

1. Uranium tailings from mining operations are typically left in piles to _____.
- a. decay
 - b. dry
 - c. be re-absorbed
 - d. be shipped to a disposal site

Answer: B

2. _____ is the most important radioactive component from uranium tailings.
- a. U-238
 - b. Co-60
 - c. Iodine
 - d. Radon

Answer: D

3. What percentage of radioactive waste is comprised of low-level radioactive waste?
- a. 90%
 - b. 75%
 - c. 50%
 - d. 25%

Answer: A

4. What type of materials are typically found in low-level radioactive waste?
- a. Unused medical isotopes
 - b. Clothing and cleaning rags
 - c. Expired radioactive liquids
 - d. Unexposed reactor fuel

Answer: B

5. The half-lives of Class A low-level radioactive waste are less than _____ year(s).
- a. 1
 - b. 15
 - c. 30
 - d. 100

Answer: C

Radioactive Waste Characterization and Management Post-Assessment Answer Key

6. Class A low-level radioactive waste generally comes from what type of facility?
- a. Medical
 - b. Reactor site
 - c. Waste processing
 - d. Industrial shipping

Answer: A

7. Class B low-level radioactive waste is typical from what type of facility?
- a. Medical
 - b. Industrial shipping
 - c. Waste processing
 - d. Reactor Site

Answer: D

8. Intermediate-level radioactive wastes usually require special _____?
- a. permits
 - b. ventilation
 - c. shielding
 - d. regulations

Answer: B

9. Which government agency is responsible for radioactive waste management guidelines?
- a. Department of Transportation
 - b. U.S. Atomic Energy Commission
 - c. Department of Homeland Security
 - d. Department of Energy

Answer: D

10. _____ is a common contributor to transuranic waste.
- a. N-17
 - b. Cobalt-60
 - c. Plutonium-239
 - d. Technetium-99

Answer: C

11. High-level radioactive waste in the form of spent reactor fuel is stored on-site in _____
- a. heat sinks
 - b. fuel pools
 - c. concrete bunkers
 - d. unused reactor cores

Answer: B

12. Reactor fuel was reprocessed to extract _____.
- a. Plutonium and Uranium
 - b. Cobalt and Cesium
 - c. Technetium and Iridium
 - d. Iodine and Barium

Answer: A

13. The reprocessing of reactor fuel left behind highly radioactive _____.
- a. equipment
 - b. tools
 - c. sludge
 - d. packages

Answer: C

14. The best method for disposal of fuel reprocessing waste is _____.
- a. storage until decayed
 - b. incineration
 - c. vitrification
 - d. chelation therapy

Answer: C

15. What is the major contributing radiation from transuranic waste?
- a. Gamma radiation
 - b. Beta radiation
 - c. Neutron radiation
 - d. Alpha radiation

Answer: D

16. What of the following is designed to establish a facility's overall culture?

- a. Safety Management System
- b. Conduct of Operations
- c. Business Management Program
- d. Ethics and Standards Policy

Answer: B

17. Which of the following is **NOT** a chapter of Conduct of Operations?

- a. Communication
- b. Lockouts and Tagouts
- c. Control Area Activities
- d. Radiation Protection

Answer: D

18. Which of the following radioactive isotopes are capable of undergoing fission?

- a. U-235
- b. Pu-242
- c. Th-232
- d. Cs-137

Answer: A

19. What does the term criticality mean in radioactive waste management?

- a. Improper location of fissionable materials
- b. Sustained high radioactivity
- c. Lethal dose limits
- d. Uncontrolled chain reaction

Answer: B

20. Emergency management at radioactive waste facilities includes all the following, **EXCEPT**

_____.

- a. training and drills for on-site workers
- b. recovery planning and emergency termination procedures
- c. funding for off-site emergency resources
- d. identification of hazard and threats

Answer: C

21. T or F - Fissionable Material Handlers are qualified as Radiation Protection Technicians.
- a. True
 - b. False

Answer: B

22. According to the guiding principles of Integrated Safety Management, _____ is commensurate with responsibilities.
- a. competence
 - b. qualification
 - c. training
 - d. skill

Answer: A

23. In an Integrated Safety Management System, who is accountable for protection of the public, workers, and the environment?
- a. The company president
 - b. Safety hygienists
 - c. Line management
 - d. Competent workers

Answer: C

24. On the Integrated safety management wheel, what is the first step?
- a. Analyze the hazards
 - b. Perform work within controls
 - c. Implement hazards controls
 - d. Define scope of work

Answer: D

25. What is the first line of defense for radioactive waste transportation?
- a. Packaging
 - b. Proper classification
 - c. Training
 - d. Radiation protection

Answer: A

26. Which of the following may be shipped in excepted packaging?
- a. Medical isotopes
 - b. Smoke detectors
 - c. Contaminated soil
 - d. Decontaminated tools

Answer: B

27. Which type of radioactive packaging is the most secure?
- a. Type A
 - b. Industrial
 - c. Excepted
 - d. Type B

Answer: D

28. This type of packaging, along with its radioactive contents, must meet standard testing requirements designed to ensure that the package retains its containment integrity and shielding under normal transport.
- a. Type A
 - b. Type B
 - c. Industrial
 - d. Excepted

Answer: A

29. Which of the following is a duty of an operator at a nuclear facility?
- a. Ordering supplies
 - b. Monitoring parameters
 - c. analyzing radioactive samples
 - d. reviewing changes to design

Answer: B

30. Fissionable materials handlers are required to be _____.
- a. Qualified
 - b. Knowledgeable
 - c. Certified
 - d. Competent

Answer: C

31. Training for a fissionable materials handler includes classroom and _____ training.
- a. on-the-job
 - b. virtual reality
 - c. self-study
 - d. laboratory

Answer: A