

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

Faculty of science

B.Sc. III Year Practical Examination

CHEMISTRY

(Organic)

Paper XIV (New)

Time: 6 hrs.

Date:

Centre:

Max. Marks: 100

Batch No:

GENERAL INSTRUCTIONS

- 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 regarding weight taken, Burette reading, melting point, etc. to examiner and obtain the signature.
 - iv) Logarithmic tables, printed or cyclostyled charts are allowed to use.
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Q. 1. Identify the type of the given binary mixture. Separate out two components from the mixture by chemical method. Analyse qualitatively one of the component from them. Prepare suitable derivative of the same.

30 Marks

Q. 2. Estimate the amount offrom the given solution.

30 Marks

Q. 3. Prepare.....from.....

Verify purity of the compound using Thin Layer Chromatography technique. **30 Marks**

Q. 4. a) Record Book

5 Marks

b) Viva – Voce

5 Marks

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Scheme of Marking

Q. 1.	Type and Separation	10 Marks	
	Elements	05 Marks	
	Functional Groups	05 Marks	
	Melting Point	03 Marks	
	Derivative	05 Marks	
	Result	02 Marks	
		<hr/>	30 Marks
Q. 2.	Performance	15 Marks	
	Observations	10 Marks	
	Calculation and Results	05 Marks	
		<hr/>	30 Marks
Q.3.	Yield	15 Marks	
	Melting Point	05 Marks	
	TLC	10 Marks	
		<hr/>	30 Marks
Q. 4.	a) Record Book	5 Marks	
	b) Viva – Voce	5 Marks	

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Faculty of Science

B.Sc. III Year Practical Examination

CHEMISTRY
(Physical / Inorganic)

Paper XV (New)

Time : 6 Hrs.

Date :

Centre :

Max. Marks : 100

Batch No. :

GENERAL INSTRUCTIONS

- i) Write the table number allotted to you alongwith your University Seat Number on Answer Book.
 - ii) Credit will be given for neat and systematic work.
 - iii) Obtain the signature of the examiner on Mean Burette reading, recorded reading from Instrumental analysis and the weight if any, before you start calculations.
 - iv) Candidates are allowed to use logarithm table, printed or cyclostyled course.
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SECTION A : (INORGANIC CHEMISTRY)

Q. 1 Separate _____ and _____ in given binary (20)
mixture. Estimate _____ gravimetrically / volumetrically.

Procedure _____

Q. 2 A Determine temporary, Permanent and total hardness of given water sample. (05)

OR

B) Determine amount of Mg^{++} in the given sample of talcom powder.

OR

C) Determine percentage of acetic acid in the given commercial sample of vinegar.

OR

D) Estimate amount of oxalic acid and sulphuric acid in the given mixture solution ,
using _____ N. $KMnO_4$ solution and _____ N NaOH solution.

OR

E) Estimate amount of Fe by $K_2Cr_2O_7$ using diphenyl amine indicator.

OR

F) Estimate amount of available Cl_2^- chlorine in the given sample of bleaching power.

Procedure _____ (04)

SECTION B : (PHYSICAL CHEMISTRY)

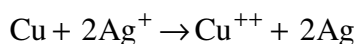
Q. 3 A) Study the effect of substituent on dissociation constant of weak acid (20)
conductometrically

OR

B) Determine amount of HCl and CH_3OOH in the given mixture using _____ N NaOH solution, conductometrically.

OR

C) Determine the standard free energy change ΔG^0 and equilibrium constant of the reaction Potentiometrically



OR

D) Determine normality and strength of given _____ acid, using _____ N. NaOH, potentiometrically.

E) Determine normality and strength of given Fe^{++} solution using _____ N $K_2Cr_2O_7$

OR

F) Determine normality and strength of given oxalic acid solution using _____ N NaOH solution conductometrically

OR

G) Determine empirical formula of ferric - 5 - sulphosalicylate complex colorimetrically

OR

H) Prepare ----- salt solution of known concentration and determine concentration of given same salt solution using refractometer.

- Q.4 A)** Determine interfacial tension between two immiscible liquids _____ and _____ **20**
OR
- B)** Study the effect of addition of an electrolyte NaCl/KCl, on solubility of Benzoic acid, at room temp.
- Q.5** Record- Book **5**
Viva voce **5**

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B.Sc. III Year Practical Examination

CHEMISTRY
(Inorganic & Physical Chemistry)
Scheme of Marking

Paper XV

Time : 6 Hrs.

Centre :

Batch No. :

Date :

Max. Marks : 100

Q.1	Separation of Mixture		05 Marks
	Gravimetric / Volumetric	± 10 mg/0.2ml	05 Marks
	Estimation of ion	± 15	03 Marks
		mg/0.3ml	
		± 20 mg/0.4ml	01 Marks
	Calculations		02/03 Marks
Q.2	A) Procedure		04 Marks
	Burette reading I & II	± 0.2 ml	06 Marks
		0.4 ml	04 Marks
		0.6 ml	02 Marks
	Calculation		
	Temporary Hardness		02 Marks
	Permanent Hardness		02 marks
	B) Preparation of Solution		04 Marks
	Burette reading	± 02 ml	08 Marks
		03 ml	06 Marks
		04 ml	04 Marks
		05 ml	02 Marks
	Calculations		04 Marks
	C) Dilution of Vinegar		04 Marks
	Burette reading	± 0.2 ml	08 Marks

		0.3 ml	06 Marks
		0.4 ml	04 Marks
		0.5 ml	02 Marks
	D and E		
	Burette reading I & II	± 0.2 ml	06 Marks
		0.4 ml	04 Marks
		0.6 ml	02 Marks
	Calculation		04 Marks
F)	Preparation of Bleaching Powder Solution		04 Marks
	Burette reading	± 0.2 ml	08 Marks
		0.3 ml	06 Marks
		0.4 ml	04 Marks
		0.5 ml	02 Marks
	A To H		
Q.3	Performance		08 Marks
	Correct observation		08 Marks
	Correct Graph		04 Marks
	Calculation		05 Marks
Q.4	A) Performance		14 Marks
	Observation		03 Marks
	Calculations		03 Marks
	B) Performance		06 Marks
	Observation		06 Marks
	Graph		04 Marks
	Calculation		04 Marks
Q.5	Record book		05 Marks
	Viva voce		05 Marks