BIOLOGY 2458 LAB

LAB PRACTICAL

Brief Review

PRACTICAL TWO REVIEW

**********Check handouts for all omissions**********

(note: this sheet is a favor to you. Do not assume that an omission from this sheet insures an omission from the practical. It is simply a mistake on my part. Therefor, the best study guides are the handouts from the web site.)

Terms you need to know:

Respiratory system:
Know all functions of the anatomy, functions of the respiratory system, pulmonary ventilation, external respiration, transport of respiratory gases, internal respiration, upper respiratory system structures, cleft palate, wind pipe, false and true vocal cords, lower respiratory structures, hilus, respiratory tree, bronchioles, respiratory bronchioles, lobes of the lungs (#'s and names for human and cat, respiratory zone vs. conducting zone, pleura, mediastinum, pulmonary ventilation, breathing, inspiration and expiration and what happens in each, respiratory volumes (TV, IRV, ERV, VC, etc.) what they are and how to calculate, spirometer, emphysema, chronic obstructive pulmonary disease, respiratory sounds, carbonic acid bicarbonate buffer system (know how it works, what happens when the oxygen or carbon dioxide levels are high or low (pH up or down) and which way the reaction will go when acidic of basic), acidosis, alkalosis

Digestive system:
Know all of the functions of the anatomy, alimentary tract vs. accessory organs, layers of the alimentary canal and what each layer does, oral cavity and vestibule, uvula, tonsillitis, palatine vs. lingual tonsils, different regions of the pharynx, gullet, know all of the sphincter and valve locations, omenta, mesocolon, chief or zymogenic cells, parietal cells, regions of small intestine, stomach and large intestine, rugae, dental formula, deciduous teeth, hepatitis, cirrhosis, LIVER ANATOMY (LOBE NAMES, MAJOR DUCTS)

Urinary System:
Know all of the functions of the anatomy, ptosis, trigone, hilus, progression of renal arteries and veins, regions of the kidney, cortex, medullary regions, renal columns, pelvis, calyces, know the anatomy of the nephron and what happens in each portion, filtration, tubular reabsorption, tubular secretion, afferent vs. efferent arteriole, micturition, internal vs. external sphincters, incontinence

Reproductive System:
Know all of the functions of the male and female anatomy, know the pathway of sperm from the testis to the urethra, glandular secretions, spermatic cord vs. ductus deferens, seminal fluid, vasectomy, female external vs. internal anatomy, ligaments and what they support, ectopic pregnancy, PID, ovulation, lactiferous ducts vs. lactiferous sinuses,

BE ABLE TO IDENTIFY ON THE CAT:

I. Respiratory System

1. trachea
2. tracheal cartilage
3. lobes of the right lung
    a. anterior
    b. middle
    c. posterior
    d. mediastinal
4. lobes of the left lung:
    a. anterior
    b. middle
    c. posterior
5. diaphragm
6. thyroid cartilage
7. cricoid cartilage

II. Digestive System

1. Liver
2. esophagus
3. gallbladder
4. falciform ligament
5. stomach
    a. rugae
    b. cardiac region
    c. fundus
    d. body
    e. pyloric region
    f. lesser curvature
    g. greater curvature
6. duodenum
7. ileum
8. ileocecal valve
9. lesser omentum
10. greater omentum
11. pancreas
12. spleen
13. large intestine
14. mesentery
15. gastroesophageal sphincter
16. pyloric sphincter
17. ileocecal valve

III. Urinary System

1. renal vein and artery (left and right!)
2. right and left kidneys
3. right and left ureters
4. urinary bladder
5. urethra

IV. Male Reproductive System

1. scrotum
2. testis (testes is plural)
3. penis
4. glans penis
5. epididymis
6. right and left spermatic cords

V. Female Reproductive System

1. ovary (left and right)
2. right and left uterine horns
3. body of uterus

BE ABLE TO IDENTIFY ON THE MODELS:

