GeoLogic Mapping

North Hollywood HS

Names: _______________________________________________
Team Name and Number: _______________________________
Score: ___/82
Instructions: Partial credit exists! No guessing penalties! Life is good.

1. Describe a sinistral fault and make a simple drawing (2)

2. Answer the following about the map below

   a. What type of map is this? (1)
   
   b. What is the contour interval? (1)
   
   c. What does the color green signify in the map? (1)
   
   d. Draw an elevation profile for the Merced River along its course (3)
3. Name the general type of map pictured above and describe its similarities to a topographic map. (2)

4. Explain strike and dip. How are they expressed numerically and graphically? (8)
5. Answer the following about tsunamis
   a. How tall was the largest tsunami ever recorded to the nearest 100ft? (1)
   b. How are the largest tsunamis formed? (2)
   c. List 3 ways in which tsunamis may form (3)

6. Describe the eruptions that form the following features (2pt each)
   a. Yellowstone caldera
   b. Columbia flood basalts
   c. Maars (no, that isn’t a typo)

7. Match each of the following descriptions to their type of mass wasting (1pt each)
   a. Gradual movement of primarily surface soil as it expands and contracts
   b. Movement of a block of earth down a curved surface known as a scarp
   c. Debris flow from a volcanic area and volcanic activity
   d. A type of flow in which rocks and sediment flow like a fluid because they compress air beneath them

8. Which of the following words does not belong? (1)
   a. Anticline
   b. Cuesta
9. The image is of the Richat Structure ("eye of the sahara") which is a geologic feature 25 miles across visible from space. How could you determine whether the feature is a synform or antiform? (3)

10. The image above displays what unique type of rock formation? How is this formed? (4)

11. You take a piece of paper and fold it in half. What type of folding does this represent? (1)

12. Matthew decides to finally quit smoking. He flicks his last cigarette into the bushes and starts on his new life as a vaper. A forest fire burns away all vegetative cover in the nearby hills. Answer the following questions.
a. Explain how this will affect the shape of the surrounding hills and drainage ways (2)

b. What is the largest risk to nearby homes after the fire? (1)

c. Millions of years later, how will the grain size in sedimentary strata from this period compare to other years? Use the terms stream load and stream competence in your answer (5)

13. What is a shield? Hint: Strategic Homeland Intervention, Enforcement and Logistics Division is not the correct answer (2)

14. Answer the following about caves
   a. Caves primarily form in what class of rock? (1)

   b. What is the most common formative agent for caves? (1)

   c. Describe speleogens and speleothems (2)

15. What is a MEGATHRUST earthquake? (3)
16. Answer the following of the image above
   a. What type of geologic feature is displayed? (1)
   b. What is the name of this specific geologic feature? (1)
   c. What are the horizontal cracks running across the image and why do they form? (2)
   d. Which scientist hypothesized the function of these features? (1)

17. Answer the following about the image above
   a. How is the magma formed? (2)
b. What is the accretionary wedge and how is it formed? (2)

c. The crust can often be very thin in the backarc (not depicted in the image). Why is this? (4)

d. How does this tectonic setting primarily cause tsunamis? (2)

e. In which 2 ways does this tectonic setting primarily cause earthquakes? (4)

f. Name all 3 locations in North America where this tectonic setting may be found (3)