



**Part B**

**5 x 6=30**

**Answer all Questions**

**Each answer should not exceed 400 words or two pages**

11. a. Introspect how the elements /metals: lithium and magnesium resemble each other.  
(or)
11. b. Compose the structure of diborane and discuss its properties.
12. a. Summarize the preparation of mercurous chloride? Generalize its important chemical reactions and uses.  
(or)
12. b. Gold refining: Appraise your answer with supportive reactions.
13. a. Account for the process of nitrogen fixation? Sketch the nitrogen cycle and discuss.  
(or)
13. b. What are per sulphuric acids? Outline the preparation of Marshall's acid.
14. a. Examine inter halogen compounds. Provide an example for each type based on classification.  
(or)
14. b. Infer on the following with justification:  
Electronic configuration and position of noble gases in the periodic table.
15. a. What is meant by solvent and non-aqueous solvent. Enumerate on the types of solvents?  
(or)
15. b. Liquid ammonia functions as a solvent. Justify this statement.

**Part C**

**5 x 12=60**

**Answer all Questions**

**Each answer should not exceed 800 words or four pages**

16. a. Compose a note on oxides and hydroxides of group IA. Describe the methodology of extraction of sodium hydroxide and magnesium.  
(or)
16. b. Discuss the method followed in the extraction of aluminium from Bauxite.
17. a. What are coinage metals? Analyze the resemblances between them.  
(or)
17. b. Smelting process is used in the extraction of copper from sulphide ore. Explain.
18. a. Outline on oxy-acids of phosphorous? Give preparation of i. Ortho phosphoric acid and ii. pyro phosphoric acid and discuss their properties.  
(or)
18. b. Generate the structure of  $\text{SO}_3$ . How is sulphur dioxide prepared? Enlist the known oxides of sulphur.
19. a. Narrate both physical and chemical properties of inter halogen compounds  
(or)
19. b. What are silicones made of? Give their methods of preparation. State their important uses.
20. a. List out the general properties of ionizing solvents.  
(or)
20. b. Give any five chemical reactions that occur in liquid  $\text{SO}_2$  and uses of  $\text{SO}_2$ .

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