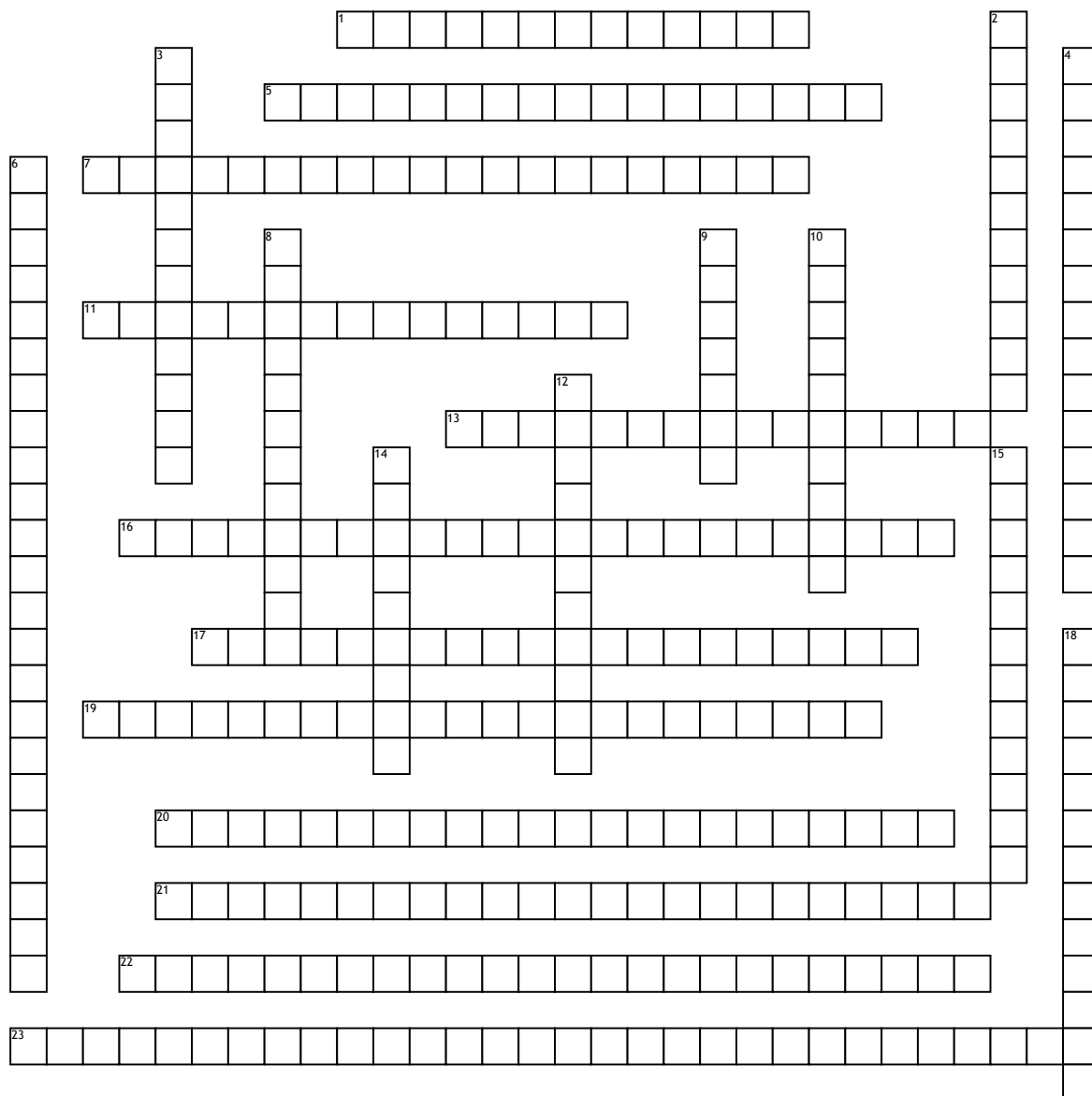


Name: \_\_\_\_\_

Date: \_\_\_\_\_

# electron in an atom(ch 5)



## Across

1. a 3D region around the nucleus of an atom that describes an electron's probable location.  
 5. predicts that all moving particles have wave-like characteristics  $h\lambda = mv$ .  
 7. major energy levels 1,2,4,5,6,7  
 11. electrons in the atom's outermost orbitals  
 13. the energy levels contained within a principal energy level  
 16. the arrangement of electrons in an atom  
 17. diagram that displays an element and its valence electrons with the element symbol and dots represents valence electron  
 19. (N), indicates the relative size and energy of atomic orbitals

20. Schrodinger, the atomic model in which electrons are treated as waves.  
 21. rule used for electronic configuration, a maximum of two electrons can occupy a single orbital, but only if they have opposite spins  
 22. form of energy that exhibits wavelike behavior as it travels through space  
 23. states that it is impossible to know both the velocity and the position of a particle at the same time

## Down

2. the lowest allowable energy state of an atom  
 3. form of electromagnetic radiation  
 4. rule used for electronic configuration, each electron occupies the lowest energy orbital available

6. distribution of electrons into the orbitals of an atom  
 8. when atoms gain energy.  
 9. the minimum amount of energy that can be lost or gained by an atom  
 10. the shortest distance between equivalent points on a continuous wave  
 12. lowest allowable every state of an atom.  
 14. rule used for electronic configuration, single electron with the same spin must occupy each equal energy orbital before additional electrons with opposite spins can occupy same orbitals  
 15.  $c = \text{wavelength} \times \text{frequency}$   
 18. the number assigned to each orbit of an electron