ESC 115 Physical Geology

Test 3

Fall, 2010

The first 10 questions refer to the slides we will view together in class. Please use the space provided to

an	swer the	questions.	
1.	(3 pts)	P waves are faster than S waves.	What does their arrival at a seismograph tell us?
2.	(4 pts)	What is the cause of the Reelfoot	t Rift shown? What is its effect?
3.			ow is the information shown used as part of that definition all earthquakes, might be used to help reduce the risk.
4.	(4 pts) figure sh		relative and absolute sea level? How do they apply to th
5.		In the slides shown, shallow earth p in red. Explain the patterns in t	chquakes are shown in yellow, intermediate depth in greet the two features circled.

0.	comes into shore? Explain or illustrate your answer.
7.	$(4~\mathrm{pts})$ The earth is clearly warmer than it was $20{,}000$ years ago, and it has warmed considerably in the last $200~\mathrm{years}$. However, global warming is politically controversial? What are two reasons?
8.	(6 pts) In the figure shown is the response of a river to rainfall. Draw and label the streams response after its drainage basin has been urbanized. What are three effects?
9.	$(5\ \mathbf{pts})$ What kind of stream is shown? What are two situations in which it is likely to occur?
10.	$(4~\mathrm{pts})$ The side shown is from the 1993 Mississippi River Flood. What are two reasons it occurred?
11.	(6 pts) What are the three approaches we discussed in analyzing risk? Apply each of the three to a decision about whether or not to require helmets for children under 14 who are riding a bicycle on a public road or sidewalk. Realize that in 2003, nearly 285,600 children ages 14 and under were treated in the US for bicycle-related injuries. Nearly half (47 percent) of children ages 14 and under hospitalized for bicycle-related injuries are diagnosed with a traumatic brain injury.

12.	(6 pts) Explain differences between volcanoes that come from felsic, intermediate, and mafic magma. Aim for at least two distinctions of each.
13.	(5 pts) Who was Oetzi? What are two things his remains can tell us?
114.	$(4~{ m pts})$ How is tidal range related to what is found in a wetland or coastal zone? Use a sketch to illustrate your answer.
15.	(7 pts) What is an estuary? What are three things all organisms want to do? Why are estuaries a good place to do these three?
16.	(4 pts) What are two reasons we have ice ages?
17.	(6 pts) What are three ways a stream changes as you go from its headwaters to its mouth?

