

MID TERM EXAM NO.1
FOR SESSIONS 1 TO 4:

Select the BEST answer

1. The 4 sciences that make up earth science are
 - a. Chemistry, Physics, Geology, Astronomy
 - b. **Meteorology, Geology, Oceanography, Astronomy.**
 - c. Geology, Archaeology, Astronomy, Chemistry
 - d. Physics, Chemistry, Metallurgy, Geology
 - e. Physics, Chemistry, Thermodynamics, Geology
2. The Scientific Method
 - a. Is used only by scientists
 - b. **Relies on observations, hypothesis, and experimentation.**
 - c. Requires outside observers
 - d. Is only sometimes correct
 - e. Is the only true road to knowledge
3. How old is the earth?
 - a. 1 billion
 - b. 2 billion
 - c. 3 billion
 - d. **4.6 billion**
 - e. 10 billion
4. Select the false statement: Ice Ages have occurred
 - a. Since the PreCambrian
 - b. **Only in recent times**
 - c. On all continents
 - d. Sometimes lasted hundreds of thousands or millions of years
5. What are earth's four interrelated open systems?
 - a. Lithosphere, Core, Hydrosphere, Atmosphere
 - b. Geosphere, Atmosphere, Protosphere, Biosphere
 - c. **Hydrosphere, Atmosphere, Lithosphere, Biosphere**
 - d. Chromosphere, Atmosphere, Lithosphere, Biosphere
 - e. Hydrosphere, Chemosphere, Lithosphere, Biosphere
6. What system studies the weather?
 - a. Climatology
 - b. **Meteorology**
 - c. Weatherology
 - d. Heat Exchange
 - e. Paleometeorology
7. Why do volcanoes erupt? Not because...
 - a. **Pele is angry**
 - b. Pressure
 - c. Heat
 - d. Melting
 - e. Extrusion
8. Who developed the 3 planetary laws of motion?
 - a. Ptolemy
 - b. Copernicus
 - c. **Kepler**
 - d. Galileo
 - e. Newton
9. Tides exist because of the following except...
 - a. Gravitation
 - b. Ocean has a gravitational bulge
 - c. Continents move through the bulge every 12 hours
 - d. **Ocean plankton**
 - e. Topographic differences

10. The 4 parts of earth's interior are
- Inner Core, Outer Core, Mantle Crust
 - Asthenosphere, Mantle, Core Crust
 - Outer Core, Inner Core, Mantle, Geosphere
 - Asthenosphere, Lithosphere, Geosphere, Mantle
11. Geologic minerals. The following is true about them except that they are...
- Naturally occurring
 - Inorganic
 - Solids with unique chemical formula
 - Everlasting
 - Have crystal structure
12. The nucleus of an atom has
- protons
 - electrons
 - neutrons
 - a and b
 - a and c
13. Elements are defined by
- Total number of protons and electrons
 - Total number of protons
 - Total number of neutrons
 - Total number of protons and neutrons
 - Total number of electrons and neutrons
14. The 4 types of elemental bonding are
- Metallic, Protic, Covalent, Ionic
 - Van der Waals, Ionic, Covalent, Prevalent.
 - Postvalent, Prevalent, Synvalent Covalent
 - Ionic, Covalent, Metallic, Van der Waals.
15. The following elements make up most rock forming minerals except...
- Potassium
 - Uranium
 - Silicon
 - Iron
 - Sodium
16. The following are groups of minerals, except..
- Halides, Oxides, Carbonates, Manganates
 - Oxides, Sulfides, Sulfates, Silicates
 - Carbonates, Silicates, Native Elements, Halides
 - Sulfides, Oxides, Carbonates, Silicates
 - Native Elements, Silicates, Carbonates, Sulfides
17. The Silica Tetrahedron. Select the false statement:
- Is the basis for all rock forming mineral
 - Only occurs on Earth
 - Can occur in single chains
 - Can occur in double chains
 - Is responsible for gemstone development
18. Examples of an amorphous solid are the following except
- glass
 - plastic
 - wax
 - salt
 - volcanic glass
19. Crystals can be microscopic or grow to be several yards in length
- True
 - False

