

**IMPORTANT QUESTIONS OF I YEAR(I-SEM) CHEMISTRY**  
**QUESTIONS.**

• **UNIT. I**

1. What is Diagonal relationship. Write the diagonal relationship between Li & Mg.
2. Write the diagonal relationship between Be & Al.
3. Write the synthesis of Diborane and explain the Structure?
4. what is borazole? Explain its structure.
5. What are carbides. write the classification of carbides with structures. Explain their reactivity.
6. What are Silicones? Write the preparation of silicones use of Grignard reagent and aromatic silylation.
7. What are Nitrides? Write the classification of nitrides.
8. Write the preparation and properties of hydrozine.
9. write the preparation and properties of Hydroxylamine.
10. What are phosphazenes? Write their properties.
11. Define solubility product & Write its applications.
12. What is common ion effect ? Write its applications

• **Unit-2**

1. What is inductive effect ? Write its applications.
2. What is resonance ? Write the characteristics of resonance.
3. Define Mesomeric effect and write its applications.
3. What is hyper conjugation write its applications ?
4. Write the type of organic reactions.

5. Define zaitsevs rule.
6. What is meant by Markownikoffs rule ? Explain with suitable example.
7. Explain the Antimarkownikovs rule with addition of HBr.(Or)Write the addition of HBr in presence of peroxide.

• **Unit-3**

1. What is Compton effect ?
2. Write about photoelectric effect.
3. Write the Schrodinger wave equation for hydrogen atom.
4. Derive the Schrodinger wave equation.
5. Write the derivation for particle in one dimensional box.
6. Describe Quantum numbers.
7. write the vanderwaals equation of state.
8. Write the Andrews isotherms of CO<sub>2</sub>.
9. Deduce the critical constants from the vanderwaals equation.
- 10.State the law of corresponding states and reduced equation.
- 11.Describe the liquefoction of air by calude method.
12. what is Joule Thomson effect ?
13. Give an account of liquefoction of gases by linde and claude methods.
14. what are intermolecular forces ? Briefly describe the three type of intermolecular forces. Give one example of each type.
15. what is surface tension ? Determine the surface tension by stalagmometer?
16. Define viscosity. Determine the viscosity coefficient by Ostwald viscometer.
17. Write the applications of liquid crystals.

18. What are liquid crystals ? Briefly explain the different types of liquid crystals.

- **Unit 4**

1. Draw the molecular orbital energy diagram for NO, CO,  $N_2$ ,  $F_2$ ,  $O_2$ , CN and  $O_2$  molecular .write its bond order and magnetic

Property

2. what are errors ? Write the types of errors.

3. What is accuracy?

4. Define Precision ?

5. what are Significant figures?