

Exam 1

What is the theory of preformation?

What is mitosis? What is meiosis?

Describe DNA. What all is in DNA?

What is RNA? Which carbon in DNA will lack oxygen, making it “deoxy”.

What is the central dogma of biology? Proteins are:

What are restriction enzymes?

What is biotechnology?

What criteria make model organisms useful to study?

What must a molecule do to be able to serve as genetic material?

What are nucleotides? What do they consist of?

What bases are purines? Which are pyrimidines? (Hint: Pure As Gold)

List each base that will be found in DNA as well as the ones found in RNA?

DNA:

RNA:

What is the difference between nucleotide and nucleoside?

Which bonds keep the sides of the ladder together? Which bonds keep the rungs of the ladder together?

If I have found that my dog's DNA is 24% Adenine, what is the composition of all my other bases?

What model of DNA replication did Watson and Crick propose? Describe it.

What DNA is most biologically active? Which ones lack guanine? Which is left-handed?

What are the three classes of RNA?

What is a retrovirus?

What UV level will proteins absorb at? What will nucleic acids absorb at?

Which bases form a triple bond? Describe their hyperchromic shift.

How long is DNA? What must be done to fit it in the nucleus?

What is chromatin? What phase of DNA replication is it seen in?

What are histones? What are the 5 types? Draw an ectomere made up of two tetramers.

What is chromatin remodeling? Where is it done?

List and describe all 3 types of chemical modifications.

What is euchromatin? What is heterochromatin?

What are pseudogenes?

