Internal Examination 2022-2023
CHEMISTRY
B.Sc- Part II
Paper – III- Physical Chemistry

Marks-34 **Time-3h**

Answer the following questions:

1. Explain the Jablonski diagram depicting various processes occurring in the excited state (4 marks)
2. What is quantum yield? How it is determined experimentally? (3 marks)
3. Discuss the laws of photo-chemistry. (3 Marks)
4. What is phase rule? Explain its application on water system. (4 Marks)
5. What is Nernst distribution law? And give the limitation and applications of Nernst distribution law. (3 Marks)
6. Apply phase rule on a system with non-congruent points. (3 Marks)
7. Apply phase rule on $FeCl_3$- water system having eutectic point. (3 Marks)
8. What is common ion effect? Explain with suitable example. (3 Marks)
9. What is Ostwald dilution law? How α and K_a or K_b can be correlated? (4 Marks)
10. Derive Clausius-Clapeyron equation. (4 Marks)