Assignment 2

Due on: 2018-09-21, 23:59 IST

1. For the following nuclear reaction, the energy released is 15.7 MeV per three nuclide pairs. Calculate the decay energy for the reaction.

2. a) For each of the following reactions, state the type of decay and whether it is spontaneous or induced.
   - Beta decay
   - Alpha decay
   - Neutron decay

3. a) For each of the following substances, state the half-life and the decay constant.
   - Carbon-14
   - Uranium-235
   - Thorium-232

4. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

5. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

6. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

7. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

8. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

9. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
   - Alpha particles
   - Beta particles
   - Gamma rays

10. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

11. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

12. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

13. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

14. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

15. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

16. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

17. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

18. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

19. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays

20. a) For each of the following substances, state the type of radiation emitted and the range of energy for each.
    - Alpha particles
    - Beta particles
    - Gamma rays