



Padalsalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- Padalsalai's NEWS - Group
https://t.me/joinchat/NIfCqVRBNj9hhV4wu6_NqA
- Padalsalai's Channel - Group
<https://t.me/padasalaichannel>
- Lesson Plan - Group
<https://t.me/joinchat/NIfCqVWwo5iL-21gpzrXLw>
- 12th Standard - Group
https://t.me/Padalsalai_12th
- 11th Standard - Group
https://t.me/Padalsalai_11th
- 10th Standard - Group
https://t.me/Padalsalai_10th
- 9th Standard - Group
https://t.me/Padalsalai_9th
- 6th to 8th Standard - Group
https://t.me/Padalsalai_6to8
- 1st to 5th Standard - Group
https://t.me/Padalsalai_1to5
- TET - Group
https://t.me/Padalsalai_TET
- PGTRB - Group
https://t.me/Padalsalai_PGTRB
- TNPSC - Group
https://t.me/Padalsalai_TNPSC



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**MOUNT CARMEL MISSION MATRICULATION HIGHER
SECONDARY SCHOOL**

Mount Road, Carmel Nagar, Kallakurichi – 606 202



QUICK REFERENCE

12th standard organic chemistry

important compounds of Chemical properties of

Phenol, Benzene diazonium chloride, Glycerol,

Benzaldehyde, Glycol, Diethyl ether



QUICK REFERENCE**PHENOL CHEMICAL PROPERTIES****PHENOL**

Zn/ Δ	→ benzene + ZnO
NH ₃ / anhyd. ZnCl ₂ / Δ	→ Aniline
CH ₃ COCl / NaOH/Py	→ Phenyl ethanoate + HCl
C ₆ H ₅ COCl / NaOH/Py	→ Phenyl benzoate + HCl
NaOH/ CH ₃ I / Δ	→ Anisole + NaI
K ₂ Cr ₂ O ₇ / Con. H ₂ SO ₄	→ 1,4- benzoquinone
3H ₂ / Ni / 160° C	→ Cyclohexanol
HNO ₂ / 278K	→ p-nitroso phenol
20% HNO ₃ / 298K	→ O-Nitro phenol + p-nitro phenol
Con.H ₂ SO ₄ / Con.HNO ₃ / 298K	→ 2,4,6- trinitrophenol(picric acid)
Con.H ₂ SO ₄	→ O-phenol sulphonic acid + p-phenol sulphonic acid
3Br ₂ /H ₂ O	→ 2,4,6- tribromophenol + 3HBr
Br ₂ / CCl ₄ / 278k	→ o-bromo phenol + p- bromo phenol
NaOH / CO ₂ / 400K / 4- 7 bar / H ⁺	→ Salicylic acid
NaOH / CHCl ₃ / H ⁺	→ Salicylaldehyde
phthalic anhydride/ Con.H ₂ SO ₄ / Δ	→ Phenolphthalein
C ₆ H ₅ N ₂ Cl/ NaOH / 273-278K	→ P- hydroxyl azobenzene

QUICK REFERENCE

BENZENE DIAZONIUM CHLORIDE CHEMICAL PROPERTIES

C₆H₅N₂Cl

H ₃ PO ₂ / H ₂ O	→ Benzene
CH ₃ CH ₂ OH	→ Benzene
Cu ₂ Cl ₂ / HCl	→ Chlorobenzene
Cu ₂ Br ₂ / HBr	→ Bromobenzene
CuCN / KCN	→ Cyanobenzene
Cu / HCl	→ Chlorobenzene
Cu / HBr	→ Bromobenzene
KI	→ Iodobenzene
HBF ₄ / Δ	→ Fluorobenzene
H ₂ O / Δ 283K	→ Phenol
HBF ₄ / NaNO ₂ / Cu / Δ	→ Nitrobenzene
C ₆ H ₆ / NaOH	→ Biphenyl
CH ₃ COOH	→ Benzoic acid
SnCl ₂ + HCl	→ Phenyl hydrazine
C ₆ H ₅ OH	→ P-hydroxy azobenzene
C ₆ H ₅ -NH ₂	→ P-aminoazobenzene
p-Cresol	→ 2- phenylazo-4- methyl phenol

QUICK REFERENCE

BENZALDEHYDE CHEMICAL PROPERTIES

C₆H₅CHO	CH ₃ CHO / dil NaOH	→	cinnamaldehyde
	CH ₃ COCH ₃ / dil NaOH	→	Benzylidene acetone
	C ₆ H ₅ CHO / NaOH	→	Benzylalcohol + sodiumbenzoate
	HCHO/ NaOH	→	benzyl alcohol + sodium formate
	alcKCN / Δ	→	Benzoin
	Acetic anhydride/ CH ₃ COONa	→	Cinnamic acid
	Malonic acid /Pyridine	→	Cinnamic acid
	Aniline/ H ⁺ / Δ	→	Schiff's base
	N,N-Dimethyl aniline/ con H ₂ SO ₄	→	Malachite green dye
	conc.FeCl ₃ /Cl ₂	→	m-chlorobenzaldehyde
	Cl ₂ / No Catalyst	→	Benzoyl chloride
	Con.H ₂ SO ₄ / Con.HNO ₃	→	m-nitrobenzaldehyde
	Con.H ₂ SO ₄	→	m- benzaldehyde sulphonic acid

