

Chapter 8 Quiz

Part A: Modified True/False

1. False, (one of) lithium, sodium, potassium, rubidium, cesium, or francium
2. False, 1+
3. True
4. True

Part B: Sentence Completion

5. alkali metals
6. similar
7. 3+
8. 1, 2, 6

Part C: Multiple Choice

9. (a); 10. (d); 11. (b); 12. (c); 13. (b); 14. (c); 15. (d)

Part D: Short Answer

16. (a) CuCl_2
(b) Na_2CO_3
(c) $\text{Fe}(\text{NO}_3)_3$
(d) $(\text{NH}_4)_2\text{CO}_3$
(e) PbBr_4
17. (a) copper(I) iodide
(b) zinc nitrate
(c) manganese(IV) carbonate
(d) calcium phosphate
(e) sodium fluoride
18. The gases will be produced in a ratio of 1:1.
19. The ratio of the elements nitrogen:hydrogen:phosphorous:oxygen will be 2:9:1:4.
20. The Roman numerals indicate the different charges of the copper ions. The copper(I) ion has a charge of 1+, and the copper(II) ion has a charge of 2+. The two ions will have slightly different properties: for instance, the copper(II) ion has a blue-green colour in solution, and the copper(I) ion is colorless in solution.
21. Calcium and barium are in the same chemical family, the alkaline earth metals. Therefore, they should form compounds in the same manner (same ion charge), and the ratio of calcium to oxygen atoms will be 1:1.
22. Bravo chloride will be a white powder that is soluble in water, and alpha carbonate will be a green powder that is insoluble in water.

Unit B Quiz

Part A: Modified True/False

1. False, chemical
2. True
3. False, neutrons
4. False, electrons

Part B: Sentence Completion

5. chemical family
6. full
7. Niels Bohr
8. physical
9. mixture

Part C: Multiple Choice

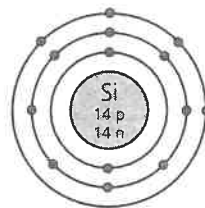
10. (d); 11. (b); 12. (a); 13. (d); 14. (c); 15. (a); 16. (a);
17. (b); 18. (c); 19. (a)

Part D: Matching

20. (b); 21. (d); 22. (g); 23. (c)

Part E: Short Answer

24. atomic number 12, atomic mass 24.31, ion charge 2+
25.



26. Neon does not normally form ions because its outer shell is already full, with 8 electrons.
27. (a) sodium carbonate
(b) ammonium chloride
(c) iron(III) phosphate
(d) lead(IV) oxide
(e) chromium(III) carbonate
28. (a) NH_4OH
(b) $\text{Mg}(\text{HS})_2$
(c) $\text{Fe}_2(\text{C}_{12}\text{O}_7)_3$
(d) KCl
(e) SnO
29. Calcium sulfide will not dissolve easily in water, as calcium and magnesium are in the same chemical family (alkaline earth metals) and, therefore, will form similar compounds.
30. Lithium, sodium, potassium, rubidium, cesium, francium. Properties are that they react with water to form hydrogen gas and a base, they are low density, they are soft, they conduct heat and electricity, and they have lustre.