

**B.E. (Chemical) 2nd year (Physical Chemistry)**

**MST 1**

**Max. Marks:20**

**Time 1h**

- Q1
1. Derive an expression for half life period of a nth -order reaction .(3)
  2. The rate of reaction doubles with every 10 degree rise in temperature. Explain. (3)
  3. Describe the Lindemann theory of unimolecular reactions. (4)
  4. In the reduction of nitric oxide ,50% of the reaction was completed in 140secs when initial pressure was 258mm of Hg and in 224 secs when initial pressure was 202 mm of Hg. Find the order of the reaction . (4)
- Q2.
1. State and explain Faraday's 1<sup>st</sup> law .Define electrochemical equivalent of a substance.(4)
  2. In a cell containing a solution of silver nitrate,a certain amount of current was passed for 3h .If 60.8 g of silver was deposited ,calculate the current strength.(2)