QUICK REFERENCE

GLYCEROL CHEMICAL PROPERTIES

GLYCEROL	$\text{HNO}_3/\text{H}_2\text{SO}_4$	→ 1,2,3 trinitroxy propane
	KHSO_4/Δ	→ acrolein (prop-2-enal)
	(O) dil. HNO_3	→ glyceric acid + tartronic acid
	(O) Con. HNO_3	→ glyceric acid
	(O) $\text{Bi}(\text{NO}_3)_3$	→ mesoxxlic acid
	$\text{Br}_2/\text{H}_2\text{O}$ (or) NaOBr (or) Fenton's reagent $(\text{FeSO}_4 + \text{H}_2\text{O}_2)$	→ glycerose (glyceraldehyde + dihydroxy acetone)
	HIO_4 (or) (LTA) Lead tetra acetane $(\text{Pb}(\text{CH}_3\text{COO})_4)$	→ formaldehyde + formic acid
	KmnO_4	→ oxalic acid

QUICK REFERENCE

GLYCOL CHEMICAL PROPERTIES

GLYCOL	PI_3	→ Ethene
	$2\text{HNO}_3 / \text{Con. H}_2\text{SO}_4$	→ 1,2 Dinitroxyethene (dinitroglycol)
	$773\text{K} / \Delta$	→ 1,2 epoxyethene (oxirane)
	anhyd. ZnCl_2	→ Ethanal
	$\text{Con. H}_2\text{SO}_4$	→ 1,4 dioxane
	$\text{HIO}_4 / \text{H}^+$	→ Formaldehyde
	HNO_3 (or) KMnO_4	→ Oxalic acid

QUICK REFERENCE

DIETHYL ETHER CHEMICAL PROPERTIES

DIETHYL ETHER	Excess O_2 / slow	→ 1-ethoxy ethyl hydroperoxide + diethyl peroxide
	$10Cl_2$ / light	→ perchloro diethyl ether
	PCl_5	→ Ethyl chloride
	dil. H_2SO_4	→ ethanol
	anhyd. $ZnCl_2$ / CH_3COCl	→ ethyl chloride + ethyl acetate

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“Life is nothing without chemistry.”

All are made up of atoms and molecules”



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MOUNT CARMEL MISSION MATRICULATION HIGHER SECONDARY SCHOOL
Mount Road, Carmel Nagar, Kallakurichi – 606 202

Class: XII
Subject: CHEMISTRY

Mark: 30
Time: 1:00hrs

UNIT TEST-15

I. ANSWER ALL THE QUESTIONS :

6x2=12

1. What are antibiotics ?
2. What are bio degradable polymers ? Give example.
3. What are anaesthetics ? give two example.
4. How do antiseptics differ from disinfectants ?
5. What are food preservatives ?
6. What are narcotic and non-narcotic drugs. Give example.

II. ANSWER ALL THE QUESTIONS :

6x3=18

7. How are terylene prepared ?
8. Differentiate thermoplastic and thermosetting.
9. Write a note on vulcanization of rubber
10. Explain the preparation of Nylon-6,6 and Buna-s.
11. Write short notes on Antioxidants.
12. What are drugs ? How are they classified.

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UNIT TEST -9

I. ANSWER ALL THE QUESTIONS:

6x2=12

1. state Kohlrausch's law
2. state Faraday's law of electrolysis.
3. Write a note on sacrificial protection.
4. Describe the electrolysis of molten NaCl using inert electrodes
5. Define equivalent conductances.
6. Why does conductivity of a solution decrease on dilution of the solution.

II. ANSWER ALL THE QUESTIONS :

6x3=18

7. Derive an expression for Nernst equation.
8. How is measurement of electrode potential with example
9. Explain Debye-Huckel and Onsager equation.
10. Explain Galvanic cell notation.
11. Write a note on lithium ion battery.
12. i) What is known as intercalation.
ii) Define electrochemical equivalent

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Mark: 30
Time: 1:00hrs

UNIT TEST -13

I. ANSWER ALL THE QUESTIONS

6x2=12

1. How is chloropicrin prepared
2. Explain diazotization with a suitable example
3. What is carbylamine reaction.
4. Write a short note on coupling reaction and Comberg reaction
5. Write the following reaction i) Nef reaction, ii) Hoffmann's degradation
6. Write the following reaction i) Sandmeyer reaction, ii) Gattermann reaction.

II. ANSWER ALL THE QUESTIONS

6x3=18

7. Explain Gabriel's phthalimide synthesis and mustard oil reaction.
8. How will you distinguish between primary, secondary and tertiary aliphatic amines.
9. Write notes on the following reactions. i) Schotten-Baumann reaction, ii) Nitrous acid reacts with primary and secondary amine
10. How will you convert nitrobenzene into
i) azoxy benzene, ii) m-nitroaniline.
11. How will you convert nitrobenzene into
i) N-phenyl hydroxylamine ii) hydrozo benzene.
12. a) How will you convert from benzenediazonium chloride to
i) phenol ii) iodo benzene
b) Write the reaction of electrolytic reduction of nitro benzene.

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