**Introduction to Part 2**
1. What two essential resources controlled the migration and settlement of our early ancestors?

2. List two large man-made impacts on Earth since the Industrial Revolution.

**Chapter 3**
3. Consider Fig. 3.1, which shows the lifetime per capita consumption of different materials by people in the U.S. How do you “personally” use all that “stone”? That uranium?

4. When did people begin to fire clay into useful pottery?

5.a. When were the first metals used?

b. Which were the first metals used? Why those?

6. Why did it so much longer for iron to be recovered and used?

7. Define the following terms:
   
   a. Alloy  
   b. Native metal  
   c. Colonialism  
   d. Nationalism  
   e. Malleable  
   f. Bronze  
   g. Brass  
   h. Pewter  
   i. Wrought iron  
   j. Cast iron  
   k. Cartel  
   l. Strategic resource

8. Why did the use of mineral resources decline so greatly during the so-called Dark Ages of Europe?

9. Why did Spain and Portugal develop their sea-faring rivalry? How did they “settle” this quarrel without war?

10. What major event happened in 1588 that changed the course of history in the “New World”?

11. Why/how is it that metals can be recycled so effectively?

12. What analysis can you make or what lessons can you derive from the story of the California Gold Rush in the 1840s?

13. Why was Napoleon’s aluminum cutlery so valuable in its day? What is one of the most-recycled metal today?

14. What conclusion can you draw from Table 3.1 on U.S. production and usage of resources?
15. What proportion of the world’s population lives in the U.S.? What proportion of the world’s resource production does the U.S. consume?

16. Consider Fig. 3.9a on U.S. import reliance (the shaded proportion of each bar) and Fig. 3.9b the commodities we import from a number of countries. From which countries do we import the most materials? According to the figure captions, what are 3 major reasons why the U.S. imports many of these commodities rather than mining them here?

17. Consider Fig. 3.10 on stages in mining development and resource use. Explain why the 3 curves have that distribution.

18. What conclusions about the “state” of our important resources can you derive from Fig. 3.11? What are the major reasons for these declines in U.S. production of metals?

19. How do you explain the relative changes in availability of liquid petroleum, fresh water, and metals, as represented in Fig. 3.12?

20. How can the amount of “reserves” of many non-renewable commodities increase over time although there is a fixed amount of the commodity itself?

21. Why is the distribution of resources not homogeneous over the earth? What does control their distribution?

22. What factors will encourage the mining of a particular element or mineral in a country/region? What factors will discourage mining?

23. What is the difference between nationalization and expropriation in a government’s dealings with a foreign company operating within its borders? What are the effects on would-be foreign investors and companies from these two actions?

24. What are 3 very important innovations/breakthroughs that permitted the Industrial Revolution to take place?

25. How do cartels and syndicates control the prices of individual commodities on the world market? Give 2 examples.

26. For which industrially important substances have we developed synthetic substitutes? What was the impetus behind each development?

27. How have concerns over resources affected international relations (and caused wars) in the past 75 years?

Focus on Figs. 3.1, 3.9 (2 pp.), 3.10, 3.11, 3.12, 3.14 and Tables 3.1, 3.2, 3.3, 3.4

(Junk) Food for Thought: What claim does the Levi Strauss Company have to the logo “Hard Rock Cafe”?