



SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF CHEMISTRY

QUESTION BANK

III B.Sc., Chemistry	Semester	V
Subject Code :	SCHJC51	Name of the Subject : Organic Chemistry - II

Section A (Multiple Choice Questions)

Unit I: HYDROXY COMPOUNDS

- Grignard reagent contains.....metal
(a) Al (b) Mg (c) Ni (d) Cu
- Reduction of Aldehyde will give.....alcohol
(a) Primary (b) Secondary (c) Tertiary (d) Quaternary
- The intermediate formed in Reimer-Tiemann reaction is
(a) Carbocation (b) Carbanion (c) Carbene (d) Dichlorocarbene
- The reagent used to synthesis benzene sulphonic acid is -----
(a) HNO₃ (b) HNO₃/H₂SO₄ (c) H₂SO₄ (d) All the above
- Alizarin used ascolor dye in textile Industry
(a) Yellow (b) red (c) black (d) orange

Unit II: ETHERS, ALDEHYDES AND KETONES

- The The example for ether compound among the following is-----
(a) Benzaldehyde (b) Anisole (c) vanillin (d) None of the above
- The Molecular formula of Iodoform is-----
(a) CHI₂ (b) CHI₃ (c) CHI₄ (d) None
- The unsaturated aldehyde among the following is -----.
(a) Benzaldehyde (b) Cinnamaldehyde (c) Acetaldehyde (d) Formaldehyde
- Cannizaro reaction occurred in -----
(a) Benzaldehyde (b) Formaldehyde (c) Acetaldehyde (d) All the above
- Vanillin is used in ----- products.
(a) Chocolates (b) Ice creams (c) Candys (d) All the above

Unit III: CARBOXYLIC ACIDS

- Which of the following is the strongest acid?
(a) Trichoroacetic acid (b) Phenol (c) Acetic acid (d) benzoic acid
- Which acid is weaker than benzoic acid?
(a) p-Methyl benzoic acid (b) p-Chlorobenzoic acid
(c) p-Nitrobenzoic acid (d) o-Chlorobenzoic acid



SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF CHEMISTRY

QUESTION BANK

13. Benzoic acid gives benzene on being heated with X and phenol gives benzene on being heated with Y. Therefore, X and Y respectively,
(a) Sodalime and copper (b) Zn dust and NaOH (c) Cu and Sodalime (d) Sodalime and Zn dust
14. What is the chemical structure of coumarins?
(a) Aromatic ring with a hydroxyl group (b) Aromatic ring with a carboxyl group
(c) Aromatic ring with an ester group (d) Aromatic ring with a nitrile group
15. Phthalic acid on heating with SOCl_2 gives
(a) Phthalic anhydride (b) Phthalamide (c) Phthaloyl Chloride (d) Oxalic acid

Unit IV: CARBOXYLIC ACID DERIVATIVES AND CARBOHYDRATES

16. The reaction of carboxylic acid with PCl_5 will yield -----
(a) Amide (b) Acid chlorides (c) Esters (d) All the above
17. Hydrolysis of ester yield-----
(a) Acid and Amide (b) Acid and Amine (c) Acid and Acid chloride (d) None of the above
18. Fructose contains ----- functional groups.
(a) Hydroxy (b) Aldehyde (c) Ketone (d) All the above
19. The example for disaccharide is -----
(a) Sucrose (b) Maltose (c) Lactose (d) All the above
20. Cellulose contains-----glycosidic linkage
(a) α (b) β (c) γ (d) δ

Unit V: NITROGEN CONTAINING ORGANIC COMPOUNDS

21. Reduction of nitrobenzene gives
(a) Anilide (b) Amide (c) Aniline (d) Aldehyde
22. Aniline containstype of electrons
a) n b) pi c) sigma d) All the above
23. Which of the following reagents does not react with aniline?
(a.) Acetyl chloride (b.) Acetic anhydride (c.) Ammonia
(d.) Nitrous acid
24. Benzenediazonium chloride reacts with phenol to form
a) P-chlorophenol b) Chlorobenzene c) p-Hydroxybenzene
d) DDT



SAIVA BHANU KSHATRIYA COLLEGE

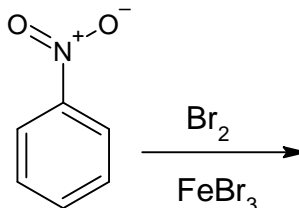
(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF CHEMISTRY

