

18/5/13

156 : Con. No.-JP

Con. 5864-13.

18th May-13

Sem-II (Rev). ATK T - Ph. Analysis-I

(REVISED COURSE)

DC-7204

(2 Hours)

[ Total Marks : 40

- N.B: (1) Question no. 1 is compulsory.  
 (2) Attempt any **four** of the remaining questions.  
 (3) Draw diagrams wherever necessary.  
 (4) Figures to the right indicate full marks.

Q1a. Explain the following terms: (4)

- i. External indicator
- ii. Normality
- iii. Sequestering agent
- iv. End point

b. What volume of 2N  $\text{H}_2\text{SO}_4$  would be required to neutralize 50ml of 1.056N NaOH? (2)

c. Balance the following redox reaction. Give the net balanced complete reaction for the same: (2)



Q2a. Give the principal behind the assay of the following: (4)

- i. Ferrous sulphate
- ii. Boric acid

b. Write a note on oxygen as an official gas. (4)

Q3a. What is a primary standard? What are the properties of such a compound? How is a standard sodium carbonate solution prepared? (4)

b. Give an account of the iron limit test. (4)

Q4a. Give the significance of the following: (4)

- i. Sulphuric acid in permanganometry
- ii. Sulphuric acid in ash value
- iii. Lead acetate cotton in arsenic limit test.
- iv. Dioxane in non-aqueous titrations.

b. Why is the maintenance of a constant pH critical in complexometric titration? Explain with the help of a suitable example. (4)

Q5a. Give an account of iodimetric titrations. Explain the role of starch as an indicator. (4)

b. Write a note on Volhard's method of estimation of halides. (4)

Q6. Write short notes on any two: (8)

- a. Non-aqueous titrations.
- b. Residue on ignition.
- c. Limit test for chloride