I. Respiratory System

1. Half a human head model
    a. Nasopharynx
    b. pharyngeal tonsil
    c. soft palate
    d. palatine tonsil
    e. oropharynx
    f. laryngopharynx
    g. esophagus
    h. trachea
    i. thyroid cartilage
    j. true vocal cord (vocal folds)
    k. vestibular fold (false vocal folds)
    l. epiglottis
    m. lingual tonsils
    n. hard palate
    o. external nares
    p. internal nares
    q. uvula
    r. nasal concha
2. Larynx model
    a. hyoid bone
    b. greater cornu
    c. lesser cornu
    d. epiglottis

e. thyroid cartilage
f. cricoid cartilage
g. tracheal cartilage
h. corniculate cartilage
i. aretynoid cartilage
j. glottis
k. vocal folds

II. Digestive System

1. Human Torso model
   a. Esophagus
   b. Liver
   c. Gallbladder
   d. Spleen
   e. Gastroesophageal sphincter
   f. Pyloric sphincter
   g. Ileocecal valve
   h. Stomach
      - cardiac region
      - fundus
      - body
      - lesser curvature
      - greater curvature
      - pyloric region
      - rugae
   i. small intestine
      - duodenum
      - jejunum
      - ileum
   j. large intestine
      - transverse colon
      - ascending colon
      - descending colon
      - cecum
      - sigmoid colon
      - rectum

2. Tooth model
   a. Enamel
   b. Dentin
   c. root canal
   d. pulp cavity
   e. root
   f. pulp

3. Jawbone model
   a. Incisors
   b. Canines
   c. Premolars
   d. Molars
   e. KNOW FORMULAS!
   f. Gingival

4. human teeth poster – all structures

III. Urinary System

1. Human Torso and urinary system models
   a. renal artery and vein
   b. left and right kidneys
   c. left and right ureters
   d. urinary bladder
   e. prostate

2. Kidney model
   a. Calyx
   b. Capsule
   c. Cortex
   d. Medulla
   e. renal column
   f. renal pyramid
   g. renal pelvis
   h. papilla of pyramid
   i. blood supply
      - renal artery
      - segmental artery
      - lobar artery
      - interlobar artery
      - arcuate artery
      - interlobular artery
      - afferent arterioles
      - glomerulus (glomeruli is plural)
      - efferent arterioles
      - interlobular vein
      - arcuate vein
      - interlobar vein
      - lobar vein
      - renal vein

IV. Male Reproductive System

1. Half section
   a. Anus
   b. seminal vesicle
   c. prostate gland

d. ejaculatory duct
e. bulbourethral (Cowper's) gland
f. testis
g. epididymis
h. ductus deferens
i. corpus spongiosum
j. corpus cavernosum
k. foreskin

V. Female Reproductive System

1. Half Section
   a. symphysis pubis
   b. labium majorus
   c. labium minorus
   d. clitoris
   e. opening to vagina
   f. anus
   g. bladder

2. Detachable uterus
   a. Ovary
   b. Fimbriae
   c. fallopian tube
   d. cervix
   e. vagina
   f. uterus

3. Mammary gland
   a. adipose tissue
   b. lactiferous sinus
   c. lactiferous duct
   d. alveoli
   e. nipple
   f. areola
   g. skin
   h. fibrous connective tissue stroma
   i. lymph nodes

3. ileum
   a. vili
   b. lumen
   c. Peyer's patches
   d. Submucosa
   e. Muscularis

4. pancreas
   a. acinar (exocrine) tissue
   b. islets (endocrine tissue)

5. renal cortex (low power view)
   a. renal tubules
   b. glomeruli
   c. lumen of glomerular capsule

BE ABLE TO IDENTIFY UNDER THE MICROSCOPE:

1. lung tissue

2. stomach
   a. simple columnar epithelium
   b. lamina propria
   c. gastric glands
   d. gastric pits