

Mid-Term Exam

1. Which of the following subatomic particles and their charges is correct?

- ☐ Neutron – neutral; proton – neutral
 - ☐ Electron – positive; proton – positive
 - ☐ Neutron – neutral; electron – negative
 - ☐ Proton – positive; electron – neutral
-

2. Match the definition with the correct term: changing of a compound into a carbonate, which promotes chemical weathering.

- ☐ Chemical weathering
 - ☐ Oxidation
 - ☐ Carbonation
 - ☐ Hydrolysis
-

3. Potassium would most likely form a bond with which element? (Use the periodic table.)

- ☐ Sodium
 - ☐ Fluorine
 - ☐ Beryllium
 - ☐ Carbon
-

4. A woman standing on a glacier is an example of _____.

- ☐ biosphere interacting with the atmosphere
 - ☐ hydrosphere interacting with geosphere
 - ☐ biosphere interacting with the hydrosphere
 - ☐ biosphere interacting with the biosphere
-

5. True or False: Calcium tends to gain two electrons during a reaction.(Use the periodic table)

- ☐ False. It will lose one electron.
 - ☐ False. It will gain six electrons.
 - ☐ False. It will lose two electrons.
 - ☐ True
-

6. Dinosaurs first appeared during the _____ Period.

- ☐ Triassic
 - ☐ Devonian
 - ☐ Permian
 - ☐ Jurassic
-

7. A person driving a car that is releasing pollution into the air is an example of _____.

- ☐ biosphere interacting with the atmosphere
 - ☐ hydrosphere interacting with geosphere
 - ☐ biosphere interacting with the biosphere
 - ☐ biosphere interacting with the hydrosphere
-

8. How is radioactive decay used to determine the absolute age of rocks?

- ☐ Daughter isotopes are compared to sister isotopes.
 - ☐ Parent isotopes are compared to daughter isotopes.
 - ☐ Isotopes of different compounds are compared.
 - ☐ Radioactive substances are compared to non-radioactive substances.
-

9. Match the definition with the correct term: large, circular depression that forms when the magma chamber below a volcano causes the ground above to sink.

- ☐ Quiet eruption
- ☐ Caldera
- ☐ Explosive eruption
- ☐ Pyroclastic material

10. Land plants such as ferns and cone-bearing plants began to develop in the _____ Period.

- ☐ Cambrian
- ☐ Permian
- ☐ Devonian
- ☐ Carboniferous

11. Match the definition with the correct term: igneous rock formations created when magma does not reach Earth's surface and solidifies inside the crust.

- ☐ Magma
- ☐ Pluton
- ☐ Hot spot
- ☐ Volcanism

12. For water to become a mechanical weathering agent through ice wedging, it needs to go through a cycle of freezing and thawing.

- ☐ True
- ☐ False

13. Match the definition with the correct term: a seismic wave that can travel through solids, liquids, and gases.

- ☐ P wave
- ☐ Body wave
- ☐ S wave
- ☐ Surface wave

14. Match the definition with the correct term: narrow, deep bay with steep walls.

- ☐ Barrier island
 - ☐ Fiord
 - ☐ Lagoon
 - ☐ Emergent
-

15. Match the definition with the correct term: an area in which strong earthquakes have occurred.

- ☐ Focus
- ☐ Shadow zone
- ☐ Seismic gap
- ☐ Foreshock zone

16. A fault or body of rock is younger than any other body of rock it cuts through according to the law of _____.

- ☐ uniformitarianism
- ☐ superposition
- ☐ crosscutting relationships
- ☐ averages

17. Element X has 19 protons. What element is it and what is its atomic number? (Use the periodic table)

- ☐ Carbon – 6
- ☐ Potassium – 19
- ☐ Carbon – 12
- ☐ Potassium – 39.1

18. Parallels and meridians are measured in degrees, minutes, and seconds.

- ☐ True
- ☐ False

19. Scientists rarely use models to simulate and study conditions in the natural world.

- ☐ True
 - ☐ False
-

20. (Analogy) Parallels: side to side as meridians:_____.

- ☐ top to bottom
 - ☐ side to side
 - ☐ left to right
 - ☐ bottom to left
-

21. Match the definition with the correct term: funnel-shaped pit at the top of a volcanic vent.

- ☐ Crater
 - ☐ Fissure
 - ☐ Rift
 - ☐ Trench
-

22. The main difference between intrusive and extrusive igneous rocks is _____.

- ☐ extrusive is due to magma cooling deep within Earth's interior and intrusive is due to it cooling at Earth's surface.
 - ☐ intrusive is due to magma cooling deep within Earth's interior and extrusive is due to it cooling at Earth's surface.
 - ☐ intrusive rocks are made of magma and extrusive rocks are made of volcanic ash.
 - ☐ extrusive rocks form quickly and intrusive rocks form over millions of years.
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23. Which of the following is true concerning the equator?

