Organic chemistry -1 B pharm sem-2 Question bank

10 MARKS QUESTIONS

1. Explain the reaction and mechanism of Perkin condensation and Aldol Condensation
2. What are elimination reactions? Discuss the kinetics, mechanism, orientation and reactivity of E2 reaction.
3. Explain kinetics, mechanism, stereochemistry and reactivity of SN2 reaction.
4. Explain the mechanism of Benzoin condensation and Cannizzaro reaction.
5. Define elimination reaction. Discuss the Kinetics and mechanism of E1 and E2 Reaction with suitable example.
6. (a)Give any three methods of preparation of alkanes. (b) Explain mechanism of Halogenation of alkanes.
7. (a) Explain the factors affecting SN, & SN, reactions. (b) Enlight the concept of Rearrangement of carbocation with suitable examples
8. Explain kinetics, mechanism, stereochemistry and reactivity of SN, reaction.
9. Explain the mechanism of Benzoin condensation and crossed Cannizzaro Reaction
10. What are elimination reactions? Discuss the kinetics, mechanism, orientation And reactivity of E, reaction.
11. What are addition reactions? Explain the mechanism of electrophilic and free Radical addition reactions of alkenes with the suitable example.
12. Describe the reaction mechanism of Perkin and Benzoin condensation.
13. Discuss the mechanism, stereochemistry and kinetics involved in bimolecular Nucleophilic substitution reaction by selecting an appropriate example.
14. Give any four general methods of preparations and four chemical reactions for Carbonyl compounds
15. Explain the mechanism of Perkin condensation and crossed aldol Condensation.
16. Discuss the mechanism, stereochemistry and kinetics involved in unimolecular Nucleophilic substitution reaction by selecting an appropriate example
17. What happens when propene is treated with hydrogen bromide? Discuss the Mechanism involved in the presence and absence of peroxide.
18. A) Define and classify carbocation. Add a note on stability of carbocation. B) Differentiate between SN, & SN, reactions.

5 MARKS QUESTIONS

1. What is Aldol condensation? Explain ita mechanism
2. Why carboxylic adds are acidic in nature? Wilte the effect of Electron Withdrawing groups on acidity.
3. Explain the effect of substituents on acidity of carboxylic acids.
4. What is hybridization? Write a note on SP3 hybridization in alkanes.
5. What are aliphatic amines? Explain any three chemical reactions of aliphatic amines.
6. Discuss the mechanism and stereochemistry of SN2 reaction.
7. Explain the reaction and mechanism of Benzoin Bcondenreactio
8. Give the IUPAC name of (a) Acetones (b) Acetic acid (c) Neopentane (d) Formaldehyde e) Isobutane
9. What are carbonyl compounds? Give any three general reactions of ketones
10. Give any four methods of preparation of alkenes.
11. Give the structure of (a) 2-chloro pentane (b) Hexenal (c) tertiary-butyl chloride) (d) opentyl bromide e) 3-chloro hex-1-yne
12. Explain the reaction mechanism involved in crossed aldol condensation
13. Explain the basicity of aliphatic amines. Describe the effect of substituents on Basicity
14. Write the general rules for IUPAC nomenclature of alkanes
15. What are alkyl halides? Discuss any three general methods of preparation for Alky! Halides
16. What is Isomerism? Discuss Structural isomerism with examples
17. What is hybridization? Write a note on SP2 hybridization in alkenes,
18. Discuss the mechanism and stereochemistry of SN1 reaction.
19. Give any four chemical reactions of alkyl halides.
20. Explain the reaction and mechanism of Perkin condensatihalide
21. Give any four methods of preparation of alkenes
22. Carboxylic acids are acidic in nature, Why? Chloro acetic acid is more acid Than acetic acid. Give reason.
23. Define and classify carbocations. Write a note on stability of them.
24. What are alphatic amines? Discuss any three general method of preparation for aliphatic amines.
25. Give the mechanism involved in the electrophilic addition reactions of conjugated dienes.
26. What are carbonyl compounds? Describe any two methods of preparation for aldhydes and ketones
27. Define hybridization? Explain SP3 hybridization in ethane.
28. How do you distinguish primary, secondary and tiary alcohols by chemical test
29. Explain the reaction and mechanism of Cannizzaro reaction
30. Write the kinetics and mechanism of E1 reaction
31. Explain lonisation of carboxylic acid and write the structure of carboxylate Anion.
32. Give the structure of (a) 2,2-dimethyl propane (b) 3-chloro pentane-2-one (c) 1,3- butadiene (d) Ethyl methy ketone e)2-bromo-3-methyl hexane
33. Discuses any four chemical reactions of aliphatic amines.
34. Enlist the different types of hybridization in carbon compounds and explain any one type.
35. Write a note on Free radical substitution reaction of alkanes.
36. Discuss any four general methods of preparation of alcohols
37. Write the mechanism of 1,2 and 1.4 addition reactions of conjugated dienes
38. Discuss any four general methods of preparation of alkyl halides
39. Explain the reaction and mechanism of Cannizzaro reaction
40. Explain the orientation and mechanism of E2 reaction.
41. Give any four qualitative tests for alcohol
42. Enlight the concept of Rearrangement reaction of carbonation with suitable example.
43. Explain the mechanism of Aldol condensation
44. What is peroxide effects? Explain its mechanism
45. What are alkyl halides? Give any three chemical reactions of alkyl halides.
46. What are alcohols? Give any three general methods of preparation of alcohols.
47. What are carboxylic acids? Discuss any three general method of preparation of carboxylic acids.
48. Explain the reaction and mechanism of Cannizzaro reaction
49. Write any two chemical tests to distinguish primary, secondary and tertiary amines,
50. Explain the reaction and mechanism of Aldoi condensation
51. Explain the mechanism of Benzoin condensation
52. Discuss any four chemical reactions of carboxylic acids.
53. Discuss any four general method of preparation for aliphatic amines.
54. Give the IUPAC name of (a) Formamide (b) Ethyl acetoacetate (c), Diethyl ether (d) Methanol e) acetaldehyde

