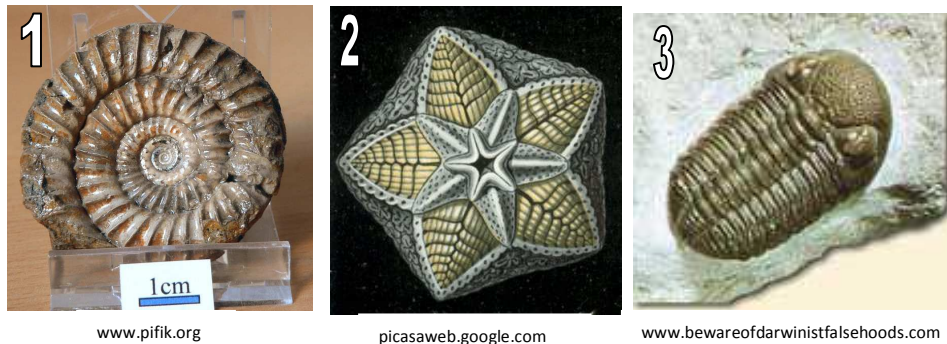


## GEOLOGY

1. The law of superposition explains that (1 point)
  - a. The lower stratum is older than the upper stratum.
  - b. The lower stratum is younger than the upper stratum.
  - c. If there is a disturbance, the lower stratum is older than the upper stratum.
  - d. If there is no disturbance, the lower stratum is older than the upper stratum.
  - e. The stratum is characterized by fossil content.
  
2. If we stand along a strike-slip fault, and if the left hand side block has moved towards us, (1 point)  
we call this a \_\_\_\_\_
  - a. Dextral strike-slip fault
  - b. Sinistral strike-slip fault
  - c. Normal fault
  - d. Thrust fault
  - e. Oblique fault.
  
3. The last mineral to form in the Bowen's Reaction Series is \_\_\_\_\_. (1 point)
  - a. Olivine
  - b. Quartz
  - c. Orthoclase
  - d. Biotite
  - e. Pyroxene.
  
4. Which fossil is usually found in Permo-Carboniferous rocks? (2 points)
  - a. *Homo erectus*
  - b. Mastodont
  - c. Eohippus
  - d. Nummulites
  - e. Fusulina
  
5. The Mohorovicic discontinuity is characterized by \_\_\_\_\_. (2 points)
  - a. A change in seismic wave velocity
  - b. High temperature
  - c. Elevated gravity
  - d. Rayleigh wave attenuation
  - e. High pressure
  
6. \_\_\_\_\_ is an ore mineral of aluminum. (2 points)
  - a. Bauxite
  - b. Garnierite
  - c. Pyrite
  - d. Chalcocite
  - e. Chalcopyrite
  
7. When did Pangea the supercontinent break up into Gondwana (2 points) and Lauratia continents?

- a. Silurian period
  - b. Cambrian period
  - c. Triassic period
  - d. Oligocene epoch
  - e. Eocene epoch
8. Which of the following is a character of river valley in its early stage? (2 points)
- a. Alluvial fans
  - b. U-shaped cross section
  - c. V-shaped cross section
  - d. Flood plain
  - e. Meander

9.



The figure above shows several invertebrate fossils. The names of the fossils are: (2 points)

- a. 1=Ammonite    2= Blastoidea    3=Trilobite
  - b. 1= Blastoidea    2= Ammonite    3= Trilobite
  - c. 1= Trilobite    2= Ammonite    3=Blastoidea
  - d. 1=Trilobite    2= Blastoidea    3= Ammonite
  - e. 1= Blastoidea    2= Trilobite    3= Ammonite
10. Which of the following is not the landslide? (2 points)
- a. Rockfall
  - b. Debris fall
  - c. Subsidence
  - d. Sliding
  - e. Mudflow
11. In stratigraphy, the grouping of sedimentary rocks based on their fossil content is called \_\_\_\_\_. (2 points)
- a. Lithostratigraphy
  - b. Chronostratigraphy
  - c. Geochronology
  - d. Biostratigraphy
  - e. Sequence stratigraphy
12. The unconformity between the older igneous/metamorphic rocks and \_\_\_\_\_ (1 point)

the younger sedimentary rock is called \_\_\_\_\_.

- Angular unconformity
- Nonconformity
- Paraconformity
- Hiatus
- Disconformity

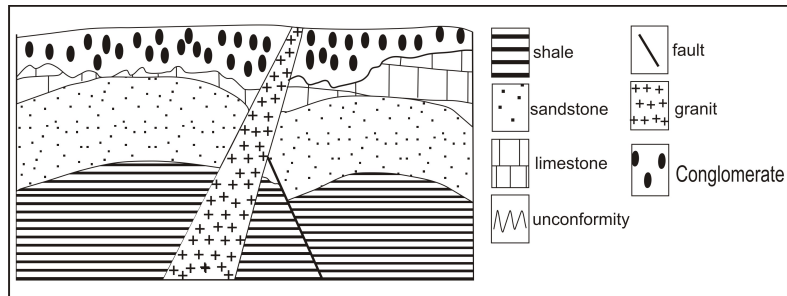
13 . The Himalayan mountain started rising since the \_\_\_\_\_ . (1 point)

- Pleistocene
- Miocene
- Jurassic
- Eocene
- Pliocene

14. Conglomerate is a sedimentary rock that consists of \_\_\_\_\_ . (1 point)

- Round grains of size more than 2 mm
- Round grains of size less than 2 mm
- Angular grains less than 2 mm
- Angular grains more than 2 mm
- Round or angular grains cemented by  $\text{SiO}_2$  or  $\text{CaCO}_3$ .

15. Based on the geologic cross-section given below, the chronology of the geologic events is: (3 points)



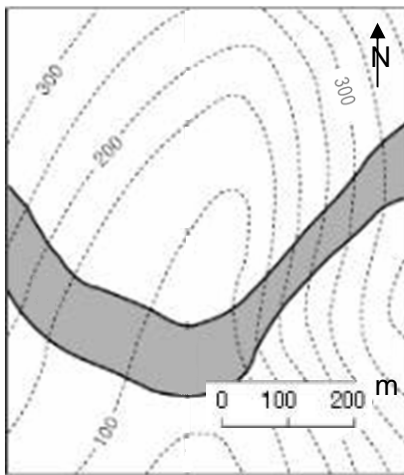
- Conglomerate - Shale – sandstone – limestone – unconformity – fault – granite
- Granite – fault – unconformity – limestone – sandstone – shale – conglomerate
- Shale – granite – sandstone – unconformity – fault – limestone – conglomerate
- Shale – sandstone – fault – limestone – unconformity – conglomerate – granite
- Shale – fault – sandstone – limestone – unconformity – conglomerate – granite

16. Limestone consists of calcium carbonate minerals. The most abundant calcium carbonate mineral is \_\_\_\_\_ . (2 points)

17. Two major minerals in granite are \_\_\_\_\_ and \_\_\_\_\_ . (2 points)

18. If we have a fault where the hanging wall has relatively moved down compared to the foot wall, (1 point)  
 we call this fault a \_\_\_\_\_.
- Dextral strike-slip fault
  - Sinistral strike-slip fault
  - Normal fault
  - Thrust fault
  - Oblique fault

19. According to the V rule, the stratum (in darker grey color) in the figure below strikes in \_\_\_\_\_ direction and dips in the \_\_\_\_\_ direction. (2 points)



20. If you make a geologic section along the true dip in the figure given above, the cross section should run in \_\_\_\_\_ direction and the thickness of the stratum is \_\_\_\_\_ m. (2 points)