

## SCIT 1408: Study Guide Outline of Laboratory Modules

### Lab #9

Note: This list of modules contains all the structures you are to know for lab quizzes and practical exams. It is also an excellent study guide for lecture exams.

\* *Starred items are found in the text book, but not in the lab manual.*

#### **Module 29**

Urinary system anatomy

- Renal artery
- Renal vein
- Kidney
- Aorta
- Vena cava
- Ureter
  - Renal pelvis
- Urethra
- Bladder
  - Internal sphincter
  - External sphincter
  - \*Trigone
  - \*Detrusor muscle

#### **Module 30**

External kidney anatomy

- Hilum
- Renal artery
- Renal vein
- Ureter
  - Renal pelvis
- Renal capsule

Internal kidney anatomy

- Cortex
- Medulla
  - Renal pyramids
  - Renal columns
  - Renal papilla
  - Minor calyx
  - Major calyx
  - Renal pelvis
  - Ureter
  - Hilum

### **Module 31**

#### The nephron

- Cortical nephrons
- Juxtamedullary nephrons
- Renal corpuscle
  - Glomerulus
  - Glomerular capsule
- Renal tubules
  - Proximal convoluted tubule
  - Henle's loop
  - Distal convoluted tubule
- Collecting duct

### **Module 32**

#### Blood supply to the kidney and nephron

- Renal artery
- Interlobar arteries
- Arcuate arteries
- Interlobular arteries
- Afferent arteriole
- Glomerulus
- Efferent arteriole
- Peritubular capillary bed
  - Vasa recta
- Interlobular vein
- Arcuate vein
- Interlobar vein
- Renal vein

### **Module 33**

#### Urinalysis—Know the normal values for the following characteristics:

- Volume
- Color
- Turbidity
- Odor
- pH (also know the effect of diet on pH)
- Specific gravity

#### Constituents of Urine

- Protein—Albuminuria
- Glucose—Glycosuria
- Ketones—Ketonuria
- Hemoglobin—Hemoglobinuria
- Erythrocytes—Hematuria
- Leukocytes—Pyuria
- Bilirubin—Bilirubinuria
- Urobilinogen—Urobilinogenuria

Casts  
Renal calculi  
Microbes—bacteriuria

### **Module 34**

Terms to know:

- \*Filtration
- \*Filtrate
- \*Reabsorption
- \*Secretion
- \*Nitrogenous waste
  - Urea
  - Uric acid
- \*Micturition
- \*Juxtaglomerular apparatus
- \*Macula Densa
- \*Juxtaglomerular cells
- \*Renin
- \*Angiotensinogen/Angiotensin I, Angiotensin II
- \*ADH
- \*Aldosterone
- \*Atrial natriuretic peptide
- \*Erythropoietin
- \*Vitamin D activation
- \*Countercurrent Mechanism