

### CHAPTER 15.1 – 15.3: Mutations

1. Define point mutations.

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2. Define mutations that are:

a. Missense – \_\_\_\_\_

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b. Nonsense – \_\_\_\_\_

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c. Insertion or deletion – \_\_\_\_\_

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3. What are the differences between spontaneous and induced mutations.

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4. What is THE significance of mutations.

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5. Briefly describe each of the following genetic disorders:

a. Tay-Sachs \_\_\_\_\_

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b. Huntington disease \_\_\_\_\_

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c. Hemophilia \_\_\_\_\_

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Name: \_\_\_\_\_

Question Set 34

d. Sickle cell anemia \_\_\_\_\_  
\_\_\_\_\_

6. Why are most genetic defects related to enzyme function recessive disorders?

\_\_\_\_\_

7. Are all genetic disorders recessive? \_\_\_\_\_

8. How do the coding regions and genome sizes of prokaryotes and eukaryotes compare?

\_\_\_\_\_  
\_\_\_\_\_

9. Much of mammalian non-coding DNA is in the form of \_\_\_\_\_

10. What is the cause of Fragile X?

\_\_\_\_\_  
\_\_\_\_\_

11. What is the cause of Huntington's disease?

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