2 marks

1. Write about Saytzreffs rule
2. Give the structure and use of Ethylchloride and Chloroform.
3. Define electromeric effect with an example.
4. Write the structure and uses of formaldehyde and paraldehyde
5. Write any two qualitative tests for carboxylic acids
6. Define Chain isomerism with example
7. Write the structure and IUPAC name of a) Formic ackd b) Neopentane
8. Write a note on allylic rearrangement.
9. Write the structure and uses of acetic acid and lactic acid
10. Write the structure and uses of oxalc acid and tartaric acid
11. Write a method for the conversion of carboxylic acid to acid halide.
12. Define metarmerism with example
13. Give the reason why Irimethylamine is less basic than dimethyl amine.
14. Write a note on ozonolysis with examples
15. Give the structure and use of Trichloroethylene and Dichloromethane
16. Write the structure and uses of acetone and chloralhydrate
17. Write any one qualitative test for benaldehyde and paraldehyde
18. Write the structure of a) Acetamide b) Acetophenone
19. Write the structure of a) 1,3- butadiene b) 2,4,6-tribromo aniline
20. Write a note on allylic rearrangement.
21. Write any two qualitative test for amines
22. How do you differentiate aldhydes and ketones by chemical test
23. Write any two qualitative tests for amides
24. Write the structure and uses of tartaric acid and citric acid
25. Write the structure and IUPAC name of a) Isopropyl alcohol b) Ethyl Acetoacetate
26. Give an example of Diel’s alder reaction
27. Write the uses of paraffins
28. Give the structure and use of Tetrachloroethylene and Tetrachloromethane
29. Explain the stability of alkene with example
30. Give the structure and use of lodoform and chloroform
31. Write the structure and uses of succinic acid and oxalic acid
32. Write the structure and uses of benzaldehyde and paraldehyde
33. Write the structure and uses of ethanolamine and amphetamine
34. Enlist evidences for E1 reaction
35. Give an example of Diel’s alder reaction
36. Give the structure and use of Chlorobutanol and Glycerol
37. Define functional isomerism with example.
38. Write any one qualitative test for vaniliin and acetone
39. Write the structure and uses of cinnamaldehyde and paraldehyde
40. Give one example for rearrangement of carbocation
41. Why polysubstituted alkenes are more stable than monosubstituted
42. Write the structure and uses of vanillin and benzaldehyde
43. Write the structure and uses of acetone and chloralhydrate
44. Explain why methyl amine is stronger base then ammonia
45. What is esterification? Give reaction.
46. Write the structure of a) 2-broma 3-methyl hexane b) Methanol,
47. What is keto-enol tautomerism? Give example.
48. Write the structure and IUPAC name of: a) tert-Butyl chloride b) Formamide.
49. Write any one qualitative test for cinnamaldehyde and paraldehyde
50. Write any two qualitative tests for esters
51. What are paraffins? Give two examples.
52. Write the structure and uses of ethylenediamine and amphetamine.
53. Give the structure and use of Ethyl alcohol and Benzyl alcohol
54. Write the structure and uses of benzyl benzoate and dimethyl phthalate
55. Write the structures of (a) 2 2-Dimethyl propane (b) 3-Chloro pentanone.
56. Enlist the different types of structural isomerism Write any one qualitative test For formaldehyde and paraldehyde
57. Why trichloro acetic acid is more acidic then acetic acid
58. Write the structure and uses of salicylic acid and benzoic acid
59. Write any two qualitative test for amines