Q. 1. What is Analytical Chemistry and Drug Analysis?

Ans. Analytical Chemistry deals with the theory and practice of methods to determine the composition of matter. Drug Analysis deals with the estimation of purity and quality of drugs and fine chemicals which are used in pharmaceutical preparations. It also deals with the analysis of medicinal agents and their metabolites found in animals or human body.

Q. 2. What is Quality Control process?

Ans. Quality control process deals with batch to batch uniformity of a product; so as to check that the final product has desired characters like identity, purity, potency, uniformity, safety, efficacy and stability within the established levels which meet all the legal, professional and company standards.

Quality control includes packing, storing in a proper manner so as to retain the original properties of a product, labeling and describes product efficiently in all aspects.

Q. 3. Differentiate between Qualitative and Quantitative Analysis.

Ans. Qualitative analysis deals with the identification i.e. what elements and compounds are present in a sample by using techniques like Infra Red, Nuclear Magnetic Resonance spectroscopy etc.

Quantitative Analysis deals with the determination of how much of a particular substance is present in sample. Analyte can be classified into 3 based on the % in sample.

(a) Major constituent >1%
(b) Minor constituent 0.01 – 1% of sample
(c) Trace constituent < 0.01%

Based upon size of sample for analysis quantitative analysis can be classified as:-

Sample weight available for analysis	> 0.1 g	– Macro
	10 to 100 mg	- Semi Macro
	1-10 mg	- Micro
	1 μg = 10^{-6}g	-Ultra micro Analysis