

Name: _____ Date: _____ Class: _____

Radiation in the Body Quiz

Directions: Circle the letter of the best answer for each question.

- 1. Why is ionizing radiation called “ionizing?”**
 - a. It is emitted by charged particles called ions
 - b. It is everywhere
 - c. It comes from the ionic part of the spectrum
 - d. It produces charged particles called ions in material it penetrates
- 2. Which of these are examples of ionizing radiation?**
 - a. Radio waves
 - b. Alpha particles and gamma rays
 - c. Microwaves and radar
 - d. Ultraviolet light
- 3. Which is the least penetrating type of ionizing radiation?**
 - a. Alpha particles
 - b. Beta particles
 - c. Delta particles
 - d. Gamma rays
- 4. Which is not one of the ways in which ionizing radiation enters the body?**
 - a. Ingested with food and water that has been contaminated with radioisotopes
 - b. Inhaled with contaminated dust
 - c. By standing near a microwave oven
 - d. Through cuts, nose, mouth, around eyes, under fingernails
- 5. Which type of radiation can potentially affect the greatest volume of cells?**
 - a. Alpha particles
 - b. Beta particles
 - c. Gamma rays
 - d. Manta rays
- 6. Which of these things could not happen when ionizing radiation strikes a cell?**
 - a. The cell is damaged but it is able to repair itself
 - b. The cell strikes back
 - c. The cell is damaged and uncontrollably reproduces itself
 - d. The cell commits suicide (apoptosis)

7. Which are **not** types of cells sensitive to ionizing radiation?
 - a. Bone marrow cells
 - b. Terrorist cells
 - c. Fetal cells
 - d. Intestinal cells

8. Which of the following is a method that cells use to repair damage to DNA?
 - a. Base and nucleotide excision repair
 - b. Blunt end ligation
 - c. Homologous recombination
 - d. All of the above

9. Which of the following are types of frameshift mutations that can happen if DNA is not repaired correctly?
 - a. Translations and trapezoids
 - b. Insertions and deletions
 - c. Transitions and transversions
 - d. Inspirations and dead ends

10. Which is not a potential somatic effect of ionizing radiation?
 - a. Passing down damage to offspring
 - b. Radiation sickness
 - c. Hair loss
 - d. Internal bleeding