

Biology

Name: _____

Worksheet over pp 342-349

Date: _____

Hour: _____

1. What is gene regulation?

2. What is the purpose of an operon?

3. Name the four parts of an operon:

4. What is a repressible operon?

5. What does *lac* stand for?

6. What types of cells do the *lac* operon and *trp* operon occur in?

7. What is the purpose of a transcription factor?

8. What is the main purpose of *hox* genes?

9. What is one mutation in fruit flies that has been caused by *hox* genes?

10. What types of disorders could RNAi possibly help?

11. Define mutation:

12. What is a point mutation?

13. What is the difference between a missense mutation and a nonsense mutation? _____

14. What is the difference between an insertion and a deletion mutation? _____

15. Why are insertions and deletions called “frameshift” mutations?

16. Name one disorder associated with each of the following types of mutations:

Missense _____

Duplication

Insertion _____

Nonsense

Deletion _____

Tandem repeat

17. When even one amino acid changes in a sequence what might happen to the protein structure?

18. What type of mutation is sickle-cell disease?

19. What are two other diseases caused by incorrect protein folding?

20. What is a mutagen?

21. What is the difference between the effects of UV radiation and X Ray radiation? _____

22. Are somatic cell mutations passed on to the next generation? _____

Why is that?

23. What can occur if a mutation happens in a sex cell?

Is the outcome positive or negative for the chi