



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**
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- **1st to 5th Standard - Group**
https://t.me/Padalsalai_1to5
- **TET - Group**
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- **PGTRB - Group**
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- **TNPSC - Group**
https://t.me/Padalsalai_TNPSC

VELAMMAL MATRIC HR SEC SCHOOL - SURAPET
ORGANIC CHEMISTRY

12th Standard

CHEMISTRY

Reg.No. :

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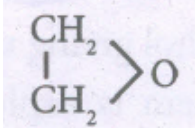
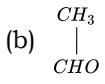
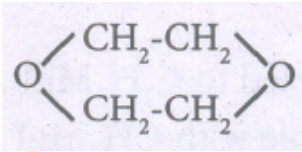
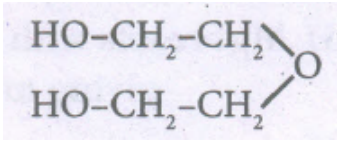
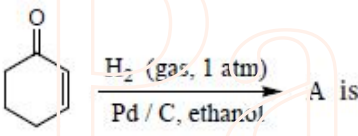
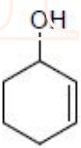
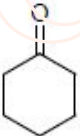
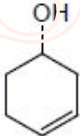
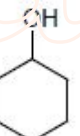
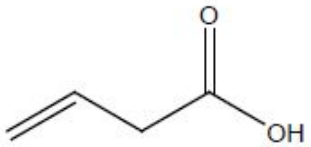
Exam Time : 03:00:00 Hrs

Total Marks : 70

15 x 1 = 15

SECTION-A

I. CHOOSE THE BEST ANSWER.

- 1) Which one of the following will react with phenol to give salicylaldehyde after hydrolysis.
 (a) Dichloro methane (b) trichloroethane (c) trichloro methane (d) CO₂
- 2) Assertion : Phenol is more acidic than ethanol
 Reason: Phenoxide ion is resonance stabilized
 (a) if both assertion and reason are true and reason is the correct explanation of assertion. (b) if both assertion and reason are true but reason is not the correct explanation of assertion. (c) assertion is true but reason is false (d) both assertion and reason are false.
- 3) On reacting with neutral ferric chloride, phenol gives
 (a) red colour (b) violet colour (c) dark green colour (d) no colouration.
- 4) Glycol $\xrightarrow{773K}$ 'A'. Identify 'A'
 (a)  (b)  (c)  (d) 
- 5) The correct structure of the product 'A' formed in the reaction

 (a)  (b)  (c)  (d) 
- 6) Which of the following represents the correct order of acidity in the given compounds
 (a) FCH₂COOH > CH₃COOH > BrCH₂COOH > ClCH₂COOH
 (b) FCH₂COOH > ClCH₂COOH > BrCH₂COOH > CH₃COOH
 (c) CH₃COOH > ClCH₂COOH > FCH₂COOH > BrCH₂COOH
 (d) ClCH₂COOH > FCH₂COOH > BrCH₂COOH > CH₃COOH
- 7) The IUPAC name of 
 (a) but - 3- enoic acid (b) but - 1- ene-4-oic acid (c) but - 2- ene-1-oic acid (d) but -3-ene-1-oic acid
- 8) The product formed by the reaction of an aldehyde with a primary amine
 (a) carboxylic acid (b) aromatic acid (c) schiff's base (d) ketone
- 9) C₅H₁₃N reacts with HNO₂ to give an optically active compound - The compound is
 (a) pentan - 1- amine (b) pentan - 2- amine (c) N,N - dimethylpropan -2-amine (d) N - methylbutan - 2-amine
- 10) Oil of mirbane is _____
 (a) nitrobenzene (b) benzaldehyde (c) methyl salicylate (d) aspirin
- 11) The optically inactive amino acid is _____
 (a) glycine (b) alanine (c) proline (d) phenylalanine
- 12) Benzylhydrol is _____.

