

11. Code A

12. Which element has 15 protons?

- a) N b) O c) P d) Ar e) not enough information

13. Which is the term used for a negative ion?

- a) anion b) bunion c) cation

14. Which of the following is **NOT** an isotope of hydrogen?

- a) tritium b) helium c) deuterium

15. Which element is the most abundant in the universe?

- a) O b) Fe c) N d) H e) He

16. Isotopes have

- a) Same atomic number and same atomic mass
b) Same atomic number and different atomic mass
c) Different atomic number and different atomic mass
d) Different atomic number and same atomic mass

17. Given 2 substances: 10 grams of Substance A with a specific heat of $1.5 \text{ cal/g}^\circ\text{C}$ and 10 grams of Substance B with a specific heat of $0.74 \text{ cal/g}^\circ\text{C}$. Which one would require more calories to raise the temperature 8°C ?

- a) Substance A b) Substance B

18. How many calories does it take to convert 5 grams of water at 100°C to steam at 100°C ?

- a) 80 b) 540 c) 2700 d) 400

19. How many calories are required to raise the temperature of 5 grams of water from 50°C to 60°C ?

- a) 50 b) 10 c) 600 d) 300

20. How many calories does it take for 10 grams of ice at -10°C to become water at 10°C ?

- a) 1000 b) 800 c) 815 d) 905 e) 950