Biology 483 - Exam II Fall 2015

Name:__________________________________________

1. Briefly define or give the significance of the following (2 pts. each).

   Diagnosability -

   Allantois -

   Temporalis -

   Dilambodont -

   Digitagrade -

   Propatagium -

   Ambulocetus -

   Endometrium -

   Frictional Drag -

   Camber -

2. Draw a metatherian upper tribosphenic molar and identify the major cusps (6 pts.)?
3. Why were the bones that formed the jaw joint in the early synapsids constrained to be robust (6 points - hint: use both words and diagrams), and what does this imply about their hearing ability (4 pts.)?

4. Identify diet associated with the following molar types (10 pts.).

   Bunodont -

   Selenolophodont -

   Secodont (Carnassial) -

   Dilambdodont -

   Lophodont -
5. Explain the difference between an epitheliochorial placenta and a hemochorial placenta in terms of erosion of tissues and separation of maternal from fetal circulation (12 pts.).

6. How does the fusion of metapodials into a cannon bone in cursorial mammals contribute to running speed (8 pts.)?
8. How does the stylar cartilage of a sugar glider impact its gliding ability (10 pts.)?

9. Can you give an example of mammal species pairs that have been shown to hybridize (8 pts.)?
10. The front limb of an armadillo is adapted for digging. Illustrate the biomechanics (show lever arms and equations) of such a front limb of (10 pts.). Why would this limb be poorly adapted for running (6 pts.)?