

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# NOVALABS

## RNA Lab Review Questions

### Tutorial: The Basics Review Questions

1. What are the two main differences between RNA and DNA nucleotides? What are three types of complementary base pairings in RNA? Order the pairs by the strength of the bond.
2. Create a diagram that outlines the structural and functional differences between DNA and RNA.
3. What role do mRNA molecules play in the process of protein synthesis?
4. Describe how amino acids are coded in mRNA.

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Trial 1: Protein Synthesis Review Questions

1. Describe the two roles of tRNA during protein synthesis.
2. How are RNases like recycling plants?
3. Describe two ways RNA avoids being destroyed by RNases.
4. Describe the evidence that supports the RNA world hypothesis.
5. How does splicing help a single mRNA code numerous proteins?

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Trial 2: RNA World Review Questions

1. Summarize the RNA world hypothesis in five steps.
2. How have scientists tested the RNA world hypothesis?
3. Why is the SRP so important to protein synthesis?
4. What evidence have scientists found in fruit flies that demonstrates RNA's role in directing cell growth?

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Trial 3: Virus Attack Review Questions

1. How do viruses replicate?
2. How does RNAi defend against viruses?
3. Why is RNA's structural weakness a big strength?
4. Describe how RNA might be used to treat HIV.