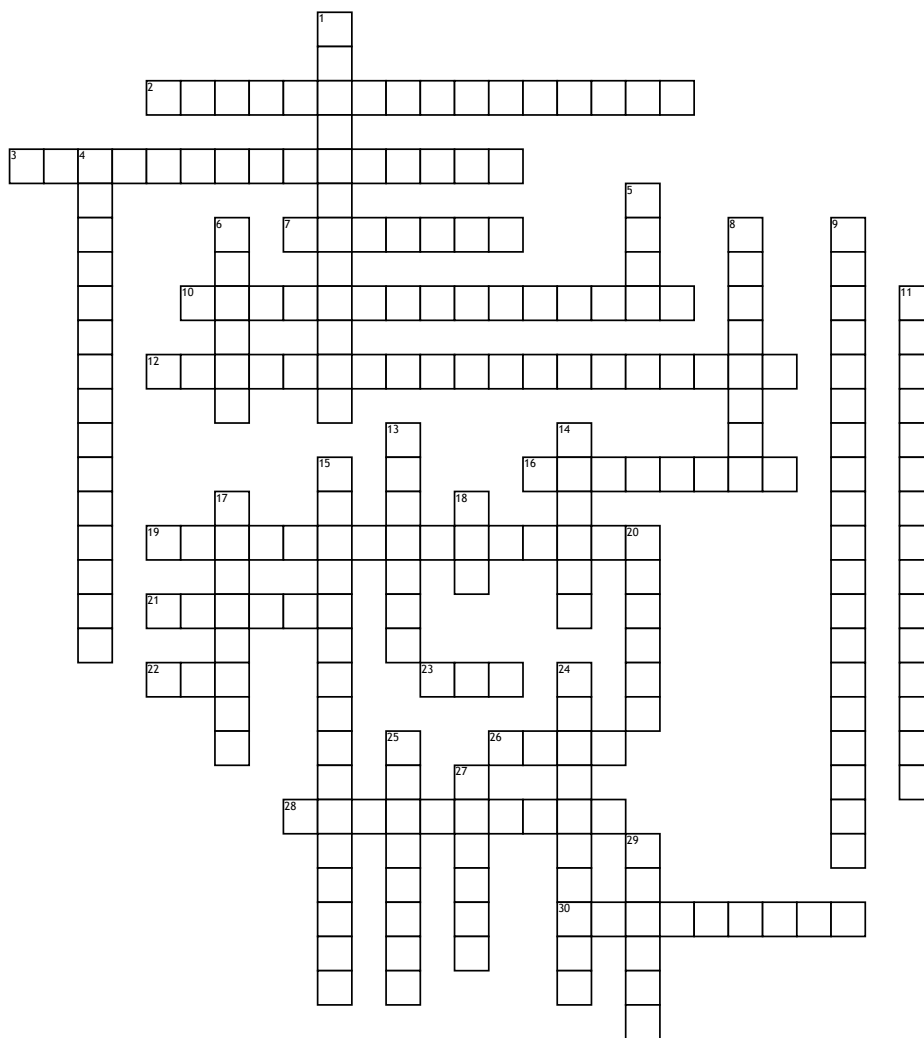


Name: _____

Date: _____

Atomic Structure, chemical bonding and Crystal Structure



Across

2. The ordered arrangement of atoms in a crystalline materials is known as

3. Unit cell with an Atomic Packing Factor of 0.74

7. The electron present in the outermost shell of an atom is known as?

10. The science that examines the arrangements of atoms in solids is known as

12. Relationship between volume of atoms in unit cell and volume of unit cell

16. What happens when two protons or two electrons are placed closed to each other?

19. The process by which the force of attraction between the ions of atoms makes them stick together is known as?

21. A positively charged ion is known as a

22. How many electrons can the first energy level hold?

23. Name of the crystal structure that has 4 atoms in its unit cell

26. Smallest particle of a substance

28. The bond length is the sum of two

30. The property of some chemical elements to exist in two or more different forms is known as

Down

1. 3D lattice of imaginary lines that connect atoms is known as

4. What is the name of the bonding which occurs when the sharing of valence electrons between two or more atoms

5. The melting point of strongly bonded materials is

6. Chemical element that can have more than one form

8. The difference between attractive and repulsive force is known as

9. Fraction of space occupied by atoms

11. Name of the crystal structure which closed packed direction are cube diagonal

13. The density of the polymers is _____ than metals and ceramics

14. A horizontal row of the periodic table is called?

15. Van der Waals forces are also known as

17. The atomic number of an element is determined by the amount of protons and

18. The atom that losses or gains an electron is known as

20. The columns of the periodic table are also known as

24. The mass of an individual atom is known as

25. The smallest unit that has the total symmetry of a crystal is known as

27. Subatomic particle positively charged

29. Elements with same number of valence electrons are located in the periodic table in the same?

Word Bank

smaller

Crystal structure

Repelled

Period

ion

Net force

Valence

Face Centred Cube

Proton

FCC

Two

Secondary bonding

ionic radii

Space lattice

Unit cell

Chemical bonding

High

Cation

Carbon

Atomic Packing Factor

Covalent bonding

Atomic Packing Factor

Atomic mass

Groups

Allotropy

Neutrons

Body Centred Cube

Atom

Column

Crystallography