**Dougherty Valley HS AP Chemistry Name:**

**IMF's, Liquids, & Solids Date:**

**IMF’S IN SOLIDS Period:**

Indicate the **strongest** IMF holding together crystals of the following:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Molecular Crystal** | | | **Metal** | **Ionic Crystal** | **Network Solid** |
|  |  | London  forces | Dipole-dipole attractions | Hydrogen Bonds | Metallic Bonds | Ionic Bonds | Covalent Bonds |
| 1. | NH3 |  |  |  |  |  |  |
| 2. | Kr |  |  |  |  |  |  |
| 3. | HCl |  |  |  |  |  |  |
| 4. | F2 |  |  |  |  |  |  |
| 5. | KMnO4 |  |  |  |  |  |  |
| 6. | NaCl |  |  |  |  |  |  |
| 7. | SO2 |  |  |  |  |  |  |
| 8. | CO2 |  |  |  |  |  |  |
| 9. | C3H8 |  |  |  |  |  |  |
| 10. | CH4 |  |  |  |  |  |  |
| 11. | CH3Cl |  |  |  |  |  |  |
| 12. | HF |  |  |  |  |  |  |
| 13. | C6H6 |  |  |  |  |  |  |
| 14. | NO |  |  |  |  |  |  |
| 15. | H2SO4 |  |  |  |  |  |  |
| 16. | WC |  |  |  |  |  |  |
| 17. | Si |  |  |  |  |  |  |
| 18. | SiO2 |  |  |  |  |  |  |
| 19. | C(graphite) |  |  |  |  |  |  |
| 20. | N2 |  |  |  |  |  |  |
| 21. | CH3OH |  |  |  |  |  |  |
| 22. | Ag |  |  |  |  |  |  |
| 23. | (C2H5)2NH |  |  |  |  |  |  |
| 24. | NaOH |  |  |  |  |  |  |
| 25. | Al |  |  |  |  |  |  |
| 26. | PCl3 |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Molecular Crystal** | | | **Metal** | **Ionic Crystal** | **Network Solid** |
|  |  | London  forces | Dipole-dipole attractions | Hydrogen Bonds | Metallic Bonds | Ionic Bonds | Covalent Bonds |
| 27. | XeF4 |  |  |  |  |  |  |
| 28. | He |  |  |  |  |  |  |
| 29. | Na |  |  |  |  |  |  |
| 30. | CO |  |  |  |  |  |  |
| 31. | Ar |  |  |  |  |  |  |
| 32. | Ba(OH)2 |  |  |  |  |  |  |
| 33. | O2 |  |  |  |  |  |  |
| 34. | H2O |  |  |  |  |  |  |
| 35. | NH4Cl |  |  |  |  |  |  |
| 36. | Hg |  |  |  |  |  |  |
| 37. | P4 |  |  |  |  |  |  |
| 38. | HCN |  |  |  |  |  |  |
| 39. | CaO |  |  |  |  |  |  |
| 40. | N2H2 |  |  |  |  |  |  |
| 41. | H2 |  |  |  |  |  |  |
| 42. | Pb |  |  |  |  |  |  |
| 43. | XeF2 |  |  |  |  |  |  |
| 44. | SF4 |  |  |  |  |  |  |
| 45. | SiC |  |  |  |  |  |  |
| 46. | Si4H10 |  |  |  |  |  |  |
| 47. | PH3 |  |  |  |  |  |  |
| 48. | SiH4 |  |  |  |  |  |  |
| 49. | H2Se |  |  |  |  |  |  |
| 50. | C2H2 |  |  |  |  |  |  |
| 51. | I2 |  |  |  |  |  |  |
| 52. | Cu |  |  |  |  |  |  |
| 53. | AsH3 |  |  |  |  |  |  |
| 54. | K2S |  |  |  |  |  |  |