

Final Exam – Sample questions

Write one or two sentences to answer the following questions

- 1. What appears to be the "pacemaker" for glacial/interglacial cycles for the past 2.5 million years of Earth's history?**
- 2. What is one proxy for wind speed that can be inferred from ice core records? What is the rationale for using it as a proxy?**
- 3. How does metabolic rate scale with body size in metazoans?**
- 4. What is one difference between human induced changes to the Earth System compared with natural changes?**
- 5. How has the evolution of language helped humans to escape the Red Queen constraint?**

Essay questions:

There are two carbon cycles on Earth – a “slow cycle” and a “fast cycle”. Describe the basic features of both cycles (you can use a diagram if you like) and explain how human activities have disrupted the cycle(s).

Explain how mass extinctions differ from “normal” extinction processes, and why mass extinctions are always followed by major radiations. In addressing these issues choose specific examples, whenever possible.