OC-II-Lab Question Bank for recrystallization Dr. Nutan Rao

1. What is recrystallization?
2. Which type of impurities would be removed during recrystallization?
3. Enlist the criteria for selection of solvent for recrystallization
4. Enlist different techniques adapted for inducing crystallization process.
5. What is gravity filtration? When do you use it during recrystallization?
6. What is vaccum filtration? Which step do you use it during recrystallization?
7. Explain the role of following during recrystallization
   a. Conical flask & not beaker
   b. Hot conditions during filtration
   c. Fluted filter paper
   d. Charcoal
   e. Slow cooling
   f. Less amount of solvent
8. What is solvent pair? Give examples.
9. Which solvent will you prefer for recrystallization if the solubility profile of compound is same.
   a. Ethanol , Ether
   b. Ethanol , Methanol
   c. Benzene , Acetone
   d. Water , Ethanol
   e. Toluene, DMF
   f. Acetone, Chloroform
10. Enlist the steps involved in recrystallization process.
11. Explain hot filtration in detail.
12. What is mother liquor?
13. What is second crop? Comment on its purity.
14. What is good & bad solvent?
15. How do you proceed with mixed solvent or solvent pair recrystallization?

(16) State True or False:

(1) Solvent for recrystallization should dissolve the desired compound at room temperature

(2) After hot filtration, fast cooling gives pure crystals.

(3) Solvents in solvent pair should be immiscible with each other.

(4) Ethylacetate & water can be used as a solvent pair.

(5) Ethylacetate and hexane can be used as a solvent pair.

(6) Charcoal adsorbs only coloured impurities.

(7) Solvent selected for recrystallization should be such that it dissolves impurities at all temperatures or keeps them undissolved at all temperatures.

(8) Vaccuum filtration is used for hot filtration.

(9) Gravity filtration is used for cold filtration.

(17) How do you calculate % practical yield of recrystallized product?

(18) What are the sources of losses during recrystallization OR Why the % practical yield is never 100%.