

Ivy Tech APHY 101 *Cells* Part Three: The Nucleus

- 1. What is a *nucleus* and why is it important for a cell's life cycle?**
- 2. What is the *nuclear envelope*?**
- 3. What are *nucleoli* and why are they important?**
- 4. What are *chromatin*? What are they made of and why are they important?**
- 5. What are the phases of the *cell cycle*?**
- 6. What are the three phases of *interphase* and what occurs during each?**
- 7. What are the four phases of *mitosis* and what occurs during each phase?**
- 8. What occurs during *cytokinesis*?**

9. What does “*semiconservative replication*” refer to when talking about DNA?

10. What stimulates cell division and what inhibits it?

11. What are: *mRNA*, *tRNA*, and *rRNA*? What do they do and how do they differ from one another?

12. What occurs during the *transcription* and *translation* segments of protein synthesis?

13. What is *apoptosis* and why is it important for our health?