

Saraswathi Vidya Bhavan's College of Pharmacy

Sample viva questions Subject: Pharmaceutical Chemistry Lab-II

Final year B. pharmcay (SEM-VIII) CBCS

Question number	Question
1	Define reduction and give any three examples of reducing agents.
2	Write balance chemical equation involved in synthesis of PABA
3	Explain role of ammonia used in synthesis of PABA
4	define isoelectric pH / point
5	Give the structures of ionized form of PABA in acidic, alkaline and at isoelectric PH
6	Give the name of reactant and reagent used in synthesis of PABA
7	Give uses of PABA
8	Theoretically how many mole of tin is needed for the reduction of one mole of PABA
9	Give the name of intermediate obtained during reduction of p-nitro benzoic acid to PABA
10	How many electrons and protons are required during reduction of p-nitro benzoic acid to PABA
11	Give the name of reagent used for precipitation of PABA
12	Give the name of reactant and reagent used in synthesis of dihydropyrimidinone derivative
13	Give advantages of green method over traditional / conventional method for synthesis Dihydropyrimidinone derivative
14	Justify α -carbon in EAA is acidic
15	Classify reagents used in synthesis of dihydropyrimidinone derivative as electrophile or nucleophile based on reaction mechanism.
16	Give IUPAC name and structure of product obtained by reaction of Ethylacetoacetate, Benzaldehyde and Urea
17	Define limiting reagent
18	Find limiting reagent for synthesis of dihydropyrimidinone derivative from benzaldehyde (1.1 g), ethyl acetoacetate (1.3 g) and urea (0.7 g) (Given Mol. Wt. of benzaldehyde: 106, Mol. Wt. of EAA: 130, Mol. Wt. of urea:60, density of benzaldehyde: 1.04 g/cm ³ and density of EAA;1.02 g/cm ³)
19	What is Conrad-Limpach-knorr quinoline synthesis.
20	Give the IUPAC name of 4-Methyl Carbostryl
21	Give uses of 4-Methyl Carbostryl
22	Give the name of kinetic and thermodynamic controlled product for Conrad-Limpach-knorr quinoline synthesis.
23	Explain the formation of kinetic control product from EAA and a aniline
24	Explain the formation of thermodynamic controlled product from EAA and aniline
25	Explain thermodynamic and kinetic reaction control in Conrad-Limpach-knorr quinoline synthesis

26	Give the name of reactant and reagent used in synthesis of 4-Methyl Carbostryl.
27	Explain formation of Acetoacetanilide from EAA and aniline
28	Explain role of Conc. H ₂ SO ₄ used in synthesis of 4-Methyl Carbostryl
29	Draw structure of EAA and give name of two reactive functional group present in EAA. Explain difference in reactivity of these two functional groups.
30	Give the name of reactant and reagent used in synthesis of Hippuric Acid.
31	Explain the reactivity (towards nucleophile) of following functional derivative carboxylic acid Acyl chloride, anhydride, ester and amide
32	Explain reactivity (towards nucleophile) of functional derivative carboxylic acid by using concept of good leaving group.
33	Give the name of functional derivative carboxylic acid used in synthesis of amide.
34	Give the name of leaving groups in of following functional derivative carboxylic acid and arrange them in increasing order of basicity. Acyl chloride, anhydride, ester and amide
35	Define recrystallization.
36	Explain the role of activated charcoal used in recrystallization with mechanism.
37	Explain difference in reactivity of benzoic acid and benzoyl chloride used during synthesis of amide.
38	Explain role NaOH used in synthesis of Hippuric Acid.
39	Calculate theoretical yield of PABA
40	Give the name of product synthesized by nucleophilic acyl substitution reaction
41	Explain first step involved in the reaction mechanism of nucleophilic acyl substitution reaction (hint: benzoylation of glycine)
42	Give IUPAC name of resacetophenone.
42	Give the name of reactant and reagent used in synthesis of resacetophenone.
44	Explain role of zinc chloride used in synthesis of resacetophenone.
45	Give the name of product synthesized by Friedel Crafts acylation reaction
46	What is Friedel Crafts acylation reaction?
47	Explain orientation of resorcinol towards electrophilic aromatic substitution reaction
48	Justify: resorcinol is more reactive than benzene towards Friedel Crafts acylation reaction
49	Give name of two products that are synthesized by rearrangement reaction.
50	Give name of two products that are synthesized by substitution reaction.
51	Suggest various reducing agents for reduction of nitrobenzene to aniline.
52	Give reaction mechanism involved in synthesis of 4-methyl Carbostryl.
53	What is difference between Hofmann degradation and Hofmann elimination
54	Explain principle of recrystallization
55	Calculate % practical yield if 4 gm of p-nitro benzoic acid gives 2.5 gm of PABA.
56	Explain different methods for inducing crystal formation
60	Explain solvent selection step in recrystallization.
61	What is Benzilic acid rearrangement reaction?
62	What kind of migratory aptitude is followed in the Benzil-Benzilic acid rearrangement reaction
63	Name the chemical class of the reactant used in the synthesis of Benzilic acid

64	Explain the reaction involved in the synthesis of Benzilic acid
65	Name and explain the role of a base used in the synthesis of Benzilic acid
66	Explain the reaction mechanism involved in the Benzilic acid rearrangement reaction
67	Explain why the 1,2-diketone is attacked by a base in the reaction between Benzil with a base
68	What is the chemical name of the product formed in the Benzilic acid rearrangement reaction
69	If one of the benzene rings from the Benzil is replaced with a p-aminobenzene ring, what change will it make in the attack of a base on the 1,2-diketone
70	Draw the structure of Benzil and explain its reactivity with a base
71	What is Hoffmann degradation reaction?
72	What does the word degradation mean in the name of the Hoffmann degradation reaction
73	What chemical class of reactants are used in the Hoffmann degradation reaction?
74	Give any two applications of Hoffmann degradation reaction
75	What reactant is used in the synthesis of Anthranilic acid
76	What kind of rearrangement is seen in the Hoffmann degradation reaction
77	What kind of amides can undergo Hoffmann degradation reaction?
78	What is the final product of a Hoffmann degradation reaction?
79	Explain the reaction mechanism involved in the synthesis of Anthranilic acid
80	How is the product of Anthranilic acid separated from the reaction mixture?
81	How is Benzilic acid separated from the reaction mixture
82	What are the principles of Green chemistry?
83	What are the reactants used in the synthesis of Phenytoin?
84	Explain the mechanism involved in the synthesis of Phenytoin?
85	Explain advantages of using green method over conventional method of synthesis of Benzilic acid
86	What are the therapeutic applications of Phenytoin ?
87	How can we purify the crude product after its synthesis?
88	How is the selection of solvents done for recrystallization of crude product
89	What is the role of Charcoal in the recrystallization process?
90	Explain the assembly of Reflux apparatus