20. Radioactive elements. Select the untrue statement. They..

- a. are common
- b. decay to stable daughter products
- c. can be used to date geologic materials
- d. are in organic tissues
- e. should be avoided at all cost

21. Crystal faces display common angles regardless of size

- a. true
- b. false

22. The physical and chemical breakdown of rock exposed to wind, water, ice and living organisms is:

- a. Regolith
- b. Soil
- c. Weathering
- d. Decomposition
- e. Rock Breakdown

23. The three major rock groups are

- a. Earth, Wind and Fire
- b. Good, Bad and Ugly
- c. Pre-Rock, Meta-Rock, Post-Rock
- d. Sedimentary, Igneous, Metamorphic
- e. Class 1, 2 and 3

24. Igneous rocks all have this in common:

- a. they all come from magma
- b. they are all explosive
- c. they occur only in certain places
- d. they can be deadly
- e. they are unpredictable

25. The silica composition of mafic rock is

- a. 100%
- b. 70%
- c. 50%
- d. 40%
- e. 20%
- 10%

26. Processes involved in sedimentary rock formation include

- a. Erosion
- b. Transportation by wind, water or ice
- c. Deposition
- d. Lithification
- e. all of the above

27. Igneous rocks are classified based on

- a. size and shape
- b. color
- c. weight
- d. texture and composition
- e. reactivity

28. Gravel becomes _____ and sand becomes _____

- a. Conglomerate, sandstone
- b. Clastic rock, chemical precipitate rock
- c. Cement, sandstone
- d. Lithified, compacted sand
- e. Deposited, lithified

29. Metamorphism acting at contacts between magma and pre-existing rock is

- a. rare
- b. lithification metamorphism
- c. contact metamorphism
- d. regional metamorphism
- e. Pre-existing rock metamorphism

30. The type of metamorphism covering tens or hundreds of square mile areas is

- a. regional metamorphism
- b. area-wide metamorphism
- c. exclusive metamorphism
- d. contact metamorphism
- e. xenometamorphism

31. The geothermal gradient is widest and highest...

- a. at mountains
- b. at valleys
- c. at low elevations
- d. at magma intrusions
- e. at spreading centers.

32. Metamorphic rocks have mineral grains that are

- a. Dark
- b. Light
- c. Lineated
- d. Foliated
- e. Schistose

33. Crops grow best on

- a. Regolith
- b. Soil
- c. Rock
- d. strata
- e. evaporites

34. The peeling of rock by weathering from expansion due to pressure release is called

- a. onion skin erosion
- b. frost wedging
- c. exfoliation
- d. mass wasting
- e. physical rounding

35. Plants and animals contribute to

- a. erosion
- b. weathering
- c. soil formation
- d. a and b
- e. b and c

36. When elements recombine it is called

- a. frost wedging
- b. elemental recombination
- c. chemical weathering
- d. exfoliation
- e. soil formation

37. Carbonic acid is formed

- a. in the laboratory
- b. in the air during precipitation
- c. on the ground during erosion
- d. on carbonate rocks only
- e. by biologic activity

38. During weathering, there is a reduction in particle size and a _____ in surface area

- a. increase
- b. decrease
- c. no change

39. During chemical weathering, muscovite becomes

- a. clay minerals
- b. K ions
- c. Ca and CO ions
- d. a and b
- e. a and c

40. Soil contains all the following, except

- a. iron
- b. loam
- c. humus
- d. carbon dioxide
- e. water

41. Weathering is important to the economic geologist because that process is responsible for the formation of the following types of mineral deposits, except

- a. nickel
- b. aluminum
- c. coal
- d. copper
- e. chromium