Grading Exam 2: Essays 1, 2, & 3

Essay 1:

7 pts - Transcription

- occurs in the nucleus of the cell
- DNA has genetic information/code
- a complementary copy, mRNA, is made

7 pts - Translation

- mRNA travels to ribosome
- ribosome is site of protein synthesis
- tRNA brings correct amino acids to ribosome and attaches them with codon-anticodon pairing
- the string of amino acids is a protein

6 pts - Example

- CTA(in DNA) transcribes to GAU (in mRNA)
- the amino acid called for is aspartic acid
- a valid mutation is in the third base (for example, GAC in the mRNA or CTG in the DNA)

Essay 2:

about 7 pts each - Describe using whichever story you chose for the origin of life including:

- molecules to monomers
- monomers to polymers
- polymers to simple life

You must describe where the hydrogen atom resides at each step!

Essay 3:

13 pts – f_l estimate

- have a number (not just a range) for f_l
- have a consistent reasoning for your number
- when describing factors important in determining your f_l, describe HOW they affect your estimate
- when describing factors important in determining your f_l, describe WHY they are important

7 pts – Most difficult step for developing life at the level of a virus

- many people forgot to answer this part of the question
- must describe WHY it is the hardest step; why is it harder than the others?
- as long as you had an answer that made any sense, you were given credit