- ☐ It is a great circle.
 - ☐ It is located at 60 degrees north.
 - ☐ It is the prime meridian.
 - ☐ It is a line of longitude.
-

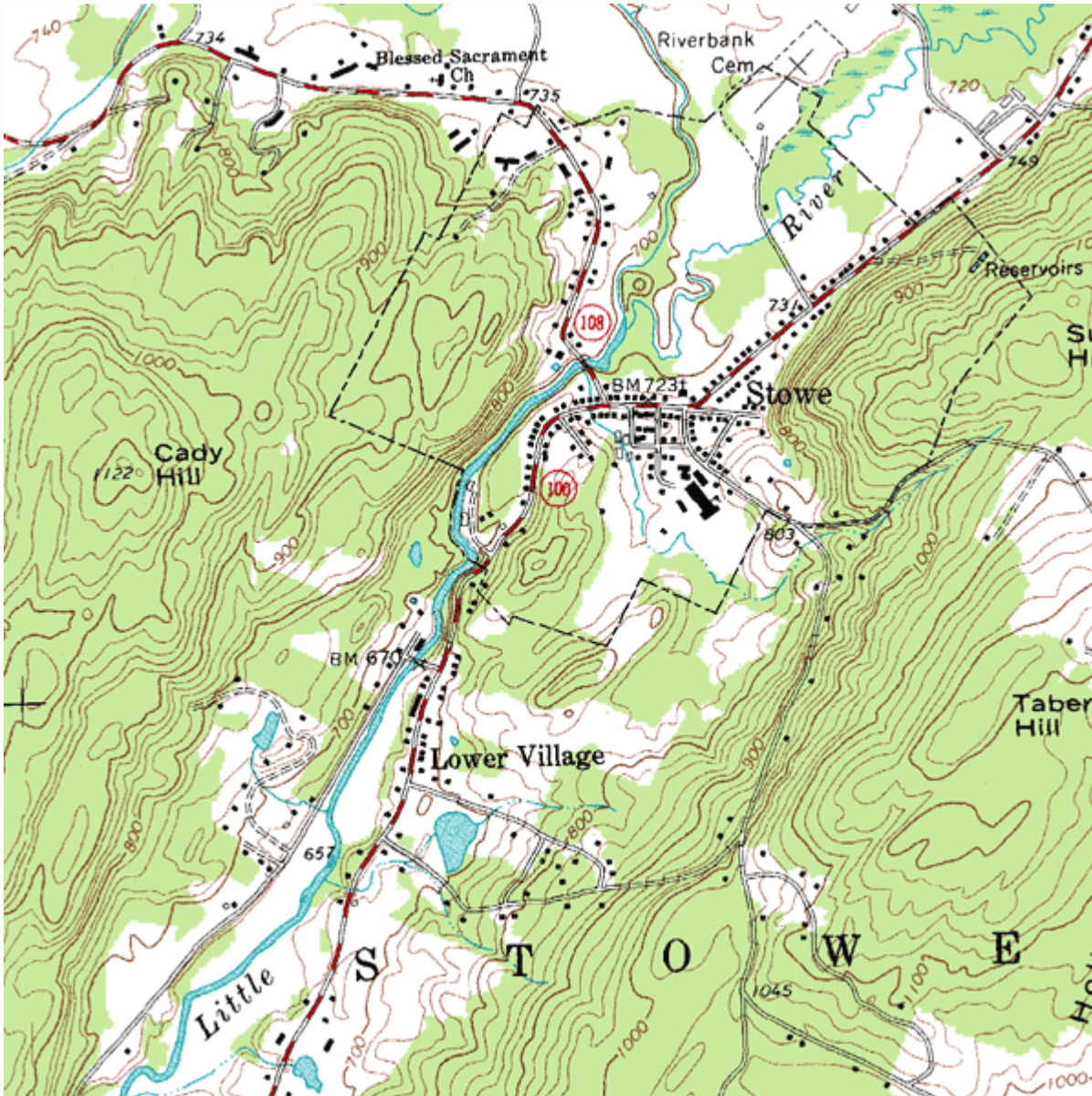
24. The carbon cycle has both a short-term and long-term component.

