

Introduction to Biology
Proctored Final Examination
Exam Number: 250112

PART A: Answer each of the following questions in one or two paragraphs. Each answer is worth 20 points.

1. Describe the five types of prezygotic reproductive barriers. Give a brief description of each.
2. Ralph wants to breed two of his prize bulldogs. For the dominant alleles, he has selected small ears (E) and a curly tail (T). Linus, the male bulldog, is homozygous dominant for both traits. Lucy, the female, is heterozygous dominant for both traits.
 - a. What are Linus's and Lucy's genotypes? *Hembra (Ee) (Tt) Macho (EE) (TT)*
 - b. What percent of their pups will have small ears and curly tails? *100%*
 - c. What percent will have large ears (e) and straight tails (t)? *0%*
3. Beginning with fertilization, describe the main stages of animal development. Give a brief description of each stage.

PART B: Answer each of the following questions in one to four sentences. Each answer is worth 4 points.

1. From G1 through M, what are the stages of the cell cycle, and what is the main occurrence in each stage?
2. Briefly describe the three-domain system of classification.
3. Explain the difference between a scientific theory and a scientific law.