**Gene Regulation Notes**

1) What is gene regulation?

2) All cells have the exact same \_\_\_\_\_\_\_\_\_\_\_\_.

3) How is the type of a cell determined?

4) promoter-

**Prokaryotic Gene Regulation**

5) Operon-

6) lac operon-

7) operator-

8) repressor-

9) Describe the operon when lactose is NOT present:



10) Describe the operon when lactose is present:



**Eukaryotic Gene Regulation**

11) Eukaryotic genes are controlled \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 Do eukaryotic genes have operons?

12) Transcription factor-

13)Differentiation-

14) Which genes control differentiation in the embryo?