Name _____

Chem 150 - Spring 2015
Unit 12 & 13 - Practice Questions

1. What are the two functions of the electron transport chain?

2. Describe what will you get when you hydrolyze a monoacylglyceride,?

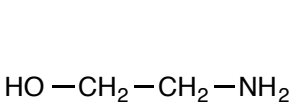
3. What type of molecule is made during translation? _____

4. What chemical building blocks are used to make a gene?
   _____

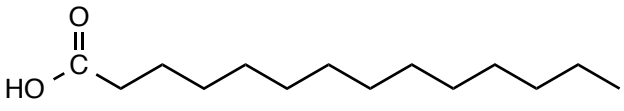
5. What type of molecule is made during transcription? _____

6. Bacteria are able to synthesize human proteins after the take up the human DNA that codes for that protein. From the standpoint of protein primary structure, what makes this possible?

7. Using the structures for ethanolamine and the fatty acid myristic acid shown below, draw the structure of the glycerophospholipid that contains ethanolamine and two molecules of myristic acid.



ethanolamine



myristic acid

   a. Describe the structure that molecules of this glycerophospholipid will form when placed in water

8. Describe how the mitochondria produce a H^+ concentration gradient and then use it to produce ATP.

9. What is the difference between *active* and *passive* transport?

10. The mitochondria use a transport protein to move ATP from the mitochondrial matrix, through the inner mitochondrial membrane, to the cytosol of the cell. What can't ATP pass through the membrane without a transport protein?

11. Describe the components that are combined to make a ribonucleodide.

12. What are the differences between the ribonucleotides, which are used to make RNA, and the deoxyribonucleotides, which are used to make DNA.

13. Describe how the nucleotides in RNA and DNA are joined together to make a nucleic acids molecule.

14. Describe the relationship between the two strand in a DNA double-helix and how either one of them can be used to replicate a DNA double-helix.

15. What is a codon?

16. What is a stop codon?

17. Explain why a mutation in one cell of a developing embryo is more harmful than a mutation in one cell of an adult.

18. What is a mutagen?

19. What role does a ribosome play in protein synthesis?