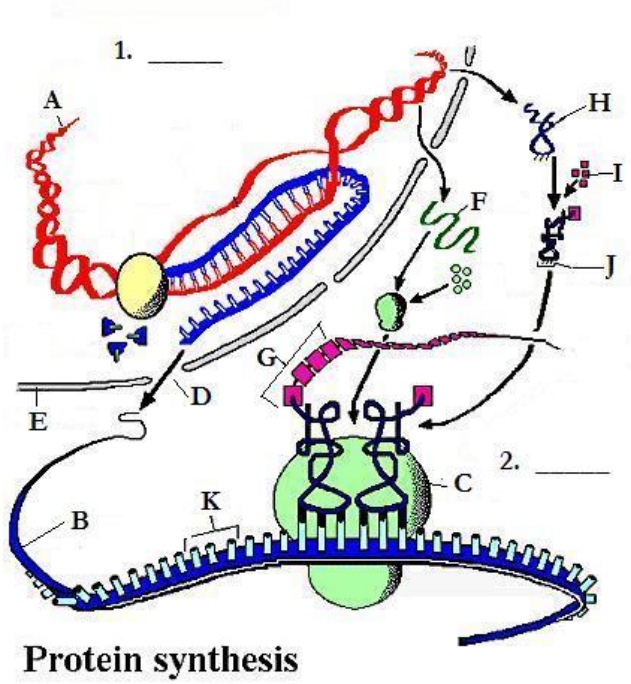
Protein Synthesis PRACTICE Quiz

1. Label diagram A. **(11 marks)**



Protein synthesis

	Name
1.	Transcription/Nucleus
2.	Translation/Cytoplasm
A	DNA
B	mRNA
C	Ribosome
D	Nuclear Pore
F	rRNA
G	Protein/Polypeptide
H	tRNA
J	Anti-codon
K	Codon

2. Given the following ORIGINAL DNA nucleotide sequence: **GTA GAG AGT**

   a. Give the complementary DNA sequence to the above strand. **(1 mark)**

   CAT CTC TCA

   b. Give the mRNA codons that would be transcribed using the ORIGINAL strand of DNA.

   CAU CUC UCA **(1 mark)**

   c. Give the tRNA anticodons. **(1 mark)**

   GUA GAG AGU

   d. Give the amino acid sequence that would be translated from it **(1 mark)**

   His - Leu - Ser

3. The fourth nucleotide on the ORIGINAL DNA strand was changed from "G" to "C".

   a. Give the mRNA codons that would be transcribed using this mutated strand of DNA.

   CAU GUC UCA **(1 mark)**

   b. What amino acid sequence would result? **(1 mark)**

   His - Val - Ser

4. The first "T" was deleted on the ORIGINAL DNA strand.

   b. Give the mRNA codons that would be transcribed using this mutated strand of DNA.

   CUC UCU CA **(1 mark)**

   a. What amino acid sequence would result? **(1 mark)**

   Leu - Ser

5. Given the following amino acid sequence, give a possible **DNA** sequence that could code for the sequence: **arginine, cysteine, histidine**

   TCT ACA GTG…….others possible **(2 marks)**