- ☐ True
 - ☐ False
-

25. The main difference between batholiths and stocks is that stocks are formed deeper in Earth's surface.

- ☐ True
- ☐ False

26. The map is an example of a _____.



- ☐ legend
- ☐ map scale
- ☐ soil map
- ☐ topographical map

27. Which of the following is NOT considered a mineral?

- ☐ Pyrite
 - ☐ Silver
 - ☐ Coal
 - ☐ Quartz
-

28. Looking at the periodic table, how many protons does an atom of tin (Sn) have?

- ☐ 100
 - ☐ 50
 - ☐ 119
 - ☐ 25
-

29. The following equation is balanced. $\text{CS} + 2\text{Cl} \rightarrow 2\text{CCl} + \text{SCl}$

- ☐ True
 - ☐ False
-

30. There are eight cardinal directions.

- ☐ True
 - ☐ False
-

31. The Himalaya Mountains were formed in a collision at a _____.

- ☐ convergent
 - ☐ divergent
 - ☐ transform
 - ☐ fracture zone
-

32. Match the definition with the correct term: large ocean wave that forms after a volcanic eruption, underwater earthqua

- ☐ Shadow zone
- ☐ Tsunami
- ☐ Foreshock
- ☐ Seismic gap

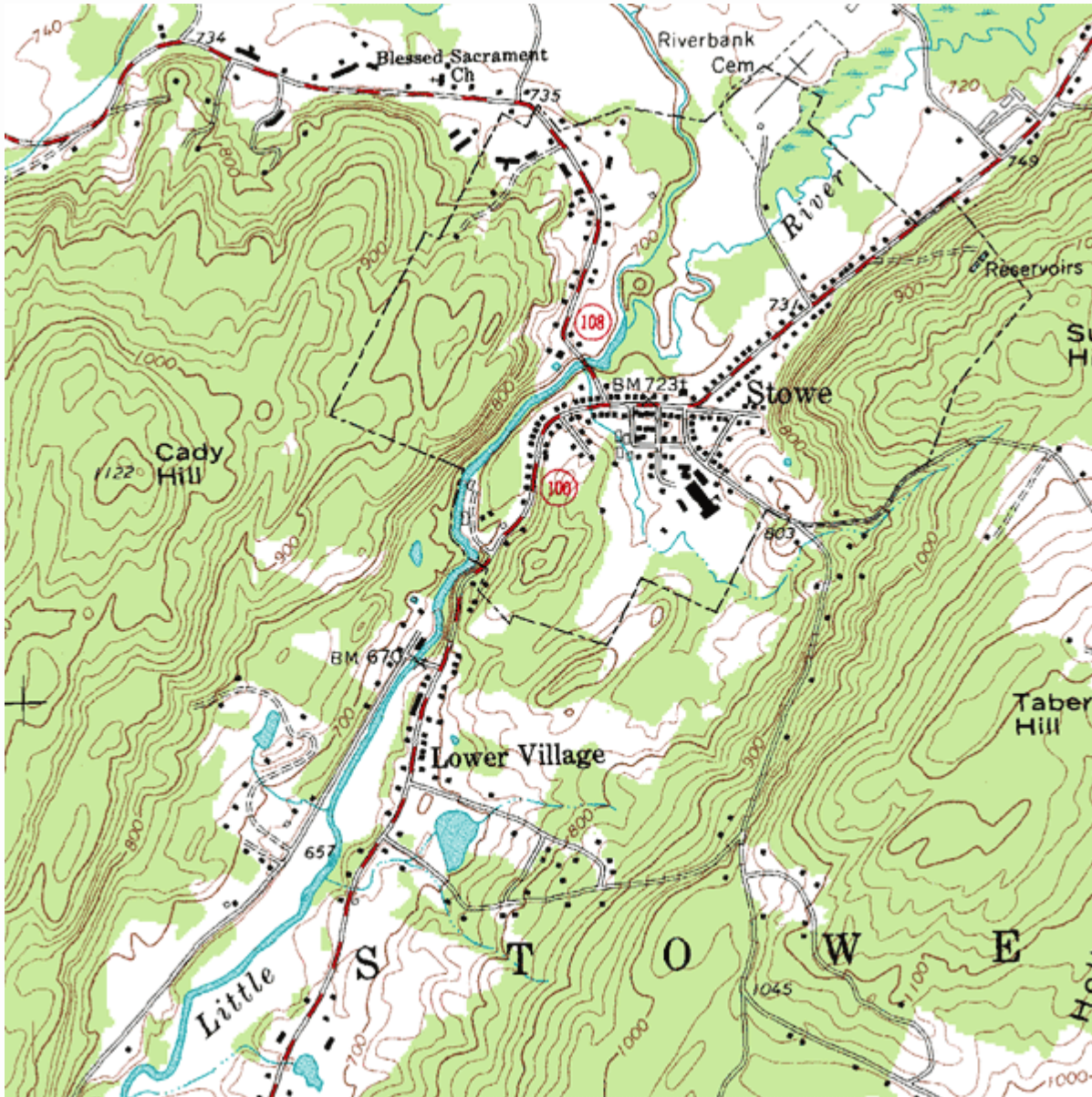
33. Match the definition with the correct term: dune shaped as a crescent with an opening that faces away from the wind.

