



8 There is a small gap represented by the Line A. What enzyme will help fill that gap/create the bond between the two strands at that point? **Ligase: Creates final bond when strands grow together.**

9. Explain what a **CODON** is and give an RNA example of 1 CODON.

3 Nucleotides      UAA      Any 3 Letters of RNA

10. Explain the function of the following in protein synthesis:

Ribosome: Reads mRNA... Lines up correct tRNA... Creates bonds from Anti-codon match between A. Acids

tRNA: Transfer specific A.A. to Ribosome based on Anti-codon

mRNA: messenger RNA transcribed from DNA... Carries message w/ Codons

Amino Acid:

11. Use the following strand of DNA to answer the remaining questions: (there are no start or stop codons in this segment so use all of the DNA strand)?

**ATTGCGCATCGGCTACTACTAGAGTAG**

a. How many codons are in this strand of DNA above (there are no start or stop codons in this segment so use all of the DNA strand)?

9

b. How many amino acids will this segment of DNA code for

9

c. Write the compliment of this strand if it were **REPLICATED**

TAA'CGC'GTA'GCCGATGATGATCTCATC

d. Write the compliment of the strand if it were **TRANSCRIBED**

UAA CGC GUA CGG GAU GAU GAU CUC AUC

e. Fill in the tRNA **ANTI-CODONS** in order on the next page...also write in the amino acid that would be carried by the specific tRNA. Use the **TRANSCRIBED** mRNA from D above and the chart to the right.