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FNDFNC 258

**Credit Based IV Semester B.Sc. (FND) Degree Examination, September 2022
(2019-20 and Earlier Batches)
CHEMISTRY – II**

Time : 3 Hours

Max. Marks : 80

PART – A

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

1. a) Give any two biological functions of calcium.
- b) What are haemocyanins ?
- c) What are essential elements ?
- d) Define adsorption.
- e) State Hardy-Schulze Law.
- f) Define n/p ratio.
- g) What is photochemistry ?
- h) Define Molar extinction coefficient.
- i) Define chemiluminescence.
- j) What are conjugated Dienes ? Give an example.
- k) Give reaction of alkenes with oxidizing agent.
- l) What are elimination reactions ? Give one example.

PART – B

II. Answer the following questions : **(4×15=60)**

Unit – 1

2. a) Explain the role of sodium and potassium in biological system. **5**
- b) Explain nitrogen cycle. **5**
- c) Explain the role of iron in haemoglobin. **5**

OR

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3. a) Give the functions of calcium and magnesium in biological system. 5
b) Write a note on toxicity of mercury and arsenic. 5
c) Give the role of cobalt in Vitamin B12 and molybdenum in nitrogenase. 5

Unit – 2

4. a) Discuss the applications of radioisotopes. 5
b) Explain Freundlich adsorption isotherm. 5
c) Write a note on C¹⁴ dating. 5

OR

5. a) Explain the Langmuir's adsorption. 5
b) What are gels ? Explain properties of gels. 5
c) Write a note on biological effects of radiation. 5

Unit – 3

6. a) Explain fluorescence and phosphorescence with examples. 5
b) Write a note on radiation dosimetry. 5
c) State and explain Beer-Lambert's law. 5

OR

7. a) Explain photosensitization and photoinhibition. 5
b) Explain chemiluminescence with an example. 5
c) Explain the instrumentation and working of spectrophotometer. 5

Unit – 4

8. a) Explain the addition of Br₂ to 1,3- butadiene. 5
b) What are dienes ? Explain their classification. 5
c) Explain E¹ mechanism with example. 5

OR

9. a) Explain the addition of HBr to propene. 5
b) Give any two methods for preparation of alkenes. 5
c) Explain S_N1 mechanism with example. 5
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