

Physical Geology

Test 2

Fall, 2003

Please enter your answer on a blue scantron. Questions from the book's website begin the set of questions for each chapter. The last 10 questions are from slides that we will look at together later in the test. For questions marked (T/F), put *a* for *True*, and *b* for *False*.

From the Essays:

1. (T/F) The extermination of the pigs of Haiti led to a slowing in the rate of deforestation.
2. The 1973 OPEC oil embargo led to all of the following *except* (a) increased availability of loans to poor countries (b) leveling in standards of living between the industrial and underdeveloped countries (c) quadrupling of oil prices (d) a rapid increase in gasoline prices in the U.S.
3. The disaster at Lake Peigneur was due to (a) the accidental release of nutria, originally from South America (b) the crash of an oil barge and subsequent oil spill (c) hurricane storm surge (d) Texaco drilling into a salt mine
4. FDR contributed to overcoming all of the following *except* (a) ending the Cold War (b) failure of the banking system (c) poverty among the elderly (d) soil loss (e) unemployment

Chapter 5

5. What is the most important agent of chemical weathering? (a) carbonic acid (b) oxygen (c) carbon dioxide (d) water (e) halite
6. Highly leached soils that develop in hot, wet tropics are called: (a) humus. (b) pedocal. (c) laterite. (d) podiatrist. (e) pedalfer.
7. Which of the following is an example of chemical weathering? (a) creep (b) rust (c) unloading (d) frost wedging
8. Which of the following minerals most resists chemical weathering? (a) feldspar (b) mica (c) quartz (d) talc
9. Unloading, which leads to a decrease in confining pressure, causes which of the following? (a) exfoliation (b) frost wedging (c) hydrolysis (d) rust
10. In which of the following locations is soil likely to be thickest? (a) in the Amazon rain forest (b) in Antarctica (c) on the Mississippi Delta (d) in the Sahara desert

11. In which of the following locations is weathering likely to be most rapid? (a) in the Amazon rain forest (b) in Antarctica (c) on the Mississippi Delta (d) in the Sahara desert
12. In the Valley and Ridge province of the Appalachian Mountains, which of the following is most likely to be found atop the ridges? (a) limestone (b) salt (c) sandstone (d) shale
13. Plants and animals aid in the formation of soil in all of the following ways *except* (a) aerating soil (b) contributing weak organic acids to infiltrating water (c) converting feldspars to clays (d) fixing nitrogen (e) providing organic material
14. The introduction of nutrients into a water body, such as Lake Pontchartrain, can lead to algae blooms and subsequent eutrophication. Which of the following does *not* contribute nutrients to Lake Pontchartrain (a) cross-contamination of sewerage and stormwater drainage in canals entering the lake (b) increase in population and use of septic tanks on the North Shore (c) opening the Bonnet Carre spillway (d) production of oil and gas from wells in the Lake

Chapter 6

15. A sedimentary rock that contains randomly distributed clay, sand, and pebble clasts is called: (a) poorly-sorted. (b) well-rounded. (c) biogenic. (d) mudstone. (e) well-sorted.
16. Turbidity currents are generally associated with which of the following sedimentary features? (a) cross-bedding (b) conglomerates (c) graded beds (d) ripple marks (e) mudcracks
17. The drainage canals that lead into Lake Pontchartrain are a major source of pollution to the lake because (a) breaks in sewer lines allow sewage to mix with stormwater (b) the decay of organic matter from old swamp and marsh areas releases organic acids (c) Jefferson Parish dumps untreated sewage directly into the lake (d) rainwater is naturally acidic
18. Before the area where UNO is located became a campus, it was all of the following *except* (a) swamp and marsh (b) a Naval Air Station (c) land constructed with silt pumped from Lake Pontchartrain (d) an old natural levee of Bayou St. John
19. Detrital sedimentary rocks are classified on the basis of all of the following *except* (a) angularity (b) grain size (c) mineralogy (d) sorting
20. Which of the following best reflects the average velocity of the water transporting sediments? (a) angularity (b) grain size (c) mineralogy (d) sorting
21. (T/F) A breccia has smaller average grain size than a conglomerate.
22. Which of the following is *not* a chemical sedimentary rock? (a) coal (b) gypsum (c) limestone (d) phyllite (e) salt
23. Which of the following would be best for making a stone-aged knife? (a) chert (b) gypsum (c) limestone (d) salt
24. To turn swamp deposits into coal requires all of the following *except* (a) cementation (b) compaction (c) cutting off oxygen to the organic material (d) evaporation of water

