

Your Name _____

Exam 2, BSC 202, Genetics – Apr. 15, 2008

1.2. Fill the blanks with words (2 points each, no partial points)

1. Mutation is either a new allele or allele will produce a noticeable phenotype. There are three ways an allele is expressed. (2 points for use of gene, mutant, then mentioned right)
2. The most critical step in the regulation of most bacterial genes is the binding of RNA, polysomes to the promoter.
3. Operons and transcription elements regulate gene transcription in prokaryotes. If the ratio of repressor to substrate is non-equilibrium, substrate is high, the gene will be expressed, producing a high level of product (used transcription)
4. Various repressor modifications of the repressor can change the level of gene expression as genes that is referred as allosteric control systems.
5. Attenuation is a small process that is commonly associated with prokaryotes in long chains, requiring the rapid growth of operons using splicing mechanism (DNA, but make sure you know it right)
6. Enhancers are DNA sequences that regulate gene function as a distance from the gene they are regulating, either 5' or 3' of the gene.
7. DNA polymerase I is involved in replication, RNA, copy of DNA template.

1.3. True or False, Circle one (1.5 pt each)

1. Because there is no surface membrane in prokaryotes, transcription and translation occur at single time for taking place at the same.
True / False
2. Genetic engineering is an example of epigenetic alteration of DNA.
True / False
3. An antibody gene for a regulatory molecule always codes for small RNA molecules (less than 50 nucleotides).
True / False
4. Mutations of the DNA are directly associated with transcriptionally regulated elements.
True / False