1. Geology is the study of the shapes, arrangement, and interrelationships of rock units and the forces that cause them.

2. is force per unit area applied to rock. The three basics types are:
   a. 
   b. 
   c. 

3. is a change in size or shape of rock in response to applied stress.

4. For the following pictures, write down the type of stress that is being depicted.

5. Rocks behave as elastic, ductile or brittle materials depending on the amount and the rate of applied, the of rock, and the environmental and ____________.

6. A rock that is stressed through tension or compression, then returns to its original shape is said to be ____________.

7. A rock that is stressed beyond its elastic limit and bends like a warm plastic is said to be ____________.

8. A rock that is stressed beyond its elastic limit and fractures is said to be ____________.

9. are places where bedrock is exposed at the surface.

10. is the compass direction of a line formed by the intersection of an inclined plane with a horizontal plane. is the direction and angle from horizontal in which a plane is oriented.

11. Measure the strike and dip for the following two pictures. Assume that the strike measurement is parallel to the ground surface. Letter A has two for you to do, and Letter B has one (5pts each).
12. _____________ are wavelike bends in layered rock.

13. _____________________ are upward-arching folds, and _____________________ are downward-arching folds.

14. Examine the image below. Label the anticline and syncline.

![Image of anticline and syncline]

15. Label the images below with the correct fold type (4pts).

![Images of various fold types]

16. ______________ are structures in which the beds dip away from a central point (sometimes called doubly plunging anticlines). ______________ are structures in which the beds dip toward a central point.

17. ______________ are fractures in bedrock along which no movement has occurred. ______________ on the other hand are fractures in bedrock along which movement has occurred.

18. A fault is considered active if the fault has moved in the last ______________ years.

19. ______________ faults have movement parallel to the dip of the fault plane. There are two types which are:

   a. ______________ faults, the hanging-wall block has moved down relative to the footwall block.
   b. ______________ faults, the hanging-wall block has moved up relative to the footwall block.

20. ______________ faults have movement that is predominantly horizontal and parallel to the strike of the fault plane.

21. Label the faults below as either normal or reverse. Also, label the hanging wall and the footwall where applicable (5pts).

![Images of various fault types]
22. What kind of fault is depicted in the picture below?

![Fault Diagram](image)

23. Label the horsts and grabens found in the picture below (3pts).

![Horsts and Grabens Diagram](image)

24. __________ faults are reverse faults with dip angles less than 30° from horizontal.

25. Examine the pictures below. Correctly label them as right-lateral or left-lateral strike-slip faults (3pts).

![Fault Pictures](image)

26. What is the relationship between strike and dip (5pts)?

27. Explain why most of the great mountain chains of the world result from compressional stress (5pts).

28. Why are anticlines such good traps for petroleum (5pts)?

29. How are geologic structures related to Plate Tectonics (5pts)?