

## DEPT. OF GEOGRAPHY

Name: \_\_\_\_\_

Environmental Geology Final Exam, Geog 115 Fall 2004

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1. Renewable: non-renewable as \_\_\_\_\_; petroleum.  
a. tide      b. wave      c. coal      d. nuclear      e. both a & b
2. Soft: hard as \_\_\_\_\_; anthracite.  
a. bituminous      b. coke      c. lignite      d. brown      e. both c & d
3. \_\_\_\_\_; straturation as vadose: aeration.  
a. Aquifer      b. Hydrologic      c. Phreatic      d. Hydrothermal      e. none of these
4. Bacteria: Coliform as \_\_\_\_\_; particle.  
a. TDS      b. Mg      c. Cl      d. Ca      e. none of these
5. \_\_\_\_\_; Chemical as abrasion: hydrolysis.  
a. acid      b. mechanical      c. Disintegration      d. decomposition      e. both c & d
6. A: B as leached area: \_\_\_\_\_.  
a. soluble material      b. accumulation      c. deposition      d. all of them      e. none of these
7. Oxisol: Laterite as \_\_\_\_\_; arisdosal.  
a. caliche      b. Entisol      c. histosol      d. spodosol      e. Mollesol
8. Pedalfer: Acid: east as pedocal: base: \_\_\_\_\_.  
a. North      b. South      c. West      d. Southeast      e. Northeast
9. Permeable: impermeable as sand/gravel: \_\_\_\_\_.  
a. pebbles      b. cobbles      c. clay      d. boulders      e. both c & d
10. Mineral: ore as diamond: \_\_\_\_\_.  
a. precious      b. rock      c. galena      d. hematite      e. kimberlite
11. The U.S. consumes 15% of molybdenum reserves and produces 50% of the supply.  
a. TRUE\_\_\_\_      b. FALSE\_\_\_\_
12. Evaporates form gypsum and halite.  
a. TRUE\_\_\_\_      b. FALSE\_\_\_\_
13. Placers are large course particles mined in the sea bed floor.  
a. TRUE\_\_\_\_      b. FALSE\_\_\_\_
14. The U.S. with 6% of world population consumers 1/6 of the world's resources.  
a. TRUE\_\_\_\_      b. FALSE\_\_\_\_
15. The following may be recycled: Al, CR, Co, Cu, Au, No.  
a. TRUE\_\_\_\_      b. FALSE\_\_\_\_

# MATCH

16. \_\_\_\_\_ lead a. smelting toxics
  17. \_\_\_\_\_ copper b. nodules
  18. \_\_\_\_\_ manganese c. substitution for metal
  19. \_\_\_\_\_ arsenic d. natural gas
  20. \_\_\_\_\_ titanium e. strategic reserve
  21. \_\_\_\_\_ methane
  22. \_\_\_\_\_ petroleum
  23. \_\_\_\_\_ mercury
  24. \_\_\_\_\_ butane
  25. \_\_\_\_\_ plastic
- 
26. Fossil fuels contain hydrogen and oxygen.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  27. Cracking process separates petroleum.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  28. Many different geological structures contain hydrocarbon deposits of fossil fuels.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  29. Slightly less than 40% of U.S oil supplies are produced in the U.S.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  30. Geopressurized deep gas zones are enhanced by hot brine injections.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  31. There are more than 10,000 oil spills each year resulting in 15-25 million gallons lost.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  32. anthracite a. soft
  33. coke b. hard
  34. lignite c. manufactured
  35. bituminous d. brown
  36. peat e. unconsolidated
- 
37. Fusion nuclear plants utilize \_\_\_\_\_  
a. deuterium b. tritium c. uranium d. both a & b e. none of these
  38. A problem of nuclear power generation is \_\_\_\_\_.  
a. radioactivity b. meltdown c. fuel handling d. waste disposal e. all of those
  39. Geothermal power works well in \_\_\_\_\_.  
a. Lardarello, Italy b. Russia c. Japan d. Greenland e. all of them
  40. Biomass power generation may produce \_\_\_\_\_.  
a. alcohol b. trees c. coal d. petroleum e. natural gas
  41. Hawaii utilizes solar and geothermal power.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  42. Biomass fuel may utilize manure  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_
  43. Electrical power usually is transported less than 300 miles.  
a. TRUE \_\_\_\_\_ b. FALSE \_\_\_\_\_

