Anatomy 35 Study Guide Unit III  Spring 2012

Urinary
1. Know the functions of the urinary system and the major components.
2. Be familiar with the gross anatomy of the kidney and its location in the body.
3. Know the capsules surrounding the kidney.
4. Be familiar with the gross internal anatomy of the kidney.
5. Know the microscopic anatomy of the kidney (nephron and blood vessels).
6. Know the sequence of blood vessels in the kidney beginning with the renal artery and ending with the renal vein.
7. Be familiar with the basic process of urine formation.
8. Know the special features of the ureters and the urinary bladder.
9. Be familiar with the differences in the male and female urethra.
10. Understand the process of kidney transplant.

Reproduction
1. What are gonads? Male? Female? What is their function?
2. What are gametes? Male? Female?
3. Be able to label images of the male and female reproductive tract. Pay attention to the figures in your lecture and your workbook!
4. Know the structure of the testes.
5. Be familiar with the cells found in the seminiferous tubules. Which of these form the blood testis barrier? Why is this important?
6. Describe the steps in the formation of sperm in sequence.
7. Be able to label an image of sperm.
8. Which cells produce testosterone? Where are they located?
9. Know the pathway of the sperm through the body.
10. Where is the epididymis located and what is its function?
11. What is the vas deferens? Where is it located in the body?
12. Be familiar with all of the structures that contribute to the composition of semen.
13. Where are Cowper’s glands located? What do they do?
14. Describe the structure of the penis. Be able to label an image.
15. What is the dartos muscle? What is the scrotum and what is its function?
16. What is the cremaster muscle and where is it located?
17. Know the tunics that surround the testis.
18. What are the ovarian follicles? Be familiar with each stage of follicular development.
19. Be able to label a picture of the ovary.
20. What is a corpus luteum? Corpus albicans?
21. Where are the fallopian tubes located? What type of epithelium lines the fallopian tubes? What are fimbriae?
22. Be familiar with the histology of the fallopian tubes.
23. Know the structure of the uterus and the three layers of tissue.
24. What is the broad ligament? What is the round ligament?
25. Where is the vagina located relative to the rectum? What is the hymen?
26. Be familiar with the external genitalia of the female and be able to label an image.
27. Which female structure is the homolog of the penis?
28. Be familiar with male and female development in the embryo.

Embryology:
1. What is the average human gestation period?
2. Know the parameters for the trimesters of pregnancy.
3. Be familiar with the stages of development (pre-embryonic, embryonic, fetal)
4. What is cleavage? What does it produce.
5. Be able to distinguish between blastomeres, morula, and blastocysts.
6. Which portion of the blastocyst gives rise to the placenta?
7. What occurs in implantation? What is a syncytiotrophoblast? Cytotrophoblast?
8. What is a primitive streak? What is gastrulation?
9. What are the primary germ layers? What do they give rise to?
10. What are the major events of organogenesis?
11. What occurs in neurulation?
12. What are the pharyngeal pouches? Somites?
13. Be familiar with all of the embryonic membranes and their functions.

Circulatory System

1. Know the structure of the heart. Be able to identify all of the chambers and the distinguishing anatomical characteristics of each region. Include the septa, papillary muscle, valves, chordae tendinae, trabeculae carnae, and pectinate muscle.
2. Be able to describe in detail the endocardium, myocardium, epicardium, and pericardium.
3. Know the pathway of the blood through the heart.
4. Be able to identify all of the major vessels of the coronary circulation.
5. What is the electrical conduction system of the heart? Be able to identify all of the associated structures.
6. Compare and contrast the structure of the fetal heart with the heart of an adult.
7. Briefly describe the major events in embryonic development of the heart. At what point chronologically does the heart start beating?
8. Distinguish between systemic and pulmonary circulation.
9. Compare and contrast the anatomical structure of arteries, arterioles, capillaries, venules, and veins.
10. Be able to identify the major blood vessels of the body.
11. What is a portal system?
12. what is an anastamosis?
13. Be able to identify the major vessels of the hepatic portal system.
15. What is the composition of blood?
16. Describe the relationship between the cardiovascular and lymphatic systems in structure and function.