- ☐ Transverse
- ☐ Barchan
- ☐ Longitudinal
- ☐ Parabolic

34. When the equation $2\text{Fe (III)} + 3\text{Br}_2 \rightarrow \text{FeBr}$ is balanced, what will the coefficient for Fe be on the right side of the equati

- ☐ 2
 - ☐ 6
 - ☐ 4
 - ☐ 3
-

35. Looking at the map shown below, at its zenith, Cady Hill is how many feet above sea level?



- ☐ 800
- ☐ 1122
- ☐ 1000
- ☐ 108

36. During which period did many marine species become extinct, but reptilian and amphibian species started to flourish?

- ☐ Ordovician
- ☐ Permian
- ☐ Cambrian
- ☐ Carboniferous

37. A list of symbols and their meanings on a map are known as a _____.

- ☐ compass
- ☐ map scale
- ☐ legend
- ☐ decoder

38. The coal dug out of Pennsylvania and burned as fuel was most likely formed during which period?

- ☐ Silurian
- ☐ Carboniferous
- ☐ Cambrian
- ☐ Permian

39. Which subatomic particles are correctly listed with their locations in the atom?

- ☐ Electron – electron cloud; proton – electron cloud
- ☐ Neutron – electron cloud; proton – nucleus
- ☐ Proton – nucleus; neutron – nucleus
- ☐ Proton – nucleus; electron - nucleus

40. A list of symbols with explanations used on a map is the _____.

- ☐ compass rose
- ☐ map scale
- ☐ legend
- ☐ map rose

41. The shape of Earth most closely resembles a(n) _____.

- ☐ approximate oval
 - ☐ oblate spheroid
 - ☐ perfect circle
 - ☐ perfect sphere
-

42. This is a disadvantage of which map projection? They are distorted as you move toward the poles.

- ☐ Azimuthal map projections
 - ☐ Conical map projections
 - ☐ Lambert projections
 - ☐ Cylindrical map projections
-

43. Some lakes are actually collapsed volcanoes.

- ☐ True
 - ☐ False
-

44. A system in which both energy and matter are exchanged with the surroundings is known as a(n) _____.

- ☐ closed system
 - ☐ flowing system
 - ☐ open system
 - ☐ dynamic system
-

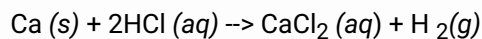
45. You are working on your mineral experiment and are unsure if you labeled your rock samples correctly. The only thing y two samples is their hardness. You know that Sample A has a hardness of 4 and Sample B has a hardness of 6. What is th

determine if you labeled your samples correctly?

<u>Mohs</u> <u>Hardness</u>	<u>Mineral</u>
1	Talc
2	Gypsum
3	Calcite
4	Fluorite
5	Apatite
6	Feldspar
7	Quartz
8	Topaz
9	Corundum
10	Diamond

- ☐ Scratch each sample on a sample of calcite.
- ☐ Scratch each sample on a piece of corundum.
- ☐ Scratch Sample B on a piece of topaz.
- ☐ Scratch Sample A with Sample B.

46. When the following equation is balanced, what is the coefficient for CaCl_2 ?



- ☐ 6
- ☐ 2
- ☐ 3
- ☐ 1

47. Soil and plants are NOT considered nitrogen reservoirs.

- ☐ True
 - ☐ False
-

48. The first law of thermodynamics states that energy cannot be created nor destroyed.

- ☐ True
 - ☐ False
-

49. Match the definition with the correct term: a seismic wave that travels along the surface of a medium.

- ☐ S wave
 - ☐ Surface wave
 - ☐ P wave
 - ☐ Body wave
-

50. Match the definition with the correct term: large rock particles less than 64 mm.

- ☐ Lapilli
 - ☐ Cinder cone
 - ☐ Lava
 - ☐ Pluton
-

51. "Hi! I am a scientist and I am going to collect data from a volcano today; I am most likely a(n) _____".

- ☐ meteorologist
 - ☐ astronomer
 - ☐ oceanographer
 - ☐ geologist
-

52. A(n) _____ is a place where matter or energy is stored.

- ☐ reservoir
 - ☐ energy storage unit
 - ☐ aquifer
 - ☐ ice cap
-

53. Match the definition with the correct term: "glue" that enables sedimentary rock to resist weathering.

- ☐ Differential weathering
 - ☐ Surface area
 - ☐ Quartz
 - ☐ Silicate
-

54. Index fossils found in rock layers in different areas of the world indicate that the rock layers _____.

- ☐ never fully formed
 - ☐ formed during the same period of time
 - ☐ are still forming
 - ☐ formed during different periods of time
-

55. An intricate diagram used to show the complex relationships between multiple food chains is known as a _____.

- ☐ mega food chain
- ☐ food complex
- ☐ producer complex
- ☐ food web