

2021
CHEMISTRY
(HONOURS)
PAPER: CEMHP-5
(Physical)
[CBCS]

Full marks : 15

Time : 2 hours

Answer all questions :

- (1) Define viscosity coefficient (η) of a liquid and find its dimension. 2
- (2) What are the limitations of the Nernst distribution law? 1
- (3) What do you understand by partially miscible liquid? 1
- (4) Explain why the observed conductance of 1(M) aqueous solution of HCl is much higher than corresponding NaCl solution. 2
- (5) The equivalent conductance (Λ) of an electrolyte in solution should be inversely proportional to normality of the electrolyte in solution since $\Lambda = k \times 1000 / C$, where k is specific conductance. Justify. 1
- (6) Highly viscous liquid is less volatile...Explain. 1
- (7) State Nernst distribution law. 1
- (8) In conductometric titration concentration of the titrant is approximately ten times more than the titer – why? 1
- (9) Explain the conductometric titration curve of KCl and AgNO_3 . 2
- (10) In Ostwald's viscometer capillary part can not be replaced by an ordinary tube-why? 1
- (11) What is Reynold's number? What does it indicate? 1+1