1.00

Total   1.00 / 1.00

Question 3

DNA sequences can be represented efficiently using

Your Answer	Score	Explanation
⦿ Two bits for each of the 4 possible bases ✔	1.00	
○ The compressed BAM file format		
○ One byte for each of the 4 possible bases		
○ The SAM alignment format		
Total	1.00 / 1.00	

Question 4

A programming language is

Your Answer	Score	Explanation
○ The way we describe high-level algorithms		
⦿ A formal language used to instruct computers what to do ✔	1.00	
○ A web-based environment for building computer programs		
○ A method for translating between languages such as English and French		
Total	1.00 / 1.00	

Question 5

Software engineering involves

Your Answer	Score	Explanation
◯ Debugging computer code		
◯ Testing programs on a wide range of examples to see if they perform as expected		
⦿ All of these options	✔ 1.00	
◯ Updating code so that it remains compatible with other software systems.		
Total	1.00 / 1.00	

Question 6

Bowtie, TopHat, and Cufflinks are

Your Answer	Score	Explanation
◯ A web-based system for browsing genome data		
◯ Programs for determining the function of a gene		
◯ Elements of men's formal evening wear		
⦿ A suite of software tools for alignment and analysis of next-generation sequence data	✔ 1.00	
Total	1.00 / 1.00	

Question 7

Sequence alignment refers to

Your Answer	Score	Explanation
◯ Making sure that all the DNA sequences in a file use the same format		
◯ Finding the single nucleotide polymorphisms in a person's DNA		
◯ Shuffling the positions in a sequence to randomize them		
⦿ Lining up two DNA sequences so that positions with the same base match one another	✔ 1.00	
Total	1.00 / 1.00	

Question 8

A software pipeline for RNA sequence (RNA-seq) analysis will

Your Answer	Score	Explanation
◯ Process large raw sequence files into a summary table showing which genes were present		
⦿ Create a database in which one can efficiently store and retrieve results	✘ 0.00	
◯ Evaluate the best RNA-seq protocol for minimizing sequencing artifacts		
◯ Automatically update all software to the latest version		
Total	0.00 / 1.00	

Question 9

Which of the following is not a computer operating system?

Your Answer		Score	Explanation
⦿ Google Drive	✔	1.00	
◯ Mac OS X			
◯ Unix			
◯ Microsoft Windows			
Total		1.00 / 1.00	

Question 10

A data set large enough to overwhelm the main memory of a computer would

Your Answer		Score	Explanation
◯ Be at least 100 gigabytes in size			
◯ Be larger than the available RAM			
◯ Use uncompressed files rather than compressed ones			
⦿ Contain more than 1000 genomes' worth of data	✖	0.00	
Total		0.00 / 1.00	