❖ IMPORTANT QUESTIONS OF II YEAR (III SEM)CHEMISTRY.

- **UNIT –I**

1.Write the electronic configuration of lanthanides and their positions in periodic table

2.What is lanthanide contraction?Discuss its consequences?

3.Write the sepration methods of lanthanides ion-exachange method and solvent extraction?

4.Write the difference between lanthanides and actinides ?

5.Explain the auto—ionasation ,and physical properities of liquid ammonia ?

6.Give the reactions of ammonoacids with examples ?

7.Write the reactions of ammono bases with examples?

8.Briefly discuss the reactions in liquid ammonia like redox and neutralization reactions

9.Write the precipitation reaction reactions in liquid ammonia?

10.Describe the complex formation reactions in liquid ammonia?

11.What is meant by solvolysis reactions?

12.Write the process autoinisation of HF?

13.Write the formation of acid –base type reactions in liquid HF solvent?

- **UNIT II**

1.Give any three methods of preparation of primary ,secondary,and tertiary alcohols

2. explain the oxidation of alcohol with pyridinium chlorochromate reagent

3.Give the reaction of alcohols with dichromate's

4. predict the mechanism for for oppnenauer oxidation

5.what is pinacol-pinacolone rearrangement explain with mechanism pinacol-pinacolone rearrangement

6.explian the acidic nature of phenols

7.Describe the reimer tiemann reaction of phenols with mechanism

8. what is gattermann-kotch reaction

9.show the coupling reactions of phenols by $fecl_3$ reaction

10.describe the schtten-baumann reaction

11.write about the Williamson method of preparation of ethers

12.Discuss the formation of acetal and hemiactetal formation

13.explain the aldol condensation reaction with mechanism

14.write the perkins reaction with mechanism

15.breifly give the mechanism of knoevengel reaction

16.write about clemmenson reduction

17.explain wolf-kishner reduction

18.Discuss about Meerwein-pondorf-verley reduction?

19.Write the analysis (identifications) of aldehydes and ketones with equations?

- **Unit-III**

20.Draw a phase diagram for one component water system ?

21.Apply the phase rule to silver-led system (Ag-Pb) binary alloy system ?

22.Construct the phase diagram of Mg Zn_2 system and explain the importance of congruent meeting point

23. Apply the phase rule to salt water system ?

24. How are the collides classified? Give examples?

25.What is gold number?

26.State and explain Hardy-schulze law ?

27. Define critical micellar concentraction (CMC)?

28.Write the types of adsorption and examples?

29.What is freundlich adsorption isotherm?

30.Describe briefy langmuir's theory of adsorption and it's applications?

- **UNIT -IV**

31.Discuss about fullerens ?

32. What are carbon nanotubes. Write the production of carbon nanotubes.

33. Write the isomers formed by 2,3 – dibromopentane.

34. Identify the R,S nomenclature in biphenyls,spiranes,Allenes.

35. Give the cohn-ingold-prelog rules for absolute configuration R & S system of nomenclature.

36. Discuss the Conformational analysis of ethane,n-butane.

37. Describe the Conformational analysis of 1,2-dichloro ethane,Cyclo- hexane?

38.Write the Conformational analysis of 2-Chloroethanol.