



NMDP Basic Radiation Training

Exam Instructions:

1. To receive credit for completion of training each examinee must submit their answers for grading online as well as complete a survey online:
 - Test link: <https://nmdp.ilinc.com/register/xcbkhj>
 - Survey link: <https://nmdp.ilinc.com/register/zwptxj>
 - *Complete the survey (6 questions) to ensure your RITN center receives credit toward its' annual training requirement.*
 - *Physicians seeking CME credit must submit the survey.*
2. Before completing this exam ensure you have read this entire course document.
3. This exam is open book.
4. Be sure to carefully read all possible answers prior to selecting your choice.
5. Results will be reviewed and shared with examinee immediately upon submission of online exam



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1. **The rem is a unit used to measure:**
 - a. Radiation exposure
 - b. Radiation dose in terms of the amount of energy absorbed
 - c. Radiation dose in terms of the amount of the biological effect caused by the amount of energy absorbed
 - d. Radioactivity

2. **Because of its low penetrating ability, the type of radiation which is usually only a hazard when inhaled or ingested is:**
 - a. Alpha radiation
 - b. Beta radiation
 - c. Gamma radiation
 - d. Neutron radiation

3. **Cosmic radiation and radiation from terrestrial sources are examples of:**
 - a. Natural background radiation
 - b. Natural man-made radiation
 - c. Industrial sources of radiation
 - d. Radioactive sources used in the medical field

4. **An example of a man-made source of radiation is:**
 - a. Terrestrial sources
 - b. Cosmic radiation
 - c. Diagnostic radiation
 - d. Potassium-40 in the human body

5. **The three factors which are important in protecting individuals from radiation are:**
 - a. Time, shielding, and dose rate
 - b. Dose rate, time, and gender
 - c. Time, shielding, and distance
 - d. Distance, time, and dose rate

6. **Radiation received by the body over a short period is:**
 - a. Chronic exposure
 - b. Sublethal exposure
 - c. Acute exposure
 - d. Supralethal exposure

7. **Chronic exposures are:**
 - a. Amounts of radiation received over a short period of time
 - b. Amounts of radiation received over a very long period of time
 - c. Acute exposures which affect only critical organs of the body
 - d. Acute exposures which affect all parts of the body



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- 8. Radioactive decay is defined as:**
- The decrease in the amount of any radioactive material due to the spontaneous emission of ionizing radiation from the nucleus
 - The decomposition of radioactive atoms due to lengthy exposure to direct sunlight
 - The gradual decrease in the number of radioactive atoms in radioactive material due to spontaneous fission
 - The decline in the strength of a radioactive source due to the combined effects of time, distance, and shielding
- 9. Radioactive fallout (a.k.a contamination) makes the surface it comes into contact with radioactive. (True or False?)**
- True
 - False
- 10. Just over half of a person's exposure to external natural radiation comes from?**
- Radon
 - Cosmic radiation
 - Rocks
 - Food
- 11. The three main types of ionizing radiation are:**
- Microwave, x-ray, gamma
 - Alpha, gamma, neutron
 - Beta, gamma, neutron
 - Alpha, beta, gamma
- 12. The amount of radiation absorbed into the body is:**
- Charge
 - Exposure rate
 - Dose
 - Contamination
- 13. A unit used to express radiation exposure is the:**
- Roentgen
 - Dose
 - Ray
 - Curie
- 14. The rate at which an individual is exposed to radiation is:**
- Watts per hour
 - Roentgens
 - Exposure rate
 - Dose
- 15. The most common physical symptoms of early radiation sickness are:**
- Nausea, changes in blood cell formation, vomiting
 - Diarrhea, nausea, vomiting, headache, fatigue
 - Vomiting, changes in blood cell formation, burns
 - High fever, changes in blood cell formation, nausea



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- 16. One of the delayed effects of high-level radiation exposure is:**
- a. Increased risk of cancer
 - b. Nausea
 - c. Vomiting
 - d. Restlessness
- 17. Radioactivity is the process where unstable atoms disintegrate or decay to stable atoms. The energy released in this process is called:**
- a. The blast effect
 - b. The shock wave
 - c. A mushroom cloud
 - d. Ionizing radiation
- 18. The type of radiation that is a major hazard due to its relatively high penetrating power is radiation.**
- a. Alpha
 - b. Microwave
 - c. Gamma
 - d. Neutron
- 19. When radioactive particles land on a surface, the original surface:**
- a. Becomes permanently radioactive
 - b. Becomes radioactive for a limited period of time
 - c. Is considered contaminated, but does not become radioactive
 - d. Is unaffected and is safe to walk about
- 20. Radiation levels naturally decrease due to radioactive:**
- a. Decay
 - b. Decontamination
 - c. Equilibrium
 - d. Absorption
- 21. Almost all of the world population's dose from radioactivity comes from _____ sources?**
- a. Radon
 - b. Natural
 - c. Nuclear medicine
 - d. Artificial
- 22. The source of most of the dose from natural sources of radiation is from what?**
- a. Radon
 - b. Lead
 - c. The sun
 - d. Consumer products



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23. **The most common medical procedure leading to an individual's collective dose of radiation is what?**
- a. Radiotherapy
 - b. Filling a cavity
 - c. Blood pressure check
 - d. X-ray
24. **Greatest danger from a dirty bomb is public panic?**
- a. True
 - b. False
25. **Radiation Injury Treatment Network centers will most likely have to decontaminate patients prior to admitting them for treatment?**
- a. True
 - b. False
26. **Symptoms of ARS include:**
- a. Nausea
 - b. Diarrhea
 - c. Fatigue
 - d. All of the above
27. **High-levels of ionizing radiation exposure can result in a long-term effect of:**
- a. Nausea
 - b. Restlessness
 - c. High fever
 - d. Increased risk of cancer
28. **Terminal ARS symptoms may include:**
- a. Over excitability and lack of coordination
 - b. Breathing difficulty
 - c. Occasional periods of disorientation
 - d. All of the above
29. **50 rad is the equivalent of:**
- a. 5 Gray
 - b. 0.5 Gray
 - c. 0.05 Gray
 - d. 500 Gray