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**FNDFNC 282**

**Choice Based Credit System IV Semester B.Sc. (FND) Degree  
Examination, September 2022  
(2020-21 Batch Onwards)  
CHEMISTRY – II**

Time : 3 Hours

Max. Marks : 80

**PART – A**

1. Answer **any ten** of the following : **(10×2=20)**
- a) Give any two biological functions of magnesium.
  - b) What are cytochromes ?
  - c) Give two examples for naturally occurring complex compounds in living systems.
  - d) What are Colloids ? Give one example.
  - e) Define adsorption.
  - f) Define n/p ratio.
  - g) Define Molar Extinction coefficient.
  - h) State Grothus and Draper law.
    - i) Give any two applications of UV-Visible spectroscopy.
    - j) What are Conjugated Dienes ? Give an example.
  - k) Give ozonolysis reaction of alkenes.
  - l) What are elimination reactions ? Give one example.

**PART – B**

Answer the following questions.

**(4×15=60)**

**Unit – 1**

2. a) Explain the role of sodium and potassium in biological system. **5**
- b) Write a note on toxicity of lead and cadmium. **5**
- c) Explain the role of magnesium in chlorophyll. **5**

OR

P.T.O.



3. a) Explain the importance of phosphorus and nitrogen compounds in biological systems. 5  
b) Explain the function of calcium and magnesium in biological systems. 5  
c) Give the role of cobalt in Vitamin B12 and molybdenum in nitrogenase. 5

**Unit – 2**

4. a) Discuss the adsorption indicators in precipitation titrations. 5  
b) What are gels ? Explain properties of gels. 5  
c) Write a note on C<sup>14</sup> dating. 5

OR

5. a) Explain the Langmuir's adsorption. 5  
b) Write a note on radioactive decay series. 5  
c) Explain ceric sulphate dosimetry. 5

**Unit – 3**

6. a) Explain fluorescence and phosphorescence with examples. 5  
b) Explain photosensitization and photoinhibition. 5  
c) Explain the instrumentation of colorimeter. 5

OR

7. a) Explain Chemiluminescence with example. 5  
b) State and explain first and second laws of photochemistry. 5  
c) Explain the applications of UV-Visible spectroscopy. 5

**Unit – 4**

8. a) Give any two reactions of alkynes. 5  
b) Explain addition of HBr to propene. 5  
c) Explain S<sub>N</sub><sup>1</sup> mechanism with example. 5

OR

9. a) Explain the addition of Br<sub>2</sub> to 1,3-butadiene. 5  
b) What are dienes ? Explain their classification. 5  
c) Explain E<sub>2</sub> mechanism with example. 5

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