BIOL-12 HW7 (10 points)

Name_____

Read pdf Ch11 and answer the questions below.
Due in class on Thrusday, Oct 26th, in class or you can complete the quiz online.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) The process by which genotype becomes expressed as phenotype is _____. 1) _____
A) gene regulation B) transcription
C) translation D) gene expression

2) Bacterial RNA polymerase binds to the _____. 2) _____
A) proto–oncogene B) promoter
C) regulatory gene D) operator

3) In prokaryotes, the production of a single RNA transcript for a group of related genes is under the control of _____. 3) _____
A) transcription factors B) an operon
C) enhancers D) a signal transduction pathway

4) In an operon, the _____ acts as an on/off switch. 4) _____
A) activator B) promoter C) repressor D) operator

5) Which of the following turns off transcription by binding to the operator? 5) _____
A) RNA polymerase B) promoter
C) lactose D) repressor

6) Repressors act by blocking the binding of _____ to the operator. 6) _____
A) DNA polymerase B) RNA polymerase
C) promoters D) the operon

7) Which of these plays a role in the regulation of transcription in both prokaryotic and eukaryotic cells? 7) _____
A) transcription factors
B) RNA splicing
C) gene operons
D) attachment of RNA polymerase to the promoter

8) Introns are _____. 8) _____
A) expressed DNA sequences
B) noncoding DNA sequences
C) the product of RNA splicing
D) DNA sequences to which activators bind

9) While examining a human cell that functions normally, you determine that it has 45 functional chromosomes and one chromosome that is almost completely inactive. You immediately decide that it is very likely that this cell _____. 9) _____

A) is lacking a chromosome
B) came from a normal human female
C) is a gamete
D) will become cancerous if one or two more genes are mutated

10) In eukaryotic cells, repressor proteins inhibit transcription by binding to _____. 10) _____

A) silencers B) promoters C) enhancers D) operons