## MAJOR CONCEPTS

- Risks & Hazards
- Health Issues in Developed & Developing Countries
- Emerging & Reemerging Diseases
- Chemical Hazards
- Toxicology: Assessing Chemical Hazards
- Environmental Pollution & Disease
- Comparative Risk Analysis
- Decision Making & Uncertainty
- Risk Assessment

## VOCABULARY

- Acute
- Antigens
- Asbestos fiber
- Background Radiation
- Biomagnification
- Bioaccumulation
- Chronic
- Dose
- Epidemiology
- Half-Life
- Hazmat
- LD50
- Morbidity
- Mortality
- Mutagen
- Neurotoxin
- Persistence
- Precautionary Principle
- Radioactive Decay
- Radioisotope
- Synergism
- Teratogen
- Threshold Level
- Toxicology
- Toxin
- Dose–Response Curve
- Endocrine disrupters
- Dioxin
- Bisphenol A
- Bioassay

## CASE STUDIES

- Global HIV/AIDS Epidemic
- Growing Germ Resistance to Antibiotics

## LAWS

- Federal Hazardous Substances Act, 1960
- Federal Environmental Pesticides Control Act
STUDY QUESTIONS

1. What are the three leading causes of death in the US? How are they related to lifestyle choice?
2. Differentiate between a hazard and a risk
3. Describe the public-health roles of the CDC and the WHO.
4. How do acute and chronic toxicity differ?
5. Distinguish between persistence, bioaccumulation, and biomagnifications.
6. What is a dose–response curve?
7. Describe how humans are exposed to and harmed by heavy metals, dioxins, and pesticides.
8. Design an experiment to test whether tomatoes or cucumbers are more sensitive to lead pollution.
9. How do scientists measure the toxicity of a substance?
10. Differentiate between risk analysis and risk assessment.
11. What are the top causes of death worldwide?
12. What is an endocrine disruptor? Give an example of where they are a problem.
13. Explain the Precautionary Principle.
14. What is bisphenol–A? What products is it in?
15. Explain what is meant by “the dose makes the posion”.
16. Distinguish between toxic chemicals and hazardous chemicals.
17. Distinguish among mutagens, teratogens and carcinogens.
18. Define the concept of an LD50.
19. What is toxicity?
20. Distinguish between dose and response for a potentially harmful substance. List five Factors that determine whether a chemical is harmful.