**APES Chapter 17: Environmental Hazards and Human Health**

**Note Taking Focus Questions**

**Directions:** Use the Cornell Method of note taking as you answer the questions below. Your notes must be **hand written** to receive credit for them. Within your notes, use the title for each subsection of notes which is *in italics and underlined.*

**Core Case Study: Mercury’s Toxic Effects**

1. What impact can mercury have on the body?

2. What are the natural and man-made sources of mercury in the environment?

3. What 2 ways are human exposed to mercury?

**Section 17-1**

*Major Health Hazards that We Face*

1. Explain the following risk, risk assessment, and risk management.

2. We cannot lead a risk free life, but what can we do?

3. List and give examples of the 5 major types of hazards that we face harm from.

**Section 17 -2**

*Biological Hazards We Face*

1. Define an infectious disease, a transmissible disease, and a nontransmissible disease.

2. In MDCs, death rates from disease have gone down since 1950’s. Why?

3. What is the difference between an epidemic and a pandemic?

4. Discuss 3 reasons why infectious diseases are still a serious threat despite medical advances.

*Genetic Resistance of Antibiotics is Increasing (Science Focus 17.1)*

5. Describe some of the factors that promote genetic resistance to antibiotics.

6. Describe MRSA and CRE. Why should be concerned about them?

7. Why do *Viral Diseases* kill large numbers of people? What are the top 3 viral killer diseases?

8. What is *Ecological Medicine*?

9. Read the Science Focus 17.2 on p. 450. What are some practices that scientists have identified as helping to encourage the spread of diseases among animals and people?

*Reducing the Incidence of Infectious Diseases*

10. Use figure 17.9 on p. 453 to list ways to reduce infectious diseases.

**Section 17-3**

*Chemical Hazards We Face*

1. Define toxic chemicals, and list the top 5 toxic chemicals.

2. List the *Three Major Types of Toxic Agents*, and explain what they are and how they impact the body.

*Impacts of Chemical Hazards on the Human Body*

3. Describe how hazardous chemicals affect our immune and nervous systems.

4. Describe how hazardous chemicals affect our endocrine system

5. Use figure 17-15 on p. 458 to describe how you can limit your exposure to hormone disrupters.

**Section 17-4**

*Factors that Determine the Harmful Health Effects of Chemicals*

1. What is toxicity?

2. List and describe the factors that affect the level of harm that a particular chemical causes.

3. What is meant by response in this section?

4. What is the difference between acute effect and chronic effect?

5. Why are infants and young children more susceptible to the effects of toxic substances?

*Protecting Ourselves from Harmful Chemicals*

6. What methods do scientists use to estimate toxicity?

7. What are the other methods described to estimate the harmful effects of chemicals?

8. How would pollution prevention and the precautionary principle help to limit our exposure?

9. Describe the REACH regulation enacted in the European Union.

**Section 17-5**

*What are the greatest risks we face?*

1. What is risk analysis?

2. What is the greatest risk world wide? Why is it such a risk?

3. What are the 4 greatest risks for shortening life span in MDCs?

*Evaluating Risks*

4. Why are we not good at evaluating the relative risks from the hazards that surround us?

5. What are the 5 factors that cause people to see a technology or product as more risky that experts judge it to be?

6. What are the 4 guidelines for evaluating and reducing risk?