24 LABORATORY SAFETY

QUIZ 1 (20 POINTS TOTAL)

True/False (4 points)

1. Chemical inventories can present significant hazards if incompatible chemicals are stored together.
   a. true
   b. false

2. Materials with a flash point of less than 100 F degrees should be stored in a flammable liquid storage container.
   a. true
   b. false

3. Inorganic acids can be stored with other acids.
   a. true
   b. false

4. Gas cylinders should be stored lying flat so that they cannot fall.
   a. true
   b. false

Multiple Choice (5 points)

5. What system should be used to store chemicals?
   a. by expiration date
   b. according to hazard class and compatibility
   c. in alphabetical order
   d. the best storage arrangement will depend on the specific chemicals used in a laboratory's inventory

6. Some biological hazards that may exist in laboratories include_____ .
   a. strong magnets
   b. electricity
   c. gas cylinders
   d. human blood

7. What standard does OSHA use to regulate the use of chemicals in laboratory settings?
   a. Laboratory Standard
   b. Chemical Safety and Hazard Standard
   c. Hazardous Materials Standard

8. What are the two primary organs of the human anatomy affected by laser beams?
   a. skin
   b. lungs
   c. blood
   d. eyes

9. Which of the following are ways that fiber optic cable has revolutionized communications?
   a. improving fidelity
   b. improving distance of transmission
   c. improving safety
   d. all of the above

Short Answer (9 points)

10. What is the most cited OSHA standard covering laboratories?

11. How should poisons be stored?

12. What variables impact the effectiveness of a fume hood?

13. What does the Laboratory Standard cover?

14. What are the two common types of portable radiation survey equipment?

15. What does the acronym ALARA stand for?

16. What is laser an acronym for?

17. What are the three types of control measures that companies can use for laser hazards?

18. What is the principal hazard of fiber optic devices?

Short Essay (2 points)

19. How are HVAC systems usually designed for laboratories?

20. What are some of the hazards associated with clean rooms?

QUIZ 2 (18 POINTS TOTAL)

True/False (4 points)

1. Good Samaritan acts, such as assisting a coworker with a nosebleed, are not covered under the Bloodborne Pathogens Standard.
   a. true
   b. false

2. Radioactive contamination is different from radiation.
   a. true
   b. false

3. Ultraviolet light is a sterilizing agent.
   a. true
   b. false

4. Electric shock is by far the greatest hazard associated with lasers.
   a. true
   b. false

Multiple Choice (4 points)

5. What two organizations have developed and published guidelines for different levels of protection when working with biohazards?
   a. American Conference of Governmental Industrial Hygienists
   b. Centers for Disease Control
   c. National Institute for Occupational Safety and Health
   d. National Institutes of Health

6. What is the principal device used to provide containment of infectious splashes or aerosols generated by many microbiological procedures?
   a. biological safety cabinet
   b. HEPA filter
   c. fixed barrier guard
   d. biomarker

7. What Biosafety Level is appropriate when work is done with any human-derived blood or body fluids where the presence of an infectious agent may be unknown?
   a. BSL1
   b. BSL2
   c. BSL3
   d. BSL4

8. Hepatitis B vaccinations must be made available to employees who have occupational exposure to blood within _____ working days of employment.
   a. 5
   b. 10
   c. 15
   d. 30

Short Answer (8 points)

9. What are some of the more common types of hazards that may be encountered in laboratories?

10. What common safety interlocks should be found on autoclaves?

11. What does the term biohazard refer to?

12. What are the three elements of containment?

13. What are cryogenic liquids?

14. What is an efficient, cost-effective means of controlling laboratory exposures to hazardous contaminants?

15. What are the four basic concepts for radiation protection methods?

16. What federal agency sets radiation protection standards and rules for radioactive materials?

Short Essay (2 points)

17. What are ANSI's minimum performance and use requirements for emergency eyewashes?

18. What are three methods of controlling radiation exposures?