

**B.A. / B.Sc. PART II EXAMINATION, 2020**  
**FAKIR CHAND COLLEGE CENTRE (551)**

**INSTRUCTIONS FOR CANDIDATES**

**READ ALL THE INSTRUCTIONS CAREFULLY BEFORE WRITING ANSWERS**

1. Total **TIME OF EXAMINATION: 2 HOURS**
2. **Candidates Have To Prepare A Single pdf File By Scanning Clearly And Serially (According To Page Numbers).**
3. **ATTACH THE UNIVERSITY REGISTRATION CERTIFICATE** As The Last Page Of The pdf File
4. Use Only **WHITE PLAIN A4 PAPERS** For Writing Answers
5. Use **ONLY BLACK INK** For Writing Your Answers
6. Give **A TOP PAGE** With Clear Mention Of University **REGISTRATION NO.**
7. **GIVE PAGE NO.** At The Top Right/Middle Of Each Page
8. Give **AT LEAST 1CM MARGINS** In All The Four Sides Of Each Page

**2020**  
**B.A. /B.Sc. Part II Examination**  
**University of Calcutta**  
**CHEMISTRY – HONOURS**  
**Paper : IVA**  
**F.M. 25**

**FAKIR CHAND COLLEGE CENTRE(551)**

**Answer ANY TWO questions.**

1. (a) Compare the hydrolytic behaviour of the fluorides of S, Se and Te and give suitable explanation. 7<sup>1</sup>/<sub>2</sub>  
(b) (CH<sub>3</sub>)<sub>3</sub>SiOH is a stronger acid than its carbon analogue. Justify. 5
2. (a) Construct the MO diagram of CO and explain its donor property. 7<sup>1</sup>/<sub>2</sub>  
(b) Explain n-type and p-type semiconductors with proper examples. 5
3. (a) Discuss the structure and bonding of polyphosphazenes. 7<sup>1</sup>/<sub>2</sub>  
(b) Suggest a method of preparation of XeO<sub>2</sub>F<sub>2</sub> and draw its structure. 5
4. (a) Explain on the basis of the solubility product principle and common ion effect the precipitation of Group- II A and Group- III B sulphides in qualitative analysis. 7<sup>1</sup>/<sub>2</sub>  
(b) Compare the oxidizing power of K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> in acidic and neutral medium. 5