44. Gasohol is usually 10% methane.  
a. TRUE\_\_\_\_ b. FALSE\_\_\_\_
45. Americans generate about 4 lbs/day of waste.  
a. TRUE\_\_\_\_ b. FALSE\_\_\_\_
46. The largest source of industrial waste is \_\_\_\_\_.  
a. animal b. chemical c. paper d. cropse. minerals
47. The common waste disposal site in Massachusetts \_\_\_\_\_.  
a. sanitary landfill b. open dump c. incineration d. off shore dump e. none of these
48. The country with the largest garbage to energy conversion rate is \_\_\_\_\_.  
a. US b. France c. Sweden d. Switzerland e. Japan
49. In a sanitary landfill you \_\_\_\_\_ and \_\_\_\_\_.  
a. burn/bury b. compost/cover c. leach/run off d. recycle/ reuse  
e. none of them
50. A good economic reason to recycle is that \_\_\_\_\_.  
a. product is cheaper  
b. product degrades quickly  
c. deposits on cans and bottles  
d. paper is in short supply  
e. none of them

#### MATCH

51. \_\_\_\_\_ Soda bottles a. polyethylene  
52. \_\_\_\_\_ Parking b. high density polyethylene  
53. \_\_\_\_\_ Salad bottles c. low density polyethylene  
54. \_\_\_\_\_ Milk bottles d. polypropylene  
55. \_\_\_\_\_ Motor oil containers e. polystyrene  
56. \_\_\_\_\_ Detergent bottles  
57. \_\_\_\_\_ Prescription bottles  
58. \_\_\_\_\_ Foam cups  
59. \_\_\_\_\_ Shopping bags  
60. \_\_\_\_\_ Cereal boxes
61. For non municipal waste plants the preferred treatment in Massachusetts is \_\_\_\_\_.  
a. sewage b. cesspool c. swimming pool d. septic tank e. gas tank
62. Most secondary sewage treatment utilizes \_\_\_\_\_.  
a. screens b. chemicals c. filters d. both a & c e. none of these
63. Massachusetts is one of the largest generators of radio active waste in the U.S.  
a. TRUE \_\_\_\_ b. FALSE\_\_\_\_
64. The U.S. Government selected Yucca Mountain as a nuclear waste site because \_\_\_\_\_.  
a. arid climate  
b. low population  
c. low water table  
d. geological stability  
e. all of them
65. Radioactive materials with the shortest  $1/2$  life probability \_\_\_\_\_.  
a. U2 38 b. Cl4 c. Ra222 d. I 131 e. SR 90

66. An important consideration in chemical contamination of water supplies is \_\_\_\_\_.
- point source
  - non point source
  - permeability
  - resident time
  - none of them

#### MATCH

- |           |                   |                          |
|-----------|-------------------|--------------------------|
| 67. _____ | Pesticide         | a. califaction           |
| 68. _____ | Thermal pollution | b. anaerobic             |
| 69. _____ | Fungicide         | c. organic               |
| 70. _____ | PCB               | d. Eutrophication        |
| 71. _____ | PVC               | e. Negative human effect |
| 72. _____ | H <sub>2</sub> S  |                          |
| 73. _____ | Methane           |                          |
| 74. _____ | Herbicide         |                          |
| 75. _____ | Noxious gas       |                          |

- |           |                  |                          |
|-----------|------------------|--------------------------|
| 76. _____ | BOD              | a. Califaction           |
| 77. _____ | Blue green algae | b. Anaerobic             |
| 78. _____ | Bloom            | c. Organic               |
| 79. _____ | Teratogen        | d. Eutrophication        |
| 80. _____ | Bog Formation    | e. Negative Human Effect |

81. Pesticides of restricted use in water are \_\_\_\_\_.
- a. copper sulfate      b. Rotenone      c. DDT      d. DDE      e. both a & b

82. Program to minimize amount of pesticides used is \_\_\_\_\_.
- a. IBM      b. IPM      c. PCB      d. PVC      e. DDT

83. The most common components of our air are \_\_\_\_\_.
- a. Nitrogen      b. oxygen      c. carbon dioxide      d. Iron      e. all but d

#### MATCH

- |            |                               |                    |
|------------|-------------------------------|--------------------|
| 84. _____  | Oxides                        | a. Ozone           |
| 85. _____  | combustion products           | b. Carbon monoxide |
| 86. _____  | removed by rain from air      | c. POM             |
| 87. _____  | high temperature              | d. Nitrates        |
| 88. _____  | smog                          | e. Sulfur          |
| 89. _____  | absorbs ultraviolet rays      |                    |
| 90. _____  | may cause skin cancer         |                    |
| 91. _____  | activated by CFC's            |                    |
| 92. _____  | melanoma                      |                    |
| 93. _____  | O <sub>3</sub>                |                    |
| 94. _____  | deadly                        |                    |
| 95. _____  | odorless                      |                    |
| 96. _____  | displaces hemoglobin in blood |                    |
| 97. _____  | urban industrial problem      |                    |
| 98. _____  | low quality coal              |                    |
| 99. _____  | acid rain                     |                    |
| 100. _____ | scrubbers                     |                    |



