Early hurdle particles solutions

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13. What is a radioisotope? [1]

14. Identify the number of neutrons in the following elements: [3]

   - $^{20}_{10}\text{Ne}$
   - $^{238}_{92}\text{U}$
   - $^{14}_{6}\text{C}$

15. What is the 'strong' force and what is its range? [2]

16. What are a, b, c, x and y for the following nuclear reactions? [5]

   - $^{235}_{92}\text{U} \longrightarrow {}^{y}_{x}\text{Th} + {}^{4}_{2}\alpha$
   - $^{14}_{6}\text{C} \longrightarrow {}^{14}_{7}\text{N} + {}^{a}_{b}\beta + c$

17. Define antimatter. [1]

18. Find the base units for c in Einstein's famous equation, $E = mc^2$. [3]

19. How are antiparticles formed? [3]