Bio 103: Computer Exercise – Anatomy & Physiology Revealed (APR)

*Skeletal System*

**A.** See Lab Instructor to sign logbook for use of laptop and cd in the lab room.

**B.** Insert Anatomy & Physiology Revealed (APR) cd into cd drive and allow it to autoplay.

**C.** View Home Screen. Take one or more of the tours (select bottom right) to

Familiarize yourself with the navigational tools:
- Dissection – “melt-away” layers of dissection to reveal individual structures
- Animation – view animations of anatomical structures and systems
- Imaging – correlate dissected anatomy with radiologic images
- Self-test – gauge proficiency with timed self-tests

**Part I. Skull**

**i.** Select System → **Skeletal.** Select Dissection (scalpel icon) → Select Topic → **Head and Neck.**
Select View → **Lateral.** Click the green **GO** button.
Review the following under “**Structure Group**”. Study the unique feature under each group.
- Frontal
- Parietal
- Temporal
- Zygomatic
- Mandible

*More specific structures can be found under the second drop-down menu “Select Structure”.

**ii.** Select **Change Topic/View → Head and Neck.** Select View → **Anterior.** Click the green **GO** button.
Review the following under “**Structure Group**”. Study the unique features under each group.
- Ethmoid
- Maxilla
- Nasal
- Vomer

Select **Change Topic/View → Skull-Cranial Cavity.** Click the green **GO** button.
Review the following under “**Structure Group**”. Study the unique features under each group.
- Cribiform plate
- Crista galli
- Foramen magnum
- Body / Greater & Lesser Wings of Sphenoid
Answer the following questions:

1. What is the only movable joint in the skull? __________________________________________
2. Which bones form the only movable joint in the skull? __________________________________ (Be Specific)
3. Which bone contains the foramen magnum? __________________________________________
4. What structure passes through this opening? _________________________________________
5. Name the six bones that form the orbit of the eye:
   ___________________________________________  __________________________________________
   ___________________________________________  __________________________________________

iii. Select Animation menu. Select Skull. Click the Play button.

After viewing the animation, answer the following questions:

1. What is the function of foramina? ___________________________________________________
2. Olfactory nerves pass through what structure? ________________________________________

Part II. Vertebrae, Ribs, Sternum

i. Select Dissection (scalpel icon) → Select Change Topic/View → Thorax:Anterior.
   Click the green GO button.

ii. Review the following under “Structure Group”. Study the unique features under each group.
   • Clavicle
   • Sternum
   • Vertebral Column
   • Ribs

iii. Answer the following questions: (use definitions supplied by your lab manual)
   1. Which ribs are called “true ribs”? __________________________
   2. Which ribs are called “false ribs”? __________________________
   3. Which ribs are called “floating ribs”? ________________________

Why? ____________________________________________________________________________

4. What structure is used as a land mark for cardiopulmonary resuscitation? ______________
Part IV. Upper Appendicular

i. Select Dissection (scalpel icon) → Select Change Topic/View → Scapula / Humerus / Radius and Ulna. Click the green GO button.

ii. Review the following under “Structure Group”. Study the unique features under each group.
   - Scapula
   - Humerus
   - Radius
   - Ulna

iii. Answer the following questions:
   1. What part of the scapula articulates with the head of the humerus? ________________
   2. What part of the humerus is a common site of fractures? ________________
   3. The projection of the wrist, along the thumb side of the arm, is what structure?
      ___________________________________________________________________

Part V. Lower Appendicular

i. Select Dissection (scalpel icon) → Select Change Topic/View → Hip and Thigh/Anterior. Click the green Go button.

ii. Review the following under “Structure Group”. Study the unique features under each group.
   - Hip Bone (os coxa)
   - Femur

iii. Select Dissection (scalpel icon) → Select Change Topic/View → Tibia and Fibula/Anterior. Click the green GO button.

iv. Review the following under “Structure Group”. Study the unique features under each group.
   - Tibia
   - Fibula

v. Answer the following questions:
   1. Name the part of the os coxa which provides attachment of back, thigh, and abdominal wall muscles; as well as serves as a landmark for intramuscular injections.
      ___________________________________________________________________
2. The lateral projection of the ankle is formed by which structure?

________________________

What bone has this structure? ________________________

3. The “shin” is the common name for which bone? ________________________

Close program.

Remove CD & put in case before shutting down computer.

Shut down computer and return hardware and software to your lab instructor.