

Instructions:

- A) This exam is based on the text, readings, and discussions. You MAY use the text, readings, and your notes from the discussions. You may also cite other resources (e.g., journal papers), though such resources are unnecessary. Avoid web sites (any nut can have one – even me).
- B) You must WORK ALONE on this exam. Do not consult anyone else or share your answers with anyone.
- C) CITE resources you use, following the format in the text.
- D) You MUST answer Questions 1-3. Then choose TWO MORE questions from the remainder of the list. TOTAL = 5 answers.
- E) Save time to EDIT your answers! Clearly-articulated, logical answers with evidence-based justifications will be graded most highly; unclear arguments without logic and/or evidence will be graded lower. There are no page limits; instead aim for efficiency.
- F) Email your exam answers to David.Jenkins@ucf.edu – you will receive confirmation of receipt.

Questions:

1. Evolution depends, in part, on historical events (e.g., glaciation during the Pleistocene). There abounds much speculation on the effects of future global warming, but another question is: What would the world's biota be like today if Earth had NOT undergone repeated, extensive glaciation cycles during the Pleistocene? Choose a focal taxonomic group for your answer (e.g., vertebrates or vascular plants), and be as specific in your projections as you can.
 2. Which is most important to biodiversity: the outcomes of historical evolution or current environmental conditions (ecology)? Explain and defend your answer.
 3. Plate tectonics and glaciation have each affected North American biodiversity – which one has the greatest lasting impact on biodiversity spatial patterns and levels (e.g., species richness)?
-
4. Terrestrial biogeography is often characterized as a simple matter of temperature and moisture. Is that all there is to it? Explain your answer. In contrast, what two drivers dominate oceanic biogeography and why?
 5. Critically review the “debate” between dispersalist and vicariance arguments in biogeography, including your assessment of the strengths and weaknesses of each side and the outcome.
 6. Species are often classified as specialists or generalists, r-selected or K-selected, and endemic or cosmopolitan. Which combination would be most likely to undergo adaptive radiation (i.e., speciation) after a major change (such as after a glacial maximum)? Which combination would not? What do your well-supported answers imply about the course of evolution in general?
 7. The text highlights several major contributors to biogeography. Besides Darwin and Wallace, which two others would you argue had the greatest influence, and why?