25. Which of the following is most likely to form in an arid environment? (a) alluvial fan (b) barrier island (c) estuary (d) swamp
26. The presence of salt layers underneath Kansas is evidence that (a) corn and wheat need salt in order to grow well (b) the Earth was much dryer than it is today (c) Kansas was once covered by a shallow inland sea (d) salt can flow long distances under pressure

Chapter 7

27. The force exerted on a buried rock by the weight of material above is called: (a) confining pressure. (b) differential stress. (c) shear stress. (d) geothermal gradient. (e) tensional stress.
28. In high grade metamorphism, the segregation of minerals into separate bands is called: (a) slaty cleavage. (b) preferred orientation. (c) rock cleavage. (d) gneissic texture. (e) schistosity.
29. Listed in order of increasing metamorphic grade, a shale could be metamorphosed into: (a) slate-schist-gneiss-phyllite (b) slate-phyllite-schist-gneiss (c) gneiss-phyllite-slate-schist (d) schist-phyllite-slate-gneiss (e) gneiss-schist-phyllite-slate
30. Where does most regional metamorphism occur? (a) around volcanoes (b) in the lower mantle (c) in areas of active mountain building (d) around magmatic intrusions (e) on the seafloor
31. The black rock on the wall in the front of the Geology Building is (a) arkose (b) gneiss (c) sandstone (d) slate
32. Which of the following is *not* a type of metamorphism? (a) contact (b) differential (c) fault-zone (cataclastic) (d) regional
33. The mineral whose growth creates schistosity is (a) calcite (b) mica (c) pyrite (d) quartz
34. Which of the following metamorphic rocks is commonly used for making statues? (a) bronze (b) copper (c) marble (d) quartzite (e) slate

Chapter 8

35. What is mass wasting? (a) the chemical and physical breakdown of rock (b) the downslope movement of material under the influence of gravity (c) the transport of rock and soil by wind and water (d) the breakdown of rocks under the influence of gravity (e) a and c
36. A slope built of angular rock fragments is called: (a) angle of repose (b) slide (c) slump (d) talus (e) flow
37. The most rapid type of mass movement is: (a) creep (b) debris flow (c) rock avalanche (d) earthflow (e) slump
38. Which of the following is *not* a trigger of mass wasting? (a) decrease in water velocity (b) deforestation (c) earthquakes (d) increase in water content (e) oversteepening of slopes
39. A mass movement that has a rotational (curved) detachment surface is called a (a) debris flow (b) lahar (c) rockslide (d) slump

40. An example of a *slow* mass movement is (a) creep (b) lahar (c) solifluction (d) all of the above (e) a and c only

From the Slides:

41. The feature indicated in the figure by an arrow is responsible for (a) accumulation of coal (b) earthquakes at New Madrid, MO (c) the location of Lake Pontchartrain (d) the location of oil and gas wells
42. (T/F) The gray area shown represents the oldest material on the geologic map of Louisiana
43. Salt domes are likely spots for finding oil because (a) they deform sediment layers to create traps (b) they serve as source material (c) they serve as reservoirs (d) their heat speeds the conversion of organic material to oil and gas
44. In the figure shown, the yellow represents (a) marshes (b) natural levees (c) swamp (d) water
45. (T/F) In the figure shown the rock has undergone spheroidal weathering.
46. The erosion shown is due mainly to (a) deforestation (b) the eradication of pigs (c) overpopulation (d) all of the above (e) a and c only
47. Using streams or open wells usually results in widespread water-borne illness. The installation and use of hand pumps reduces water-borne illness by (a) adding chlorine to the water (b) cutting off contact with the source of water (c) decreasing availability of water (d) increasing exercise levels
48. The large crystals shown in the rock matrix are (a) emeralds (b) diamonds (c) garnets (d) rubies
49. The figure shown illustrates (a) creep (b) a debris flow (c) a lahar (d) a landslide
50. The rock shown is (a) breccia (b) gneiss (c) sandstone (d) slate