Biology Chapter 10 Study Guide

Be able to define the following terms.

Gamete

Binary Fission

Gene

Chromosome

Chromatid

Centromere

Homologous Chromosome

Diploid

Haploid

Zygote

Autosome

Sex Chromosome

Karyotype

Mutation

Cell Cycle

Mitosis

Cytokinesis

Cancer

Spindle Fibers

Centrioles

Stem Cell

Differentiation

Possible Short Answer Questions

How do organisms grow?

What is the difference between a gamete and a somatic cell?

Describe the structure of a copied chromosome (3 parts).

What is the difference between a haploid and diploid cell?

What is a zygote?

Explain the concept of homologous chromosomes.

What are the sex chromosomes in humans? What two do males or females have?

What is trisomy? What are two examples of trisomy diseases and what condition does each cause?

How can karyotypes help diagnose certain genetic diseases?

What are the four types of chromosomal mutations? Explain each.

What are the 3 main phases of the cell cycle?

What are the 3 sub-phases of Interphase? Explain each one.

Define Mitosis. What is happening during each stage of mitosis? PMAT

What is cytokinesis?

How is it different in plant and animal cells?

What are the 3 checkpoints and what does each one do?

Why are they so important? What disease do they help prevent?

Be able to sketch each step of mitosis, know the order, and label what is happening.

What is a stem cell? What is the difference between embryonic stem cells and adult stem cells?

What is cell differentiation?