

**Dr. Babasaheb Ambedkar Marathwada University**

**B.Sc. Second Year (Practical Examination)**

**Chemistry: Paper IX**

**(Physical Chemistry)**

*Time: Four Hours*

*Maximum Marks: 100*

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- Q.1 a) Determine normality and strength of HCl/CH<sub>3</sub>COOH solution using ..... N NaOH solution conductometrically. 30  
OR  
b) Determine normality and strength of HCl solution using ..... N NaOH solution pH-metrically.  
OR  
c) Verify Lambert-Beer's law using KMnO<sub>4</sub> solution colorimetrically.  
OR  
d) Determine indicator constant of a given indicator colorimetrically.  
OR  
e) Determine the amount of sugar in given unknown solution using polarimeter.
- Q.2 a) Determine the critical solution temperature of Phenol-Water system. 30  
OR  
b) Determine the heat of neutralization of NaOH by HCl/CH<sub>3</sub>COOH.  
OR  
c) Determine the partition coefficient of benzoic acid in Benzene-Water system.  
OR  
d) Determine the refractive index of ethanol-Water system.
- Q.3 a) Determine the molar mass of polymer by viscosity measurements. 30  
OR  
b) Determine the solubility of benzoic acid at different temperatures and calculate ΔH of dissolution process.  
OR  
c) Investigate the kinetics of iodination of acetone.  
OR  
d) Determine the equilibrium constant for the reaction:  $KI + I_2 \rightarrow KI_3$
- Q.4 a) Record Book 05  
b) Viva-voce 05

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Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

**FACULTY OF SCIENCE**

**B.Sc. II Year Practical Examination**

**CHEMISTRY**

**PAPER- X**

TIME :  
CENTRE :  
BATCH NO.

DATE :  
MAX. MARKS : 100

**GENERAL INSTRUCTIONS**

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- i) Verify the table number allotted to you and write your University Examination Seat number on Answer Book.
  - ii) Credit will be given for neat and systematic work.
  - iii) Show your observations to examiner and obtain the signature regarding, weight taken, burette reading , melting point, etc.,
  - iv) Logarithmic tables, printed or cyclostyled charts are allowed to use.
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**Section- A (Organic)**

Q. 1. Prepare ----- derivative of -----recrystallise and determine its melting point. (20)

Q.2. To estimate -----by -----method. (25)

**Section –B ( Inorganic )**

Q.3. To estimate -----gravimetrically as -----(25)

Q.4. To estimate the -----by EDTA solution using ----- indicator. (20)

Q.5. Record Book -----05 Marks

Viva –Voce ----- 05 Marks

-----X-----

**FACULTY OF SCIENCE**  
**B.Sc. II Year Practical Examination**  
**CHEMISTRY**

Paper No. X (Organic and Inorganic Chemistry)

**Scheme of Marking**

Q.No.1.	Organic preparation	-	20 Marks
	Yield	-	10 Marks
	Crystallisation	-	05 Marks
	Melting point	-	05 Marks
Q.No.2.	Organic Estimation	-	25 Marks
	Correct burette reading		
	± 0.2 difference :	-	20 Marks
	± 0.3 difference :	-	16 Marks
	± 0.4 and above difference :	-	12 Marks
	Calculations and Results	-	05 Marks
Q.No.3.	Gravimetric analysis	-	25 Marks
	Performance	-	10 Marks
	Correct weight		
	± 10 mg	-	10 Marks
	± 20 mg	-	06 Marks
	± 30 mg & above	-	04 Marks
	Calculations & Results	-	05 Marks
Q.No.4.	Complexometric Titration	-	20 Marks
	Correct burette reading		
	± 0.2	-	15 Marks
	± 0.3	-	12 Marks
	± 0.4	-	09 Marks
	± 05 & above	-	06 Marks
Q.No.5.	Record book	-	05 Marks
	Viva –Voce	-	05 Marks
		-	100 Marks