Transcription & Translation Practice

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

1. List the 4 classes of organic molecules and the monomers that make them up
   1. ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Define the following
   1. Law of segregation
   2. Law of independent assortment
3. List 4 types of proteins associated with membranes
   1. .
   2. .
   3. .
   4. .
4. List 3 functions of proteins in the body
   1. .
   2. .
   3. .
5. What is Gene Expression
6. Compare and contrast DNA and RNA in the following diagram

Single stranded, double stranded, nucleus, cytoplasm, adenine, cytosine, thymine, guanine, uracil, phosphate group, deoxyribose, ribose, sugar, gene expression, made by polymerase

RNA

DNA

1. Fill in the chart below

|  |  |
| --- | --- |
| Type of RNA | Function |
|  |  |
|  |  |
|  |  |

1. What is the genetic code?
2. Use the word bank below to fill in the diagram comparing and contrasting transcription and translation in a prokaryote and eukaryote

Promoter RNA polymerase circular chromosomes linear chromosomes 1 chromosome

Multiple chromosome bacteria plants animals fungi protists nucleus

membrane bound organelles DNA operons gene regulation cellulose cell wall

splicing introns exons spliceosomes

Eukaryotes

Prokaryotes