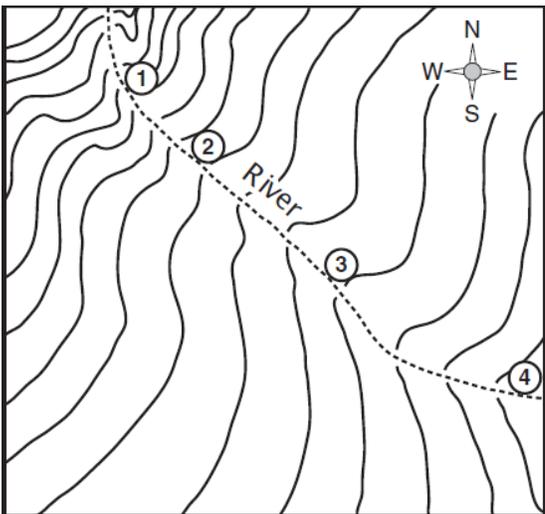


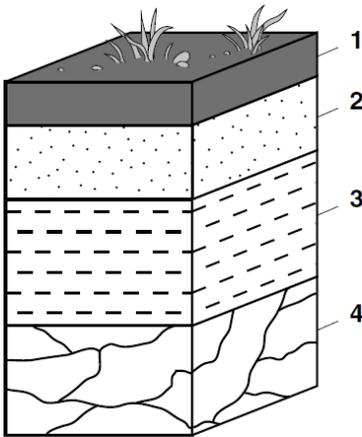
Earth Science Practice Final Exam

1. Which provides the best evidence for the theory that faults and volcanoes are results of tectonic plate interactions?
 - a. Faults on tectonic plates are in constant motion, but volcanoes may not erupt for many years.
 - b. Faults and volcanoes existed long before there were tectonic plates.
 - c. Tectonic plates that have many faults do not usually have volcanoes.
 - d. Faults and volcanoes are often found at tectonic plate boundaries.
2. The breakdown of rocks and minerals into smaller particles without a change in composition is called _____
 - a. igneous intrusion
 - b. chemical precipitation
 - c. mechanical weathering
 - d. metamorphic foliation
3. Metamorphic rocks with a layered or banded look are called —
 - a. foliated
 - b. unfoliated
 - c. striated
 - d. evaporated
4. Which recent geologic processes commonly occur in the Coastal Plain region of North Carolina?
 - a. Crustal uplift and rock deformation
 - b. Rifting and intrusion
 - c. Erosion and deposition
 - d. Subduction and metamorphism
5. Identical rock types, identical fossils, and very similar mountain ranges are found on different continents that are separated by a wide ocean. Which of these best explains these observations?
 - a. Organisms traveled between these continents on land bridges.
 - b. The same forces erode mountains in different locations.
 - c. These continents were joined together at one time in the past.
 - d. Some rock types are very common and are found everywhere.



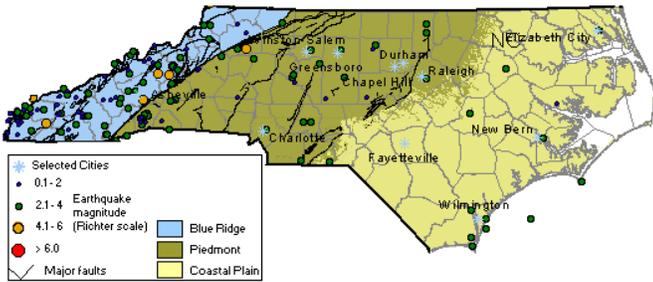
6. The river shown on the topographic map flows fastest at point —
 - a. 1
 - b. 2
 - c. 3
 - d. 4

Soil Profile



7. Which layer of the soil profile would be affected the most by weathering and erosion?
- 1
 - 2
 - 3
 - 4
8. The folding and faulting found in the rocks of the Appalachian Mountains of North Carolina were created by —
- collisions of continental plates
 - wave action of prehistoric ocean
 - the Coriolis effect
 - heating and cooling of the prehistoric atmosphere
9. The major disadvantage of using solar panels to generate electricity is that solar panels —
- release toxic fumes into the air
 - cannot convert energy efficiently
 - are affected by cloud coverage and day length
 - produce energy that cannot be stored
10. Limestone chips dissolve after they are placed in a beaker of dilute acid. Which geologic process is this most similar to?
- Faulting
 - Folding
 - Weathering
 - Subduction
11. Which of the following processes will change a sedimentary rock into an igneous rock?
- Melting and crystallization
 - Erosion and deposition
 - Deformation and deposition
 - Faulting and fracturing
12. Some fuels are classified as nonrenewable because they —
- produce toxic waste
 - can be easily recycled
 - come from deep within Earth
 - require a long period of time to form
13. Why are seismic waves of an earthquake more strongly felt at the epicenter of an earthquake?
- Because millions of small movements of crust occur there
 - Because most faults converge at the epicenter
 - Because the epicenter is directly above the focus, the place inside the earth where the earthquake starts
 - Because crustal plates rise and fall with the ocean tides

