Test Review   Chp 3

1. Would you be able to identify the major cellular components in a diagram? Look at Figure 3.2, page 59.

2. Do you know what each of the following is and its function?
    i. chromatin, nuclear envelope, nuclear pores, nucleoli

3. Can you identify the parts of the membrane structure? Look at Figure 3.3, page 61.

4. What are the components of Phospholipids?

5. Why do all biological membranes share the same bilayer structure?

6. Compare/contrast hydrophilic and hydrophobic and explain how they are related to the plasma membrane.

7. Can you explain diffusion and osmosis?

8. Can you explain the difference between smooth and rough er?

9. Can you explain the difference between the two different kinds of ribosomes (on er and free ribosomes) and their function as a site for protein synthesis?

10. Can you explain the function of the Golgi Apparatus?

11. Lysosomes and Peroxisomes – Can you explain the difference between these structures?

12. Can you describe and or identify the general structure of mitochondria?

13. Can you describe the general function of mitochondria?

14. Can you describe the three components (Microtubules , Microfilaments, intermediate filaments) of the cytoskeleton?

15. How is the Centrosome and centrioles involved in mitosis?

16. What are the two components of Cytoplasm?

17. Look at Figure 3.18 & 3.19 on pages 78 & 79. Would you be able to describe the two different processes that the diagrams are explaining if the comments were not there? (transcription & translation)

18. Could you diagram the following components of the Cell cycle?
    i. Interphase [gap 1, synthetic phase, gap 2],
    ii. Mitosis [prophase, metaphase, anaphase, telophase, cytokinesis]

19. Can you explain the difference between mitosis and meiosis?

20. What is a telomere and how is it related to cell aging?

21. What is the difference between apoptosis and necrosis?

22. Can you explain what cancer? Can you define the following terms related to cancer?

    i. Benign   malignant   tumor   metastasis