EASTERN UNIVERSITY, SRI LANKA

THIRD YEAR SECOND SEMESTER EXAMINATION IN SCIENCE- 2020/2021 (July/August 2024)

CH3101: INORGANIC CHEMISTRY LABORATORY-II

Group II

Answer all questions **Time: 03 hours**

1. Perform the following experiments and answer the questions listed below.

Procedure I

- Pipette out 10.0 ml of given $ZnSO_4$ (0.02 $moldm^{-3}$) solution into a titration flask.
- Add 2 ml of pH 10 buffer solution.
- *Titrate* against EDTA solution using Eriochrome Black-T as an indicator.

Procedure II

- Pipette out 10.0 ml of given water sample (X) into a titration flask.
- Add 2 ml of pH 10 buffer solution.
- Titrate against EDTA solution using Eriochrome Black-T as an indicator.

d. *Tabulate* your reading (two readings).

e. *Write* the balanced equations involved in the reaction.

f. *Determine* the Calcium hardness of water sample (X).

2. The Biochemical Oxygen Demand (BOD) of the water sample was determined by Winkler method using $Na_2S_2O_3$ as the titrant. Initially 1.0 ml of Manganese (II) solution and NaOH solution containing $KI_{(aq)}$ was added into the water sample and the precipitate was dissolved in acid. Then 200 ml of the acidified sample solution in the stoppered bottle was titrated against 0.01 $moldm^{-3}$ $Na_2S_2O_3$ which required 3.50 ml to reach the endpoint. *Determine* the Biochemical oxygen demand (BOD) of the given water sample.

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