

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 operator.
3. Operons and transcription elements regulate gene transcription in prokaryotes. If the ratio of repressor to substrate is unfavorable to high, the gene will be repressed, preventing it to bind RNA polysomes transcription.
4. Various repressor modifications of the repressor can change the form of gene expression as genes that is referred as allosteric allo repressor.
5. Substrate is a small protein that is covalently attached to polypeptides in long chains, carrying the signal protein to regulate gene expression (DNA, but make sure you know it right).
6. Substrate is a repressor that represses gene function as a substrate binds to gene they are repressing, either 2 or 3 of the gene.
7. RNA polymerase I transcribes rRNA genes RNA polysomes transcription.

**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 gene can be taking place at the same.  
True False
2. Genetic engineering is an example of epigenetic alteration of DNA.  
True False
3. Converting DNA to a regulatory molecule always uses an small RNA molecules (less than 50 nucleotides).  
True False
4. Mutations of the DNA are directly associated with transcriptionally repressed chromosomes.  
True False