QUESTION BANK

25. Predict the major product of the following reaction



a) *o*-Bromonitrobenzene and *p*-Bromonitrobenzene

c) *o*-Bromoaniline and *p*-bromoaniline

b) *m*-Bromonitrobenzene

d) *m*-bromoaniline

Section B (7 mark Questions)

Unit I: HYDROXY COMPOUNDS

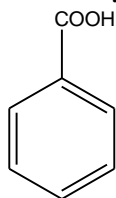
26. Write any two methods of preparation for aromatic and aliphatic alcohols.
27. Enumerate the mechanism of Hydroboration reaction to prepare alcohols.
28. Write a note on the effect of substituents on acidity of Phenol.
29. Explain the mechanism of Kolbe reaction and Schotten – Baumann reaction
30. Enumerate the preparation and uses of Alizarin.

Unit II: ETHERS, ALDEHYDES AND KETONES

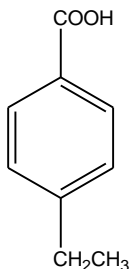
31. Write any two methods of preparation for aliphatic Aromatic aldehydes.
32. Enumerate the mechanism of Iodoform reaction.
33. Write a note on preparation and uses of Cinnamaldehyde.
34. Explain the mechanism of Williamson and Cannizaro reaction.
35. Write a note on Acid catalyzed mechanism of Keto-Enol tautomerism

Unit III: CARBOXYLIC ACIDS

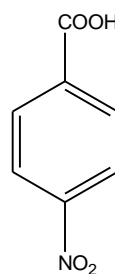
36. Arrange the following series of compounds on order of increasing acid strength. Give the reasons for the order you select



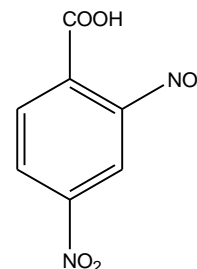
(a)



(b)



(c)



(d)



SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF CHEMISTRY

QUESTION BANK

37. How are the following compounds prepared?
- a) Mandelic acid b) Salicylic acid c) Cinnamic acid d) Phtahalic acid
38. Discuss effects of substitution on acidity of aromatic acids
39. Write preparation, properties and applications any three dicarboxylic acids
40. How are aliphatic and aromatic acids prepared? Describe its important reactions

Unit IV: DERIVATIVES OF CARBOXYLIC ACIDS AND CARBOHYDRATES

41. Enumerate the mechanism of trans esterification.
42. Explain the concept of mutarotation.
43. Draw open and cyclic structure of glucose.
44. Explain the method of ascending synthesis of Carbohydrates.
45. Write a note on Acid catalyzed esterification mechanism.

Unit V: NITROGEN CONTAINING ORGANIC COMPOUNDS

46. Write the preparation and important reactions of aniline
47. Give the preparation and properties of naphthalane
48. What products are obtained by reduction of nitrobenzene under different conditions?
49. Explain the following facts:
- a) Nitro group (-NO₂) is a meta director
- b) Nitro group is a deactivator
50. Discuss the effects of substituents on the basic character of amines

Section C (10 mark Questions)

Unit I: HYDROXY COMPOUNDS

51. Explain the preparation and properties of alpha and beta Naphthols
52. Explain the mechanism Nitration and Sulphonation reaction of aromatic compounds

Unit II: ETHERS, ALDEHYDES AND KETONES

53. Explain the mechanism of reaction of HCN and alcohols with aliphatic and aromatic aldehydes.
54. Write a detailed note on Benzoin and Perkin reations.

Unit III: CARBOXYLIC ACIDS



SAIVA BHANU KSHATRIYA COLLEGE

(Aruppukottai Nadargal Uravinmurai Pothu Abi Viruthi Trustuku Pathiyapattathu)

ARUPPUKOTTAI

DEPARTMENT OF CHEMISTRY

QUESTION BANK

55. Give the preparation of cinnamic acid, coumarin, salicylic acid, anthranilic acid and mandelic acid
56. Write the preparation of oxalic, malonic, succinic, glutaric, adipic and phthalic acids

Unit IV: DERIVATIVES OF CARBOXYLIC ACIDS AND CARBOHYDRATES

57. Write acidic and alkaline esterification mechanism.
58. Explain the structure of Sucrose and maltose.

Unit V: NITROGEN CONTAINING ORGANIC COMPOUNDS

59. Give the preparation and properties of α -naphthylamine
60. Discuss the preparation, properties and uses of benzenediazonium chloride