

2018

CBCS

3rd Semester

CHEMISTRY

PAPER—C6P

(Honours)

(Practical)

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

**Inorganic Chemistry—II Lab.**

- |                                                                       |    |
|-----------------------------------------------------------------------|----|
| 1. Estimate the total amount of Iron in the supplied portland cement. | 15 |
| 2. Laboratory Note Book                                               | 2  |
| 3. Viva-Voce.                                                         | 3  |

### Procedure

1. (a) Preparation of 250 ml standard  $\left(\frac{N}{20}\right)K_2Cr_2O_7$  solution :

Weight out accurately 0.6125 gm of  $K_2Cr_2O_7$  (AR grade) and dissolve it by distilled water in a 250 ml volumetric flask.

- (b) Estimation of  $Fe_2O_3$  in Portland Cement:

Transfer the supplied Cement Sample quantitatively into a 500 ml beaker and dissolve it in 50 ml (1:1) HCl. Then heat the solution with stirring by glass rod for 15 minutes. Add additional 25 ml (1:1) HCl and reduce iron by slow addition of Al-foil at near to boiling condition. Cool the solution and dilute to 150 ml by distilled water. Add 5 ml of syrupy  $H_3PO_4$  followed by 3-4 drops BaDs indicator. Then titrate it with a standards and  $\left(\frac{N}{20}\right)K_2Cr_2O_7$  Solution until first red-violet colour appears. Note the titre value to calculate the amount of  $Fe_2O_3$  in supplied portland cement sample.