

Biology 483 - Exam II Fall 2022

Name: _____

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

Sciurognathous -

Xenarthrous process -

Postzygotic Isolation -

Diagnosability -

Laurasiatheria -

Brachydont -

Selenolophodont -

Dentin -

Hystricomorphous -

Dermoptera -

2. For what dietary specialization is *Manis* adapted (2 pts.). Please list three of these adaptations (6 pts.)?

3. Elephantids have an unusual mode of replacing their cheek teeth (molars and premolars). How is it unusual (6 pts.) and what other group shares this (2 pts.)?

4. Why is it so difficult to apply the Biological Species Concept in cases of allopatry (8 pts.)? How do phylogenetic concepts avoid this problem (4 pts.)?

5. What is the primitive dental formula for eutherians (8 pts.)?

6. What does Templeton mean by “too much sexual reproduction” as it relates to the Biological Species Concept (8 pts.)? Please provide two examples (2 pts.)?

7. Please illustrate a eutherian upper **tribosphenic** molar. Be sure to label all cusps (8 pts.).

Now, please illustrate how a bunodont molar is derived from the tribosphenic molar (4 pts.).

8. To what **family** do the following genera belong (8 pts.).

Trachops:

Tupaia:

Orcinus:

Sorex:

Onychomys:

Homo:

Procyon:

Rattus:

9. What is the syncytio-trophoblast and how is it thought to be important to the disparity in diversity between metatherians and eutherians (14 pts.)?