Control of Microorganisms

Start with some definitions

1. Sterilization - destruction or removal of all living organisms. Technically it is wrong to say that something is almost or relatively sterile.
2. Disinfectant - an agent that kills the growing forms of pathogens (disease producers). A disinfectant will not necessarily destroy the spore formers and it is used on inanimate (nonliving) objects. Disinfecting agents should be evaluated under the identical or comparable conditions in which they will actually be used.
3. Antiseptic - an agent which kills or inhibits microorganisms and is nontoxic when applied to humans dermally.
4. Decontaminant - an agent which achieves the disinfection and/or removal of toxic materials from an area. Toxins decontaminated include bacterial toxins and chemical toxins. In certain instances we use decontamination to rid an area of ionizing radiation.
5. Germicide - any chemical agent which kills microorganisms and could be either an antiseptic or a disinfectant. A very general term.
6. Bactericidal - an agent capable of killing bacteria. Remember from our discussion on bacterial growth phases that the exponential death of a bacterial population is essentially the inverse of their exponential growth pattern.
7. Bacteriostatic - an agent preventing or inhibiting bacterial growth and reproduction. Some compounds are bacteriostatic at low concentrations and bactericidal at higher concentrations.
8. Pseudomonicidal - an agent capable of killing members of the genus *Pseudomonas*. This addresses a very specific action.
9. Fungistatic - an agent preventing or inhibiting fungal growth and reproduction. This should stop the growth of yeasts and molds.
10. Fungicidal - an agent capable of killing fungi.
11. Viricidal - an agent capable of destroying (killing/complete inactivation) viruses. This term is used for industrial purposes. It is a misnomer however, since viruses are not alive.

See Antimicrobial Agents handout (starts with killing of organisms)