14. Why are wind, water, and gravity major agents of erosion rather than weathering?
- Because weathering is often limited to physical changes in earth material
 - Because weathering is often limited to chemical changes in earth material
 - Because erosion involves the stationary processes that break down rock
 - Because erosion involves movement of earth materials from one location to another
15. Which more likely to prevent mass-movement events?
- Constructing buildings in stream drainage paths
 - Clear-cutting trees from the side of a mountain
 - Paving roads next to sloping hills
 - Contour plowing of crop areas
16. How does the replacement of large land areas with concrete and asphalt affect the land?
- It changes the bedrock of underlying layers of soil
 - It prevents the dynamics of the rock cycle
 - It increases the amount of groundwater in porous rock
 - It increases the erosion of sediments by increasing runoff
17. Why does mining of coal and other natural resources often result in environment pollution?
- Mining pollutes the air near streams
 - Mining produces acid precipitation near streams
 - Mining creates waste material which can flow into streams
 - Mining strips the surface of the land near streams
18. Which alternative energy technology could take advantages of land and sea breezes in coastal NC?
- Biofuels production
 - Wind farms
 - Solar energy panels
 - Nuclear fusion
19. Why would citizens be advised to recycle plastic products?
- Because the products are not biodegradable and would therefore accumulate
 - Because this would increase the consumption of petroleum products
 - Because this would decrease the amount of green industry jobs
 - Because the products can be made into inexpensive public art
20. When rocks along strike-slip fault lines catch and build up pressure, they eventually break and release a great deal of energy. The point from which this energy is released is known as the _____.
- Epicenter
 - Focus
 - Energy fissure
 - Fracture
21. When looking at an igneous rock it is noticed that the crystals of the rock are coarse (big). This property tells us that the rock cooled _____.
- Intrusive
 - Extrusive



22. The map above shows the earthquake activity in North Carolina over the past two decades. Based on the information which section of North Carolina is most likely to experience an earthquake?

- a. Piedmont
- b. Mountains
- c. Outer coastal plain
- d. Inner coastal plain

23. Which of the following isn't a factor/force involved with erosion?

- a. Gravity
- b. Wind
- c. Tension
- d. Water

24. Why does Earth experience precession?

- a. Because the Earth revolves around the sun every 365 days
- b. Because of the movement of the circumpolar stars and Polaris
- c. Because the Earth is the third planet from the sun
- d. Because the plane of the moon's orbit is tilted from the Earth's elliptical plane

25. Which is true about Earth's motion through space?

- a. The earth's revolution changes the Sun-Earth gravitational pull
- b. The Earth's rotation causes annual changes in its surface temperature
- c. The tilt of the Earth's axis and its revolution around the sun produces seasons
- d. The Earth's precession affects the amount of heat reflected from its surface.

26. Which of the following chemical reactions produce the sun's energy?

- a. Helium nuclei are combined by nuclear fusion
- b. Oxygen is present to cause combustion of solar fuel molecules
- c. Hydrogen nuclei combine through nuclear fusion into helium
- d. Helium and oxygen break down through nuclear fission

27. Why is solar energy essential to plants?

- a. Solar energy maintains the internal temperature of the plants
- b. Solar energy is converted to chemical energy used by the plants
- c. Solar energy signals the plants to release leaves in the fall
- d. Solar energy regulates the consumption of oxygen by the plant

28. How is the balance of heat energy maintained in the oceans?

- a. The sun's energy is equally distributed throughout the oceans
- b. The tides transfer heat energy across the oceans
- c. The movement of waves transfers heat energy throughout the oceans
- d. Heat energy is cycled by currents between the equator and the polar regions.

29. In what type of soil would the permeability of groundwater into streams occur the slowest?
- Fine sand
 - Gravel
 - Fine clay
30. How would several wells in a given area affect the balance of groundwater recharge and discharge?
- The wells would provide dissolved oxygen
 - The wells would increase the water table level by adding water from runoff
 - The wells would deplete the groundwater which is usually supplied by percolation from rain
 - The wells would provide storage areas for groundwater to maintain the water level
31. When a sewer pipe breaks near a stream which would most likely occur?
- Increase in salinity
 - Decrease in dissolved nitrogen
 - Decrease in dissolved oxygen
 - Increase in pesticides
32. The earth's atmosphere is mainly composed of which two gases?
- nitrogen and oxygen
 - Carbon dioxide and nitrogen
 - methane and oxygen
 - oxygen and carbon dioxide
33. How does a cold front form?
- Warm air advances and replaces cold air
 - Cold air advances, forcing warm air to rise
 - Warm and cold air masses mix and meet
 - Warm and cold air masses have no relative advancement
34. On an August afternoon in NC, the barometric pressure is 29.92 inches and falling. What weather condition is likely to happen?
- Clearing skies and cooler temperatures
 - Continued fair weather
 - Storms
 - Conditions will slowly improve
35. What is the major difference between weather and climate?
- Air temperature
 - Air pressure
 - Humidity
 - Time
36. What type of pressure system is a hurricane associated with?
- High
 - Medium
 - Low
37. Which of the following is an example of climate?
- The current temperature in Pinehurst, NC
 - The relative humidity in Raleigh, NC
 - The average current temperature in a region
 - The average temperature in Raleigh, NC over the past 30 years

38. Many of the biomes that exist on Earth can be found in the western part of NC. What is the primary reason for the existence of such a wide range of biomes in this area?
- The rivers and lakes in the mountain areas
 - The wide range of altitudes of the mountains
 - The types of rocks that make up the mountains
 - The wind and water erosion of the mountains
39. Which type of clouds are tornadoes associated with?
- Cirrus
 - Cumulonimbus
 - Stratus
 - Cumulus
40. What level of the atmosphere do meteorites burn up in?
- Troposphere
 - Stratosphere
 - Mesosphere
 - Thermosphere