

2021
B.A./B.Sc. Semester V General Examination
University of Calcutta
CHEMISTRY
Paper: DSE-A2
(PRACTICAL)
F.M. 30

FAKIR CHAND COLLEGE CENTRE (551)

[Use A4 pages and black ink only for writing answers. Write Roll number and Registration number at the top and page number at the bottom of each page. Images of answer script and admit card must be in a single pdf file.]

Answer any FIVE:

1. a) Write the composition of cement? (3)
b) Why buffer is added for the complexometric titration? (3)
2. a) Write the composition of dolomite and how can they be estimated? (1+3)
b) Write the name of two complexometric indicators? (2)
3. a) Why NH_4Cl is used for the preparation of zinc-acetate solution? (3)
b) How Fe_2O_3 is estimated in cement? (3)
4. a) Write the composition of Z-R reagent? (2)
b) In which type of titration, Z-R reagent is used? (1)
c) Why Z-R reagent is used for the estimation of Fe? (3)
5. On the basis of practical (Determination of composition of Dolomite by complexometric titration) – Required volume of EDTA for CaCO_3 and MgCO_3 are 25.4ml and 19.7 ml respectively. 25ml 0.01(M) Zinc-acetate is standardized 42.6 ml EDTA solution. Calculate the amount of CaCO_3 and MgCO_3 in gm/lit. (3+3)
6. a) Write the redox reaction for the titration of oxalic acid with KMnO_4 in acid medium and write the equivalent weight of KMnO_4 ? (2+1)
b) For the standardization of KMnO_4 using oxalic acid, which type of indicator is your choice and why? (2)
c) Write the starting and the end point colour of the above titration? (1)
7. a) 25 ml (M/100) Zn-acetate dihydrate solution is completely titrated with 23.8 ml EDTA solution. Calculate the strength of the EDTA solution? (3)
b) Write the full name of EDTA? (1)
c) Write the process by which all composition of cement except Fe_2O_3 is estimated? (2)