21101453

QP CODE: 21101453

Reg No : .....

Name : .....

B.Voc Degree Examinations, JUNE 2021

Second Semester

B.Voc Renewable Energy Technology and Management

RETTG202 - FUNDAMENTALS OF ELECTROCHEMSITRY

2019 Admission Onwards

BAD67AE5

Time: 3 Hours Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What are electrolytes? What is the basis of its classification into strong and weak electrolytes?
2. What is ionic mobility?
3. State and explain Faraday's second law of electrolysis.
4. Give any two peculiar characteristics of a reversible cell.
5. What are reversible electrodes?
6. How many types of concentration cells are possible?
7. Draw the conductometric titration curve for strong acid vs strong base titration and explain its appearance.
8. Give the names of four different types of polarography.
9. Write the names of any four photochemical reactions.
10. What is meant by intersystem crossing?
11. What is flash photolysis?
12. Give the names of two energy rich molecules having role in photosynthesis.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What is Walden's rule? Illustrate with example.
14. Draw and explain different ionic movement possibilities in Hittorf's theoretical device.
15. How emf and concentration of electrolyte are related.
16. Draw a Daniel Cell. Write the cell representation . Write the cell reaction.
17. Draw and explain different types of titration curves for the amperometric titration.
18. Write all the possible processes that can happen when an electromagnetic radiation interacts with matter.
19. Define and explain i) Grotthuss-Draper law and ii) Stark-Einstien law.
20. Give a brief note about two important secondary photochemical reactions happening in the atmosphere.
21. What are charge transfer reactions? Explain why metal complexes are used in such reactions.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Dervie Ostwald's dilution law and give its significance
23. Derive the reltion between EMF of a cell between (i) Equilibrium Constant (ii) Concentration of the electrolyte
24. Write a note on Coulometric titration with schematic representation.
25. Discuss about Beer's law and Lambert's law and discuss how Beer's-Lambert's law is generated from both these laws.

(2×15=30)