

University Lab Design Final Exam

1. If you have two standard sinks and one cup sink in a teaching lab, how many sinks need to be accessible?
 - a. 1
 - b. 2
 - c. 3
 - d. None of them

2. Which type of countertop is the least expensive?
 - a. Epoxy resin
 - b. Phenolic resin
 - c. Chemical resistant plastic laminate
 - d. Stainless steel

3. What type of exhaust should be specified for soldering stations?
 - a. Snorkels
 - b. Fume hoods
 - c. Biological safety cabinets
 - d. Gloveboxes

4. What is a control area?
 - a. The area in a building that contains the controls for the building's security system
 - b. Spaces within a building where quantities of hazardous materials NOT exceeding the maximum allowable quantities per controls area are stored, dispensed, used, or handled
 - c. The area at the physical plant where engineers adjust the Building Automation System controls
 - d. Spaces within a building where quantities of hazardous materials exceed the maximum allowable quantities per controls area are stored, dispensed, used, or handled.

5. What determines the class of a chemical?
 - a. The flashpoint
 - b. The type (flammable or combustible) of chemical
 - c. The flashpoint and type (flammable or combustible) of chemical
 - d. The quantity in which it is deemed hazardous

6. Which of the following can be located in a high-traffic area?
 - a. -80 freezer
 - b. Gas cylinders
 - c. Non-recessed safety showers
 - d. AED

7. Which of the following labs is the costliest? (Assume everything about them is the same except the factors listed below.)
 - a. A dry lab with fixed, wood casework
 - b. A wet lab with fixed, steel casework
 - c. A wet lab with mobile, wood casework
 - d. A wet lab with mobile, steel casework

8. Which of the following equipment is sensitive to vibration?
 - a. Microscopes
 - b. Balances
 - c. Lasers
 - d. All of the above

9. With COVID, the distribution and return of ____ has changed at some universities.
 - a. PPE
 - b. Chemicals
 - c. Glassware
 - d. Hand sanitizer

10. Which of the following is false regarding control areas in buildings?
 - a. The control area can be a single lab.
 - b. The control area can be a group of labs.
 - c. Non-lab rooms cannot be within a control area.
 - d. Control areas are required to be separated from other areas with fire-rated separations.

11. If a flammable hazardous material has a flash point of 70°F and a boiling point of 102°F, how would it be classified?
 - a. Class IA
 - b. Class IB
 - c. Class IC
 - d. None of the above

12. How many control areas are allowed on the second floor of a building?
 - a. 1
 - b. 2
 - c. 3
 - d. 4

13. What percent of worksurfaces in a teaching lab must be accessible?
 - a. 5
 - b. 25
 - c. The Accessibility Standards do not specify a percentage. A 30-inch length of worksurface must be accessible.
 - d. The Accessibility Standards do not specify a percentage. A 36-inch length of worksurface must be accessible.

14. Which of the following is required in a BSL1 lab?
- Self-closing doors
 - Available autoclave
 - Eye wash
 - Protected vacuum lines
15. Which of the following is required in a BSL3 lab?
- Impervious surfaces
 - Self-closing doors
 - Negative airflow into laboratory
 - All of the above
16. If a P.I. is doing research utilizing an agent that may have lethal consequences, what BSL rating should the rating of the lab be?
- BSL1
 - BSL2
 - BSL3
 - BSL2 or BSL3
17. Which of the following is not typically seen on college campuses?
- BSL1
 - BSL2
 - BSL3
 - BSL4
18. Which of the following statements is true?
- Teaching labs are more likely to have mobile casework over fixed casework.
 - Teaching labs require more airflow during unoccupied times than during occupied times.
 - Research labs are more likely to have mobile casework over fixed casework.
 - Size of mechanical components cannot be reduced in a research lab due to the fume hoods not needing to run concurrently.
19. Which of the following is likely to be found in a dry lab?
- Electronics
 - Wood casework
 - Recirculated air
 - All of the above
20. Which of the following is likely to be found in a wet lab.
- Chemicals
 - Fume hoods
 - Piped gases
 - All of the above