101. Volatile organic compounds include \_\_\_\_\_.  
 a. hydrocarbons      b. chemical solvents      c. heavy metals      d. UFFI  
 e. all except d
102. 500: 50 as \_\_\_\_\_: good.  
 a. moderate      b. unhealthful      c. very unhealthful      d. both b & c      e. none of these
103. Methods of controlling air pollution include.  
 a. filters      b. scrubbers      c. catalytic converters      d. wet scrubbers      e. all of them
104. Riparian: Prior appropriation as West: \_\_\_\_\_.  
 a. North      b. South      c. West      d. Northeast      e. Southeast
105. According to the Rule of capture anything you can get is yours.  
 a. TRUE \_\_\_\_\_      b. FALSE \_\_\_\_\_
106. According to the Rule of Reasonable use you can return polluted water to streams.  
 a. TRUE \_\_\_\_\_      b. FALSE \_\_\_\_\_
107. The oldest US law concerning water pollution is \_\_\_\_\_.  
 a. Riverways Act      b. Municipal Sewage Act      c. Clear Water Act  
 d. Water Quality Improvement Act      e. EPA Act
108. According to CRAMRA we can mine in the Arctic.  
 a. TRUE \_\_\_\_\_      b. FALSE \_\_\_\_\_
109. \_\_\_\_\_ Love Canal      a. Superfund  
 110. \_\_\_\_\_ geological hazards      b. Field ACT  
 111. \_\_\_\_\_ zero flocculants      c. MDS  
 112. \_\_\_\_\_ Environmental Policy      d. EIS  
 113. \_\_\_\_\_ Cost Benefit      e. FFIP  
 114. \_\_\_\_\_ Toxic waste site  
 115. \_\_\_\_\_ Rivers  
 116. \_\_\_\_\_ pollution exclusion  
 117. \_\_\_\_\_ coasts  
 118. \_\_\_\_\_ footing  
 119. \_\_\_\_\_ marine dumping  
 120. \_\_\_\_\_ soils
121. Manganese in smoke and aerosols may cause nerve and brain damage.  
 a. \_\_\_\_\_ TRUE      b. \_\_\_\_\_ FALSE
122. Locoweed is to cattle and may cause hair loss or depression is rich in the chemical selenium.  
 a. \_\_\_\_\_ TRUE      b. \_\_\_\_\_ FALSE
123. Selenium is taken up by the root system of plants like wheat, cabbage and onions.  
 a. \_\_\_\_\_ TRUE      b. \_\_\_\_\_ FALSE
124. Radon is commonly found in \_\_\_\_\_.  
 a. Fe      b.  $\text{UO}_2$       c. granite      d. limestone      e. both a & b
125. Humans living in coastal communities have higher rates of heart disease because of \_\_\_\_\_.  
 a. Fe      b.  $\text{UO}_2$       c. Na      d. Mn      e. all but c

- Certain chemicals in environments impact human physiology.
- 126. teeth a. zinc
  - 127. growth b. chromium
  - 128. insulin c. Iodine
  - 129. glucose tolerance d. lead
  - 130. bone strength e. Fluorine
  - 131. healing
  - 132. infertility
  - 133. poisoning
  - 134. reproduction
  - 135. thyroid problems
136. Of the 8639 dams in the U.S., the Corps of Engineers says that approximately one third of are unsafe.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
137. An Olympic site in France recently that was the site of a poorly engineered dam was the \_\_\_\_\_.  
a. La Salle b. Seine c. La Rance d. Voiant e. Lido
138. As a site planner to gain the best possible value from a dam site, I would consider \_\_\_\_\_.  
a. hydro power b. irrigation c. flood control d. both a & b e. all of them
139. A good environmental planner would probably use often all of the following maps except \_\_\_\_\_.  
a. topographical b. geological c. political d. zoning e. flood plain
140. Point source pollution is easier to define than non-point source pollution.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
141. The Field Act is important in re-establishing inner city brown fields.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
142. A dam that holds base water, generates power, provides irrigation is described as segmental use function.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
143. In the US for planning purposes land value is described as the highest and best possible use.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
144. Pesticides can combine and react with mud.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
145. Zoning, as we know it, is less than 100 years old in US practices.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
146. The Federal Government may legally allow mining a Natural Park Land.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
147. There is a natural conformity on water rights and law in the US.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
148. A pond with pH 4.2 could be sterile.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
149. Temperature inversion contributes to smog impacts on humans.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE
150. The movement of POM's is dependant upon size and amount of rain.  
a. \_\_\_\_\_TRUE b. \_\_\_\_\_FALSE

**Have a nice Vacation!**