Transcription and Translation Practice Worksheet

For each of the following sequences, fill in either the DNA, the mRNA sequence, the tRNA anticodons, or the amino acid sequences that have been left blank. If several sequences might work choose any one. Use page 338 in your textbook.

1. DNA ________________________________
   mRNA A U G A C U A G C U G G G U A U U A C U U U U A G
   tRNA ________________________________
   AA ________________________________

2. DNA T A C C G C T C C G C G T C G A C A A T A C C A C T
   mRNA ________________________________
   tRNA ________________________________
   AA ________________________________

3. DNA ________________________________
   mRNA ________________________________
   tRNA U A C C A C C C C G U A U G G C U G G G A A U A U C
   AA ________________________________

4. DNA ________________________________
   mRNA ________________________________
   tRNA ________________________________
   AA MET ARG GLY PHE PHE MET VAL GLY (STOP)

5. DNA T A C ________________________________ A T G ________________________________
   mRNA ________________________________ U G U G A U ________________________________
   tRNA ______ C U C ________________________________ U U G _______ A U U
   AA ________________________________ ALA __________________ PRO __________
6. What are the three differences between RNA and DNA?

7. Where is DNA found in the cell? __________________________
   
   Where is RNA found in the cell (2 places)? __________________________

8. Fill in the below table:

<table>
<thead>
<tr>
<th>Type of RNA</th>
<th>Function</th>
<th>Basic drawing</th>
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<tbody>
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</table>

9. Draw an mRNA strand that is complementary to the DNA strand AATTGC. Circle a nucleotide.

10. Below is a drawing of a cell. Show where transcription and translation are occurring make sure to label the DNA and the RNA (all three types!).

   ![Cell Diagram]