Name: _____

AP Biology

BioFlix Study Sheet for Protein Synthesis

Refer to your book, BioFlix Animation, and BioFlix Tutorials if you need help.

1. For each of the following steps in protein synthesis, describe the location in the cell where it occurs, the key events that occur, and the molecule that is produced.

Step in Protein Synthesis	Location in Cell	Key Events	Molecule Produced
Transcription			
RNA Processing			
Translation			
Protein Processing			

2. Describe the roles of the following structures in protein synthesis and secretion.

Structure Involved in Protein Synthesis and Secretion	Role
DNA	
mRNA	
Ribosome	
tRNA	
Anticodon	
Amino Acid	
Rough Endoplasmic Reticulum	
Golgi Apparatus	
Plasma Membrane	

AP Biology
BioFlix Quiz - Protein Synthesis

Write the answer to each question in the blank. Note that the order of the answer options does not match the online version of the quiz.

____1. Which of the following events occurs during transcription?
A. A cap is added to the RNA molecule.
B. mRNA binds to a ribosome in the cytoplasm.
C. The message in mRNA is translated into a protein.
D. A molecule of RNA is formed based on the sequence of nucleotides in DNA.
E. Those segments of the RNA strand that do not actually code for the protein are removed.

____2. Which of the following is a correct statement about mRNA?
A. mRNA is transcribed from DNA in the cytoplasm.
B. mRNA binds directly to amino acids during translation.
C. mRNA includes a cap that consists of extra adenine nucleotides.
D. Segments of mRNA that code for protein are removed before translation.
E. mRNA moves from the nucleus to the cytoplasm following RNA processing.

____3. The site of translation is
A. the cell nucleus.
B. the Golgi apparatus.
C. the plasma membrane.
D. ribosomes in the cell nucleus.
E. ribosomes in the cell cytoplasm.

____4. Which one of the following does not play a role in translation?
A. DNA
B. tRNA
C. Anticodon
D. Ribosomes
E. Amino acids

____5. Which of the following does not occur during RNA processing?
A. mRNA attaches to the small subunit of a ribosome.
B. Segments of RNA that do code for the protein are reconnected.
C. Adenine nucleotides are added to the end of the RNA strand, forming a tail.
D. Segments of the RNA strand that do not actually code for the protein are removed.
E. A modified guanine nucleotide is added to the beginning of the RNA strand as a cap.