- (a) phenacyl bromide (b) methyl carbinol (c) diphenyl carbinol (d) phenyl carbinol
- 13) Calcium acetate + calcium benzoate $\xrightarrow{\text{distillation}}$ gives
 (a) benzophenone (b) benzaldehyde (c) acetophenone (d) phenyl benzoate
- 14) Oxidation of secondary alcohol gives
 (a) aldehydes (b) ketones (c) ethers (d) primary alcohols
- 15) Formic acid contains _____ group/s
 (a) aldehyde (b) carboxylic acid (c) alcohol (d) both (a) and (c)

SECTION B

6 X 2 = 12

II. ANSWER ANY SIX OF THE FOLLOWING.**6 X****2 = 12****Each question carries TWO marks and Q.NO: 24 is compulsory**

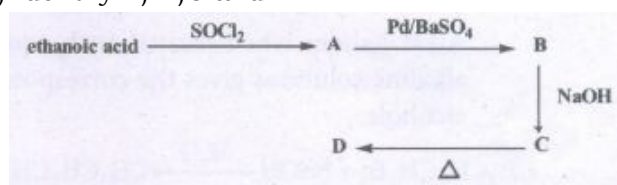
- 16) Is it possible to oxidise t – butyl alcohol using acidified dichromate to form a carbonyl compound.
- 17) Explain Schotten - Baumann reaction.
- 18) State Saytzeff's rule.
- 19) What is urotropine? Give its use.
- 20) Explain Gattermann - Koch reaction
- 21) There are two isomers with the formula CH_3NO_2 . How will you distinguish between them?
- 22) Can aniline be prepared by Gabriel phthalimide reaction? Justify your answer.
- 23) How will you convert ethylene glycol to 1,4 - dioxane.
- 24) What happens when anisole is nitrated?

SECTION C

6 x 3 = 18

III. ANSWER ANY SIX OF THE FOLLOWING.**Each question carries THREE marks and Q.NO 33 is compulsory.**

- 25) How are the following conversions effected
 i) benzyl chloride to benzyl alcohol
 ii) benzyl alcohol to benzoic acid
- 26) How is nitroglycerine prepared from glycerol?
- 27) Identify A) B) C and D



- 28) What is Rosenmund's reduction? What is the purpose of adding BaSO_4 in it?
- 29) Account for the following
- Aniline does not undergo Friedel – Crafts reaction
 - Diazonium salts of aromatic amines are more stable than those of aliphatic amines
 - pK_b of aniline is more than that of methylamine
 - Gabriel phthalimide synthesis is preferred for synthesising primary amines.
 - Ethylamine is soluble in water whereas aniline is not
 - Amines are more basic than amides
 - Although amino group is o – and p – directing in aromatic electrophilic substitution reactions, aniline on nitration gives a substantial amount of m – nitroaniline.
- 30) How are the following compounds obtained from benzene diazonium chloride?
- phenol
 - ester
 - p-hydroxy azo benzene
- 31) Write a note on
- Perkin's reaction, and

(ii) Knoevenagel reaction.

32) What is Malachite green dye? Explain its preparation?

33) Write a note on the basicity of amines

SECTION - D

5 x 5 = 25

IV. ANSWER ALL THE QUESTIONS IN DETAIL.

34) a) Starting from phenol how would you obtain the following compounds?

(a) 1, 4-benzo quinone,

(b) picric acid,

(c) Anisole?

(OR)

b) How are the following conversions effected

(a) propanal into butanone

(b) Hex-3-yne into hexan-3-one.

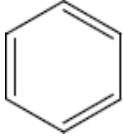
(c) phenylmethanal into benzoic acid

(d) phenylmethanal into benzoin

35) a) Explain the mechanism of Cannizzaro reaction.

(OR)

b) Give two tests for aldehydes.

36) a)  $\xrightarrow[\text{AlCl}_3]{\text{CH}_3\text{Cl}}$ A $\xrightarrow{\text{HNO}_3/\text{H}_2\text{SO}_4}$ B $\xrightarrow{\text{Sn/HCL}}$ (C) $\xrightarrow[\text{O}^\circ\text{C}]{\text{NaNO}_2/\text{HCL}}$ D $\xrightarrow{\text{CuCN}}$ E

(OR)

b) Write a note on

(i) Carbylamine reaction

(ii) Mustard oil reaction

(iii) Acetylation of benzylamine

(iv) Formation of Schiff's base

(v) Diazotisation reaction

37) a) Explain Victor Meyer test

(OR)

b) Explain the mechanism of Cannizzaro reaction

38, a) Explain i) Stephens reaction ii) Sabatier - Mailhe reaction

(OR)

b) Write the reasons for the following: i) Amines more basicity than amide. why?

ii) Aniline does not undergo Friedel-Crafts reaction. why?
