

## 2014-15 Barge Anatomy 1<sup>st</sup> Semester Final Review Questions

Use the chapters in the textbook *Essentials of Anatomy & Physiology* by Martini & Bartholomew as a resource. Not everything in every chapter will be on the final.

### Introduction (Chp 1; PowerPoint notes on classwebsite)

1. Can you describe the contribution of each of these historical figures?  
Hippocrates (Father of medicine = scientific observation, classifying diseases, moral & professional code-standards)  
Andreas Vesalius (father of modern anatomy: dissections of human cadavers; book with first accurate descriptions; rejected many of Galen's teachings)  
William Harvey (founder of modern physiology: book showing that heart is a pump)  
Henry Gray (publishes Gray's Anatomy – 1<sup>st</sup> comprehensive anatomy textbook for medical students 1858)
2. Can you identify major components of the different body systems and function pg 8-13
3. Can you define the following:  
Anatomy, physiology, anatomical position, axial skeleton, appendicular skeleton
4. Can you identify the following terms on the body and use in descriptions:  
coronal (frontal) plane, sagittal (lateral) plane, axial (transverse) plane  
superior, inferior, cranial, caudal, medial, lateral, proximal, distal, superficial, deep, plantar, palmar, anterior (ventral), posterior (dorsal)
5. Can you identify on the body and identify major organs in each body cavity:  
Dorsal, cranial, vertebral, ventral, thoracic, abdominal, pelvic, abdominopelvic
6. Can you define homeostasis & feedback loop and identify 3 components (receptor, control center, effector); Can you describe the 2 types (negative, positive) of feedback?
7. Can you describe what diabetes is? Can you explain the difference between type 1 and type 2?
8. When diabetes is suspected why is a blood glucose tolerance test and a measurement of insulin concentration done minutes after drinking a glucose solution?

### Infectious Disease

9. Can you explain the difference between emerging disease, re-emerging disease and endemic disease?
10. What is the difference between the following pairs of terms?  
Disease reservoir – Vector; Carrier – Index case; Morbidity – Mortality; Pathogen - Virulence
11. Can you explain the difference between modes of transmission?  
Direct contact & indirect contact                      Horizontal transmission & Vertical transmission
12. How is a pandemic different than just an epidemic?
13. What was the big deal about the 1918 flu?
14. Why is guinea worm disease so painful?
15. Why is herd immunity important to control epidemics?

### Ebola

16. What was the first country to report Ebola in the 2014-15 outbreak?
17. How is Ebola spread?
18. What does the Ebola virus do to the human body to cause disease?
19. What treatment is available for the treatment of Ebola?
20. What is the best way to contain the disease?

**Tissues (Chp 4; PowerPoint notes on class website)**

21. Can you describe and identify the 4 major tissue classifications? Can you explain how epithelium is classified and discuss at least three functions of this tissue type? Pg 93
22. Can you compare four different types of intercellular connections (junctions between cells in tissues)? Tight junction; gap junction; button desmosome; hemidesmosomes pg 91
23. Can you describe the function of connective tissue? Name at least two kinds of fibers found in connective tissue and discuss how their presence affects tissue functions. Pg 99
24. Can you describe the process of tissue repair? Pg 127
25. Can you identify pictures, location, and function of the following tissues?
  - i. Simple squamous epithelium pg 95
  - ii. Simple columnar epithelium pg 95
  - iii. Stratified squamous epithelium pg 96
  - iv. Adipose pg 102
  - v. Dense connective tissue pg 102
  - vi. Skeletal muscle pg 108

**Integumentary System (Chp 5; Powerpoint Notes on class website)**

26. Can you explain the different major layers of skin (3)?
27. Can you identify the 4 main functions of the skin?
28. Can you identify where the following components are found in skin? Use Figure 5-1 pg 118 and *Nerves in Skin on classwebsite*.  
Epidermis; Dermis; Hypodermis; Sweat gland; Pacinian corpuscle; Melanocyte;  
Arrector pili muscle; Sebaceous gland
29. What is the difference between basal cell carcinoma and squamous cell carcinoma and melanoma [where do they originate; rate of metastasis; severity]?
30. Can you explain/identify the following components of skin?  
Merkels' Disks; Pacinian corpuscle; Free Nerve endings; Hair follicle ending  
Melanocyte; Melanin; Arrector pili muscle; Sebaceous gland
31. What is keratin?
32. How is skin and hair color determined? How does blood affect skin coloring?
33. What are the signs of cyanosis?

**Imaging**

34. Can you give a basic explanation of each type of imaging below? How it is made and what you can see with each?

X-ray	Computed Tomography (CT)	Magnetic Resonance Imaging (MRI)
Positron Emission Tomography (PET)		Sonograms

**Case Study Vocabulary**

35. Can you define each term below?

Etiology	Idiopathic	Sign of disease	Symptom of disease
Acute disease	Chronic disease	Asymptomatic	Palpation
Palliative treatment	Preventive treatment	Active treatment	Hypotension
Leukocytosis	Leukopenia	CBC (WBC, RBC)	Vital Signs