

1. Chemical Hygiene Plans are required by _____.
 - a. Environmental Protection Agency (EPA)
 - b. US Department of Transportation (DOT)
 - c. Nuclear Regulatory Commission (NRC)
 - d. Occupational Safety and Health Administration (OSHA)

2. What is a chemical hygiene plan?
 - a. The procedure that describes safe work practices for chemicals.
 - b. A strategy for chemical PPE.
 - c. A program that protects workers from chemical hazards.
 - d. The policy that describes the hazards in a fume hood.

3. About a chemical hygiene plan, standard operating procedures provide what?
 - a. A restriction on how and where chemical are used in the laboratory.
 - b. A consistent approach to performing laboratory analysis
 - c. A limitation to the volume of chemicals allowed in a fume hood.
 - d. The rules and regulations regarding chemical exposure.

4. Hazards controls to reduce or limit exposure to chemicals include all the following methods, **EXCEPT?**
 - a. Engineering controls
 - b. Personal protective equipment (PPE)
 - c. Administrative controls
 - d. Chemical sensitivity training

5. In order to meet the requirements of a chemical hygiene plan, monitoring of chemical fume hoods includes _____.
 - a. current contamination levels
 - b. air flow rates
 - c. equipment loading
 - d. spill data

6. The person responsible for the implementation of the chemical hygiene plan is the _____.
 - a. Chemical Hygiene Officer
 - b. Laboratory Manager
 - c. Laboratory Safety Officer
 - d. Industrial Hygienist

7. T or F – A chemical hygiene plan must provide special provisions for every chemical.
 - a. True
 - b. False

8. Worker training specified by the chemical hygiene plan is required to ensure _____.
 - a. chemicals are used as prescribed
 - b. co-workers are protected from spills
 - c. safety of personnel from chemicals
 - d. exposure limits are not exceeded

9. Chemical hygiene training includes all of the following, **EXCEPT**?
 - a. Hazards associated with equipment malfunction
 - b. Health hazards of chemicals in the work area
 - c. Physical hazards of chemicals in the work area
 - d. Details of the chemical hygiene plan

10. T or F – Medical monitoring of personnel is required whenever an employee develops signs or symptoms of exposure.
 - a. T
 - b. F

11. The Hazard Communication Standard is issued by which government agency.
 - a. Environmental Protection Agency (EPA)
 - b. Occupational Safety and Health Administration (OSHA)
 - c. US Department of Energy (DOE)
 - d. US Department of Transportation (DOT)

12. The Hazard Communication Standard requires which of the following communication methods?
- Procedures and Polices
 - Signs and Postings
 - Container Labeling
 - Certified Training
13. Laboratory chemical labels allow workers to _____.
- safely mix chemicals
 - properly store chemicals
 - immediately identify hazards
 - ensure the correct chemical is in the container
14. The least effective method for hazard control is _____.
- personal protective equipment
 - administrative controls
 - substitution
 - engineering controls
15. Chemical fume hoods are an example of which type of hazard control?
- personal protective equipment
 - administrative controls
 - substitution
 - engineering controls
16. Safety Data Sheets are created by the _____.
- procedure author
 - chemical manufacturer
 - chemical hygiene officer
 - industrial hygienist
17. T or F – Safety Data Sheets should be used in place of local policies and procedures, if possible.
- True
 - False

18. Chemical container labeling should contain which piece of information?
- Preparer
 - Ingredient List
 - Expiration Date
 - Common Uses
19. _____ exposure refers to chemical effects/damage that appear immediately.
- fast-acting
 - instant
 - hazardous
 - acute
20. A "Hazard" on a label is typically _____.
- one word
 - a statement
 - written in more than one language
 - identified by a picture
21. T or F – Chronic exposure is usually treatable.
- T
 - F
22. Which of the following is an example of an acute effect from chemical exposure?
- Loss of smell
 - Brain damage
 - Sudden collapse
 - Cancer
23. Which of the following routes of entry is the most common?
- Absorption (skin contact)
 - Inhalation (breathing)
 - Ingestion (eating)
 - Injection

24. The most effective way to reduce exposure to hazardous chemicals is by _____.
- personal protective equipment
 - engineered controls
 - substitution
 - administrative controls
25. Ingestion of chemicals can be best prevented by _____.
- washing hands
 - wearing PPE
 - cleaning up spills
 - storing food outside lab areas
26. Corrosive hazards _____.
- are dangerous to living organisms
 - are also irritants
 - create allergic reactions
 - destroy exposed tissue
27. Toxic substances _____.
- are dangerous to living organisms
 - are also irritants
 - create allergic reactions
 - destroy exposed tissue
28. Ergonomic hazards include all the following, except _____?
- awkward positions
 - computer workstations
 - repetitive motions
 - stairwells

29. Cryogenic materials are used to _____.
- produce very cold temperatures
 - enhance radioactivity
 - promote burning
 - improve reaction time of chemicals
30. Electrical shock will most likely be caused by which of the following?
- electrical maintenance
 - instrument repair
 - operating breakers
 - damaged receptacles
31. Cryogenic materials can cause _____.
- blisters
 - a fire hazard
 - rapid skin degradation
 - asphyxiation
32. A fume hood sash should be positioned _____.
- the same for all work
 - as low as possible
 - in the most comfortable location
 - where the industrial hygienist requires it
33. Laboratory pipets are subject to all of the following when small amounts are used EXCEPT _____.
- humidity
 - temperature
 - barometric pressure
 - pipet angle

34. Hotplates and stirrers can create hazards in the laboratory most likely due to _____.
- very hot surfaces
 - electrical shock
 - high stirring rates causing splashes
 - failure of auto-shutoff feature
35. The motive force for a laboratory stirrer is _____.
- an electromagnetic motor
 - an electric motor
 - an air-powered motor
 - none of the above
36. Muffle furnaces create unique hazards because of which of the following?
- Interlock devices do not prevent door from opening
 - Additional gloves are required, limiting dexterity
 - Tongs require practice
 - All the above
37. Electrically heated ovens are commonly used for _____.
- evaporating water
 - warming chemicals before use
 - maintaining a constant temperature in the laboratory
 - evaporating toxic chemical waste
38. Microwave ovens are commonly used for _____.
- heating liquids above their boiling point
 - evaporating water
 - irradiating metals
 - dissolving materials
39. T or F – Laboratory balances can be affected by changing temperatures.
- T
 - F

40. _____ balances are the most sensitive.
- Top-loading
 - Air-tight
 - Analytical
 - Temperature controlled
41. Which of the following can have a substantial effect on balance measurements?
- container size
 - static electricity
 - material density
 - balance manufacturer
42. The most accurate device for liquid measurements is a _____.
- beaker
 - graduated cylinder
 - volumetric flask
 - buret
43. Which type of measurement device is best where less accuracy is acceptable?
- Beaker
 - Graduated Cylinder
 - Volumetric Flask
 - Buret
44. Beakers are best when _____ is required.
- Heating
 - transporting
 - reacting
 - any of the above

45. Proper reading of a meniscus is required for which of the following volumetric devices?
- Volumetric Flasks
 - Beakers
 - Erlenmeyer Flasks
 - Auto-displacement Pipets
46. Centrifuges rely on different _____ materials.
- temperature
 - density
 - mass
 - phase
47. Laboratory centrifuges can be dangerous due to _____.
- electrical shock
 - unbalanced loads
 - over-speed conditions
 - brake failure