

The third hour exam covers these principal topics: the scientific method, plate tectonics, rocks and minerals, weathering, soils and soil processes.

1. What are the steps in the scientific method?
2. What is a testable hypothesis? Why is it critical to the scientific method?
3. What are plate tectonics? What evidence was used to support the theory of plate tectonics (both original and modern)?
4. What features (both in the oceans and on the continents) are associated with tectonic processes?
5. Way and how are the continents and the oceans fundamentally different?
6. What is the difference between a rock and a mineral?
7. What are the major classes of minerals?
8. What is the rock cycle and how does it relate to the three basic types of rocks?
9. What is weathering? What are the major weathering processes?
10. What is the sedimentary cycle?
11. What is mass wasting or mass movement? Give examples.
12. What is an aquifer? What are the three major classes of aquifers?
13. What is Karst? a Karst system? Karst topography? How can Karst also be an aquifer?
14. Why did the Dutch have an especially good knowledge of soils?
15. Who was Hans Jenny? What are his five major soil forming factors?
16. What is Van Hoff's rule and how does it relate to soil processes?
17. What are the principal soil properties?
18. What is the difference between soil texture and soil structure? Why is texture an especially important property of soils?
19. What is the difference between pedocal and pedalfer? Where is each located?

20. What is a histosol, vertisol, aridisol, mollisol, spodosol, aridisol?