

1. Name the properties of bases.
2. Name the properties of acids.
3. Look at the pH chart in the data book. Explain it like you would to someone who has not taken this class.
4. What is an indicator? What does it do? Describe what color bromthymol blue would be at pH=3.
5. What is a non-metal oxide? What is a metal oxide?
6. What happens when you put a non-metal oxide in water? What happens when you put a metal oxide in water?
7. What is an organic compound?
8. What is an inorganic compound?

9-12 Complete the following chart.

Reaction Type	Starts with	Example
Synthesis		
Decomposition		
Single replacement		
Double replacement		
Neutralization		
Combustion		

13, 14 Predict the products and name the reaction type.

- a. _____ HgO → _____
- b. _____ HCl + _____ KOH → _____
- c. _____ C₅H₁₂ + _____ O₂ → _____
- d. _____ Sr + _____ O₂ → _____
- e. _____ Br₂ + _____ CaCl₂ → _____
- f. _____ Zn + _____ Ni(NO₃)₂ → _____
- g. _____ ZnSO₄ + _____ SrCl₂ → _____

15. Describe how temperature, concentration, and catalysts effect reaction rate.

16. What is a catalyst?

17. Define isotope.

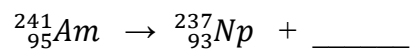
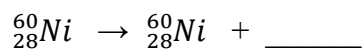
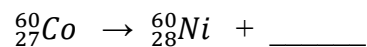
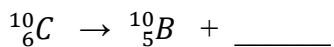
18. What two ways can isotopes be written? Give an example of both.

19. Complete the chart.

Name	Formula	Atomic Mass	Protons	Neutrons
Carbon-14				
	${}^{238}_{92}\text{U}$			

20. Describe alpha, beta, and gamma decay.

21, 22, 23, 24 Complete the following equations.



25. What is a fusion reaction?

26. What is a fission reaction?

27. Sketch a decay curve. Show both the parent and daughter isotopes.

28. What is half-life?

29. What percent of a radioactive isotope will remain after 25 years if it has a half-life of 5 years?

30. If 1.4g of isotope remains, how many grams was in the original sample if the half-life is 23 days and the isotope has been stored for 92 days?