

2019

B.Sc.

4th Semester Examination  
**CHEMISTRY (Honours)**

Paper - GE4P

[Practical]

Full Marks : 20

Time : 3 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

**Section - A**

1. Perform one experiment (To be settled by lot)      8
  - (a) Determine the strength of a HCl solution by titrating against a standard NaOH solution conductometrically.
  - (b) Determine the strength of an acetic acid solution by titrating against a standard NaOH solution conductometrically.

[ Turn Over ]

- (c) Determine the strength of a acetic acid solution by titrating against a standard NaOH solution potentiometrically.
- (d) Determine the strength of the supplied Mohr's salt solution by titrating against a standard  $K_2Cr_2O_7$  solution potentiometrically.
- (e) Determine the critical solution temperature (CST) of phenol-water system and mass per cent of phenol at this temperature.

**Total marks of 8** are divided among the following :

Theory	:	<u>1</u>
Experiment	:	<u>3</u>
Reporting data + Graph (if any)	:	<u>3</u>
Result	:	<u>1</u>

### Section - B

2. Perform one experiment (To be settled by lot) 7
- (a) Determine the total hardness of water by EDTA titration.

- (b) Find out the pH of an unknown solution by comparing colour of a series of HCl solutions + 1 drop methyl orange, and a similar series of NaOH solutions + 1 drop phenolphthalein.
- (c) Determine the rate constant for the acid catalysed hydrolysis of an ester.

**Total marks of 7** are divided among the following :

Theory : 1

Reporting data + Graph (if any) : 3

Calculation : 2

Result : 1

3. Laboratory Note Book 2

4. Viva-voce 3