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**FNDFNC 383**

**Choice Based Credit System Sixth Semester B.Sc. (FND) Degree  
Examination, September 2022  
(2021-2022 Batch Onwards)  
CHEMISTRY (Paper – IV)**

Time : 3 Hours

Max. Marks : 80

**PART – A**I. Answer **any ten** of the following :**(10×2=20)**

- 1) a) Define specific conductance. Write its SI unit.
- b) What is entropy ? Mention any two properties.
- c) What is EMF ?
- d) Define stereoisomerism and give its types.
- e) Give the properties of diastereomers.
- f) Write the structure of (+) Lactic acid and (–) Lactic acid.
- g) What are heterocyclic compounds ? Give example.
- h) Explain isoprene rule.
- i) Define polymers.
- j) Name any two pollutants responsible for air pollution.
- k) What is COD and BOD ?
- l) Define  $R_f$  value.

**PART – B**

II. Answer the following questions :

**(4×15=60)****Unit – I**

- 2) a) Explain the construction and working of hydrogen electrode. **5**
- b) Explain the determination of pH of a solution using quinhydrone electrode. **5**
- c) Define Lechatlier's principle. Explain the effect of temperature on equilibrium. **5**

OR

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- 3) a) Write the principle and advantages of conductometric titration. 5  
b) Explain the determination of equivalent conductance of solution of an electrolyte. 5  
c) Explain the factors responsible for equilibrium. 5

### Unit – II

- 4) a) Explain geometrical isomerism in oximes. 5  
b) Write a note on Conformational Isomerism in Ethane. 5  
c) What are Enantiomers ? Give its properties. 5

OR

- 5) a) Explain optical isomerism of tartaric acid. 5  
b) Give a note on elements of symmetry. 5  
c) What is racemic mixture ? Give the methods for the resolution of racemic mixture. 5

### Unit – III

- 6) a) Explain the aromatic characteristic of pyrrole. 5  
b) Explain the classification of terpenes. 5  
c) Write a note on the physiological action of nicotine. 5

OR

- 7) a) Explain the classification of alkaloid. 5  
b) Explain preparation and application of bakelite. 5  
c) Explain occurrence and importance of menthol. 5

### Unit – IV

- 8) a) Write a note on control of air pollution. 5  
b) Explain the effect of radioactive waste on soil pollution. 5  
c) Define chromatography. Explain its general principle. 5

OR

- 9) a) Explain the process of sewage water treatment. 5  
b) Explain different sources of water pollution. 5  
c) Explain the principle and application of ion exchange chromatography. 5
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