

2020

CHEMISTRY — HONOURS — PRACTICAL

Paper : CC-2P

Full Marks : 30

The figures in the margin indicate full marks.

Physical Chemistry

(Marks : 20)

1. Determine the Viscosity Coefficient of a given solution using Ostwald Viscometer.
- (a) Write down the theory using the following points :
- (i) Newton's law of Viscosity, viscosity coefficient and its unit.
 - (ii) Poiseuille's Equation and explanation of the terms.
 - (iii) Draw a neat diagram of the Ostwald Viscometer to show the pressure differences between the two arms of the viscometer.
 - (iv) Derivation of the Working Formula.
- (b) Determine the ratio of viscosity coefficient of the supplied solution to that of water at the experimental temperature. Given : time of flow for water = 80 sec, time of flow for the solution of same volume through the same viscometer = 100 sec. Density of Water at the experimental temperature = 1.00 g.cm^{-3} . Density of the supplied solution at experimental temperature = 1.12 g.cm^{-3} . (2+2+2+4)+10

Organic Chemistry (1B)

(Marks : 10)

2. Draw a neat diagram of boiling point apparatus and properly label its different components.
- (a) Diagram
 - (b) Proper labelling. 2+2
3. Suggest which among the following pairs would have a higher boiling point? Explain why.
- (a) *n*-butyl alcohol and isobutyl alcohol.
 - (b) Cyclohexanol and ethyl methyl ketone. 3+3
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