



**DUDHNOI COLLEGE**  
**SESSIONAL EXAMINATION: DECEMBER- 2021**  
**CHEMISTRY (HONOURS)**

**Semester**  
**III**

Paper: CHE-HC-3036: Physical Chemistry III

Time: 1 hour  
Full marks: 20

*Answer all questions. The figure in the margin indicates the full mark for the question.*

1. Answer any five of the following: 1x5=5
  - a. What is Degree of Freedom?
  - b. Write the reduced form of Phase Rule.
  - c. What is Solid Solution?
  - d. What is the unit of Rate Constant k?
  - e. Differentiate between Order and Molecularity.
  - f. What is Congruent Point?
  - g. What is Activation Energy?
  
2. Answer any three of the following: 5x3=15
  - a. What is One Component System? derive H<sub>2</sub>O system with clean diagram.
  - b. Draw Zn-Mg System and mention the eutectic point.
  - c. What is Rate of a reaction? Derive first order kinetics.
  - d. Describe the role of temperature on reaction rate. Mention Arrhenius Coefficient.
  - e. Describe Two Component System with suitable example.