

GEOG 101 STUDY GUIDE

EXAM 04 – SHAPING EARTH’S SURFACE

Readings due:

Physical Geography, Mason et al., units 35, 36, 39, 40-45, 47-50

Questions for review:

1. What is geomorphology?
2. Define denudation, weathering, erosion, and deposition.
3. What is the difference between physical and chemical weathering? Explain the processes of frost wedging, salt-crystal growth, exfoliation, hydrolysis, oxidation, and carbonation. Be sure to distinguish where we find these processes and whether they are physical or chemical weathering.
4. What is karst? How does it form and what are the features associated with it?
5. Do we need to worry about sinkholes here in California?
6. What is the “angle of repose?”
7. Explain mass wasting, falls, slides, and flows
8. What does fluvial mean? What is alluvium?
9. How does a watershed work and why is it important to study?
10. What is an exotic stream? Are they good sources of drinking water for large cities?
11. Define base level as it relates to streams.
12. What are the three ways in which fluvial erosion occurs? Explain them.
13. What is the basic relationship between stream load and stream capacity?
14. Fully explain how a meandering stream works. Explain point bars, cut banks, oxbow lakes, and meander scars.
15. What is a natural levee? How does it form and how does it prevent flooding?
16. When can you expect the next 100-year flood?
17. What is a rejuvenated stream? What is a notable landform that was created by one?
18. What are distributaries and deltaic islands? Are they erosional or depositional landforms?
19. How are waves typically created?
20. Explain the concept of wave refraction and what it does to coastlines over time.
21. Define the following: headland, pocket beach, sea stacks, lagoon, baymouth bar, spit, and tombolo. Be sure to state whether they are erosional or depositional.
22. What is littoral drift?
23. Define Aeolian.
24. Who was Ralph Bagnold and what did he contribute to modern geomorphology?
25. Explain Aeolian deflation and what landform it leaves behind.
26. Explain Aeolian abrasion and how it forms ventifacts and yardangs.
27. What are saltation and surface creep in Aeolian sediment transport?

28. What are the three depositional landforms created by Aeolian forces?
29. Explain dune movement.
30. How do star, barchans, and transverse dunes form?
31. Define alluvial fan and bajada.
32. What is a glacier and how does it form?
33. Is the Earth currently gaining or losing glacial ice?
34. What are the differences between valley, cirque, and tidewater glaciers? Are they alpine or continental?
35. What is an ice sheet and where do we currently find them?
36. Explain ice regelation and rock plucking.
37. How does glacial abrasion work and what does it leave behind?
38. Study WM Davis' drawings of alpine glacial erosion. You should be able to explain what happens from beginning to end.
39. Define arête, horn, cirque, tarn, paternoster lake, truncated spur, hanging valley, erratic, and moraine. How do they form and are they erosional or depositional?
40. Define esker, drumlin, kettle, and roche moutonnée. How do they form and are they erosional or depositional?
41. Be sure to study the physiographic realms and which landforms are found in which realm.

Don't forget your Scantron form and #2 pencil!