

Chapter Four Study Guide / Tortora & Derrickson
Tissue Level of Organization

1. What is histology?
2. What is tissue?
3. What are the four “tissue types”?
4. What ratio within the tissue itself provides insight about the structure of the tissue?
5. What is another term used to define extra cellular material? What type of substance makes up the matrix?
6. What are the characteristics of epithelial tissue?
7. What are two primary structural criteria used to epithelial cells?
8. What are the different shapes of epithelial cells? How may these cells be arranged?
9. What are keratinized epithelial cells? Where are they located?
10. What is connective tissue?
11. Fibrous connective tissue is the most abundant type of CT. It is best characterized by the type of its extra cellular fibers but this tissue also has a variety of cell types and ground substance between the fibers. What are the three types of protein fibers found in fibrous CT?
12. Where is ground substance? What is the consistency of GS?
13. Glycosaminoglycan (GAG) characteristics: What is the most abundant GAG and where do we find it?
14. What are proteoglycans (PG)? Where are they located? What type of molecule is associated with proteoglycans?
15. What are the two directional arrangement of CT fibers?
16. What type of tissue is fat? What type of cell stores fat? What is the appropriate name for fat tissue?
17. What is cartilage?
18. What are the three type of cartilage?
19. What is bone?
20. What is the difference between spongy and compact bone?
21. What is an osteon?
22. Identify the following structures of an osteon: lacunae, canalicul, lamellae, and central canal.
23. Blood is also classified as connective tissue. Why relationship helps to define blood classified as connective tissue?
24. What is the dominate characteristic of nervous tissue?
25. What is the dominate characteristic of muscle tissue?
26. What are the three types of muscle cells? Characteristics?
27. What are cell junctions?
28. What is the function of the five types of cell junctions?
29. What is a gland?
30. What is the difference between a secretion and an excretion?
31. What type of cells form glands?
32. What is the difference between endocrine and exocrine glands?

33. Glands can be multicellular or unicellular structures. What is an example of a unicellular gland that looks like a type of “serving glass”? Where are they located?
34. What is the difference between a merocrine and holocrine gland?
35. Define the following terms: hyperplasia / hypertrophy / neoplasia / meaplasia
36. What is regeneration?
37. What is fibrosis?
38. What are the stages of healing a skin wound?
39. Describe the following membranes: mucous, serous, synovial, and cutaneous.