Rock Cycle & Rock Types - **Honors**

Name:_____

Use each of the terms below just once to complete the following statements.

Extrusive	Magma	Lithification	Physical weathering	Sedimentary rock
Igneous rock	Cementation	Chemical weathering	Clastic sediments	Sorted deposits
Lava	Intrusive	Sediment	Unsorted deposits	Deposition

1. Molten rock inside earth's surface is called _____.
2. A(n) _____ is formed from the crystallization of magma.
3. Magma that flows out onto Earth's surface is called _____.
4. Fine-grained igneous rocks that cool quickly on Earth's surface are called _____ igneous rocks.
5. Coarse-grained rocks that cool slowly beneath earth's surface are called _____ igneous rocks.
6. _____ consists of solid material that has been deposited on Earth's surface by wind, water, ice, gravity, or chemical precipitation.
7. Glaciers and landslides create _____ in which sediments of different sizes are mixed together.
8. During _____, the minerals in a rock are dissolved or otherwise chemically changed.
9. Process by which mineral growth binds sediment grains together into solid rock is _____.
10. Weathering produces _____, which are rock and mineral fragments.
11. When sediments become cemented together, they form _____.
12. As a result of _____, sediments are laid down on the ground or on the bottom of bodies of water.
13. The physical and chemical process called _____ transforms sediments into sedimentary rocks.
14. During _____, minerals remain chemically unchanged, and rock fragments simply break off of the solid rock along fractures or grain boundaries.
15. Sediments tend to form _____ when transported by water and wind.

For each statement below, write TRUE or FALSE. If false, write the correct word or phrase in to make the statement true.

16. Magma is often a slushy mix of molten rock, gases, and mineral crystals. _____
17. The elements found in magma are quite different from those found in Earth's crust. _____
18. Silica is the most abundant compound found in magma. _____
19. Magmas are classified as intrusive or extrusive. _____
20. Heat in the upper mantle and lower crust may come, in part, from the decay of radioactive elements. _____
21. Lithification begins with erosion. _____
22. Groundwater, oil, and natural gas are commonly found within pore spaces in sedimentary rocks. _____
23. The temperature in Earth's crust decreases with depth. _____

Use each of the terms in the box above the passage just once to complete the passages.

Elements	Fractional crystallization	Reverse
Magma	Melting points	Partial melting

Because different minerals have different __(24)__, not all parts of a rock melt at the same time. The process whereby some minerals melt at low temperatures while other minerals remain solid is called __(25)__. As each group of minerals melts, different __(26)__ are added to the magma "stew", changing its composition. When the magma cools, it crystallizes in the __(27)__ order of partial melting. The process wherein different minerals form at different temperatures is called __(28)__. As each group of minerals crystallizes, it removes elements from the remaining __(29)__ instead of adding new elements.

24. _____
25. _____
26. _____
27. _____
28. _____
29. _____

Cross-bedding	Fossils	Graded bedding	Lithification
Ripple marks	Sand dunes	Transport	Bedding

The primary feature of sedimentary rock is __(30)__, or horizontal layering. The type of bedding that occurs depends upon the sediment's method of __(31)__. Bedding is called __(32)__ when the heaviest and coarsest material is on the bottom. A second type of bedding called __(33)__ forms as inclined layers of sediment migrate forward across a horizontal surface. Large-scale cross-bedding can be formed by migrating __(34)__. When sediment is moved into small ridges by wind or wave action, __(35)__ can form. Many sedimentary rocks contain __(36)__, the preserved remains, impressions, or any other evidence of once-living organisms. During __(37)__, parts of an organism can be replaced by minerals and turned into rock.

30. _____
31. _____
32. _____
33. _____
34. _____
35. _____
36. _____
37. _____

Answer the following questions:

38. How are igneous rocks formed?

39. What happens to igneous rocks that undergo weathering and erosion?

40. How do sediments become sedimentary rock?

41. What forces cause sedimentary rocks to be transformed into metamorphic rocks?

42. How can metamorphic rocks be transformed into igneous rock?

43. How can sandstone be transformed into sediment without becoming metamorphic or igneous rock first?