Possible Test Questions
Unit 5 EOLIAN SYSTEM

(Revised 7/16)

Eolian Transport
1. What effect can dust, derived from the Sahara Desert, have on the Texas and the coral reefs within the Caribbean Sea?

The US Dust Bowl and Black Blizzards
2. Historically, what events are referred to as “black blizzards”?
3. Which decade was the “American Dust Bowl”, a tragic phenomena?

US Droughts Today
4. What defines a drought (time vs. rainfall)?

World Deserts
5. Describe the extreme conditions of the Atacama Desert that make it unique

Deserts and US Deserts
6. How much rain generally defines an area as a desert, as per our lecture?
7. Is Texas a part of a large desert? If so, what is the name of this desert?
8. What is the average normal rainfall for Corpus Christi in inches?

Rain Shadow
9. What two major Earth features cause something called a “rain shadow” in western North America?

Two Agents of Wind Erosion (Sediment Removal)
10. Describe a ventifact

Lag Gravel or Desert Pavement or Desert Varnish
11. What effect does a large area of thick lag gravels have on continued deflation?

Deflation (Wind Eroding Sand and Dust)
12. Which two methods of sand grain “movements” create deflation of an area?
13. Describe saltation of sand grains (a picture might help – be sure to mention chain-reactions).
14. You see long “thin trails” within a dried lake bed that leads to a large rock, and someone ask you if aliens were responsible for this. How would you explain the cause of those “trails” to this person?

Deflation - Hoodoos
15. What must “underlie” a hoodoo for these strange rocks to be created?

Evidences of Wind Transportation
16. Someone told you that they were driving through a dust storm but then suddenly they drove into a “mud storm”. You would say – I believe you because you drove through a ________

Sand Sheets and Ripples
17. Describe the alignment of sand ripples to the wind direction.
**White Gypsum Sands**
18. What is unique about the type of sands found at White Sands National Monument and a part of the Texas Guadalupe Peak National Park?

**Dune Shapes**
19. How is a “dune” different from a “hill”? *(Hint: Of what material are they composed?)*
20. Draw a typical sand dune showing its slope according to a wind direction (show wind direction arrow).
21. Draw an example of cross bedding within a dune, and show the wind direction (arrow) that would cause this slip face or cross bedding to occur.

**Conditions Needed to Create Different Types of Sand Dunes**
22. Dune shapes will be determined by what three conditions?

**Other Specialized Dunes**
23. Draw and describe a coppice dune, also show wind direction.

**Padre Island and Oso Bay Dunes**
24. At Padre Island, there is a dune ridge along the beach. What is the most common “type” of dune is found here?
25. What causes a “blowout complex” that we can find on Padre Island?
26. Where have small clay dunes been found locally?

**State Park**
27. Texas has a sand hill state park with dunes 70 feet tall. Where is this park located?

**Loess**
28. Why are loess deposits of wind-blown sediments important to mankind?

**“Dust Devils”**
29. What are dust devils and what creates them?
30. Describe some of the eolian activity that has been observed on Mars

**Stabilized Sand Dunes and Others**
31. What has happened to most of the older sand dunes that cover much of the western US?

**Power Generation in the US**
32. Which state is the largest producer of wind generated electricity?
33. What is a major problem for relying solely on wind generated electricity for any town or industry?
34. Near which local town do you find a large number of wind turbines for creating electricity?
SEE BELOW FOR DAILY QUIZ

Open Notes and Book Daily Quiz #7 (Unit 5 Eolian System)
Using the word bank below: please clearly write the correct answer number

A. Introduction Pages 365
   About 6,000 years ago, the Sahara Desert in Africa was ___

B. Wind Erosion Page 367
   Ventifacts are rocks that are the product of wind erosion, whose surfaces ___

C. Wind Deposits Page 369;
   Dunes are ___

D. Loess Page 372
   Deposits of wind-blown sand and clay ___

IF YOU PLAN TO LEAVE CLASS EARLY, PLEASE PLACE AN “X” AS THE ANSWER FOR QUESTION E

E. Desert Landforms Pages 378 - 379
   Alluvial fans may coalesce to form a ___

Open Notes and Book Daily Quiz #8 (Unit 5 Eolian System)
Using the word bank below: please clearly write the correct answer number
   All answers found using the textbook

IF YOU TARDY (arrived after class time start), PLEASE PLACE AN “X” AS THE ANSWER FOR QUESTION A

A. Weathering and Soils Pages 376 - 377
   What ancient man-made features are found on some area desert rocks? ___

B. Introduction Page 366
   What is desertification? ___

C. Wind Erosion Page 367-368;
   Yardangs are elongated, streamlined ridges that look like ___

D. Characteristics of Deserts Page 376
   The black shiny coating on the surface of many desert rocks is called ___

IF YOU PLAN TO LEAVE CLASS EARLY, PLEASE PLACE AN “X” AS THE ANSWER FOR QUESTION E

E. Desert Landforms Pages 379 - 380
   What are playas that are found in the deserts? ___

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