Questions for the weekly activity:

1. Explain the sequence of changes occurring during radiation damage to a cell?
2. Explain the mechanisms of direct radiation damage to the cell?
3. Explain the mechanisms of indirect radiation damage to the cell?
4. In which part of the cell cycle is the cell most sensitive to radiation and why?
5. Name the factors that have an impact on radiation damage to the body?
6. Explain what is spatial and temporal dose distribution?
7. Explain what is effective half-life?
8. Explain what is LET - linear energy transfer?
9. Explain what affects the radiosensitivity of a cell?
10. Explain what are deterministic radiation effects?
11. Explain what are stochastic radiation effects?
12. Explain what acute radiation syndrome is?
13. List the stages of acute radiation syndrome.
14. List the chronic radiation changes that can occur in occupationally exposed personnel?
15. Explain the role of radioactivity in oncogenesis?
16. The role of radioactivity in teratogenesis and mutagenesis?
17. Explain the term exposure dose?
18. What is the unit of exposure dose?
19. Explain the term absorbed dose?
20. What is the unit of absorbed dose?
21. Explain the term equivalent dose?
22. What is the unit of equivalent dose?
23. What is the annual effective dose limit for occupationally exposed persons?
24. Explain the ALARA (As Low As Reasonably Achievable) principle?
25. State and explain the principles of protection of professionally exposed personnel?
26. State and explain the principles of personnel protection against contamination?
27. Explain the role of dosimeters in the protection of occupationally exposed personnel.
28. List and explain the principles of patient protection?
29. List and explain the principles of protection of persons living close to patient (patient family)?