

Biology Final Study Guide

Chapter 11: Introduction to Genetics *11 (not 11.5)

Vocabulary: be able to define, recognize, relate and use these terms

Genetics

Trait

Hybrid

Allele

Gene

Probability

Meiosis

Punnett square

Gamete

True-breeding

Crossing-over

Phenotype

genotype

Segregation

Homozygous

Heterozygous

Multiple alleles

Polygenic

Short Answers/Essays: Can you answer/discuss the following?

Use a Punnett Square - Purpose for? Represents?

Differences between mitosis and meiosis

Stages of meiosis p. 276-277 - compare meiosis I and II

Differences in formation of sperm and eggs p. 278

Chapter 12: DNA and RNA * 12 (second half of 12.1, not 12.5)

Vocabulary: be able to define, recognize, relate and use these terms

DNA polymerase

Nucleotides

Template

Replication

Histone

Nucleosome

Double helix

Chromatin

RNA polymerase

Transcription

Translation

Base-pairing

Codon

Anticodon

Short Answers/Essays: Can you answer/discuss the following?

Structure of DNA - Chargaff/base-pairing, Franklin/x-ray, Watson and Crick/double helix

What are the steps in DNA replication?

What is the relationship between DNA, chromatin, histones and nucleosomes? p. 297

DNA vs. RNA

Three types of RNA p.300

Be able to use the "Decoder Ring" for transcription of DNA strands into mRNA codons and translation into amino acids

Mutations - Gene/Point and Chromosomal - examples of each

Chapter 14: The Human Genome *14.1/2

Vocabulary: be able to define, recognize, relate and use these terms

Autosomes

pedigree chart

polygenic

karyotype

sex chromosomes

nondisjunction

Short Answers/Essays: Can you answer/discuss the following?

Describe different examples of autosomal, sex-linked, and chromosomal diseases. pp. 345, 350-353

What determines that there are approximately 50% males and 50% females in the human population?

Why are all X-linked alleles expressed in males even when there is only 1 recessive allele?

Be able to read a pedigree chart and interpret the information

Blood Types p. 344 - genotypes and phenotypes

Lorenzo's Oil