

Questions (Polynuclear hydrocarbons & heterocycles)  
& Active methylene compounds

Q1 The electrophilic substitution occurs preferentially at 2-position in furan

Q2 Pyridine undergoes nucleophilic substitution rxn at 2-position.

Q3 Explain why pyridine is more basic than pyrrole

Q4 Explain briefly the Lambert-Beer law.

Q5 Explain why the C-C bond length in naphthalene is shorter than the C-C bond length

Q6 Explain Haworth synthesis of naphthalene

Q7 Discuss the mechanism of Claisen condensation.

Q8 How will you prepare the following from ethyl acetoacetate

1) Adipic acid

2) Crotonic acid

3) Succinic acid

4) 2-Ethylbutanoic acid

5) Pentan-2,4-dione

Q9 Give the proof for the presence of two fused rings in naphthalene.

Q10 Why electrophilic attack on naphthalene is favoured at 1-position.

Q11 What is tautomerism & how does it differ from resonance

Q12 Pyridine is less basic than aliphatic amines but more basic than aniline. Explain.

Q13 Arrange pyrrole, indole and furan in increasing order of their basic character also give suitable reason for same.

Q14 Explain Haworth's Synthesis, for anthracene.

Q15 Why, electrophilic substitution reactions in five membered aromatic heterocyclic compounds are preferably favoured at 2-position and not at 3-position?

Q16 Draw the resonating structures of anthracene.

Q17 Naphthalene is more reactive than benzene towards electrophilic substitution reaction.

Q18 furan undergoes Diels Alder reaction, whereas pyrrole and triophene do not.

Q19 Complete the rxn's

