

Unit 2: Cell Division/DNA/Protein Synthesis Test Review

1. Be able to describe the process of DNA Replication. What are the end results? What are important enzymes?
2. Know the stages of Mitosis and what occurs in each.
3. What size of cell is more efficient? Why?
4. Know the cell life cycle and what occurs at each step. When is DNA in chromatin form and when does it organize itself into chromosome form? When does DNA synthesis occur? When does the cell grow? When does it divide?
5. Be able to label the structure of a chromosome. Know how the terms chromosome, chromatid, sister chromatid, and centromere are related.
6. What is the difference between cell division in plants and animals?
7. What are cyclins and what do they control?
8. What is the relationship between tumors and cancer? Why do tumors form?
9. What are purines and pyrimidines and how are they related?
10. Nucleosomes, histones, chromosomes, DNA molecule. What are these? How are these terms related?
11. How are a codon, anticodon, and amino acid related?
12. Be able to describe the process of Protein Synthesis (transcription and translation) with a sequence of DNA nucleotides. (convert from DNA to mRNA to amino acids). Know how tRNA is related to all of this and why it's important.
13. How do DNA and RNA differ and how are they similar?
14. Know what "the genetic code" is and how to read it. (both circle and square kinds...you have been given both in class)
15. What are the 3 different types of RNA? What do they look like and what role do they play in protein synthesis?
16. What are the purines and pyrimidines in RNA and DNA?
17. What determines the rate at which wastes are produced in cells?