

12. a) Discuss the chemistry of chlorides of phosphorous.  
  
(Or)  
b) Discuss the methods of manufacture of any one oxy acids of nitrogen.
13. a) Write down the mechanism of nitration of benzene.

Maximum: 75 Marks

14. a) Explain Hoffmann elimination reaction with specific example.

(Or)

- b) Discuss the effect of orientation.
15. a) Enumerate and explain the various statements of second law of thermodynamics.
- (Or)
- b) Discuss about Randomness and entropy.

SECTION - C (3 X10 = 30 Marks)

Answer **ANY THREE** Questions.

1. Study the following reaction and give the mechanism of sodium carbonate extract in qualitative analysis.

2. Give the mechanism of comparative study of V group elements.

3. Give the mechanism of  $\text{SN}^1$  and  $\text{SN}^2$  reactions.

4. Give the mechanism of elimination reaction with suitable examples.

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19. Discuss the mechanism of elimination reaction with suitable examples.
20. Entropy the change for a) reversible and b) Irreversible process.