Chapter 1

Definitions

Sterilisation

Sterilisation is a process by which all living micro organisms including spores are destroyed. This can be achieved by:

- Autoclaving which involves using steam under high pressure. (15 pounds of pressure, time 30 minutes at 121^0C).
- Ethylene oxide which is usually used for instruments which are heat labile.
- Sporicidal chemical such as 2% activated glutaraldehyde (bacterial spores). It is used for sterilising sharp instruments.
- Formaldehyde is used only in case where steam sterilisation is not available or not suitable.
- Hot air oven is used to sterilise glassware, some metals, and toughened plastic. It is used more in the laboratories.
- Ionising by gamma rays which is more common in industries.

Disinfection

Disinfection is a process by which the number of viable organisms is decreased. However, the spores are not killed. This can be achieved by:

- Low temperature steam at 73^0C for 10 minutes
- Boiling water
- Chemical disinfectants such as phenols, hypochlorite, iodine, alcohols (70% isopropyl alcohol) and quatenery ammonium compounds. It is not recommended for ophthalmic instruments.

Asepsis

Preventing wound contamination by ensuring that only sterile material makes contact with the wound and air borne infection transmission is minimised. Absolute sterility is not possible. Therefore, wherever needed aseptic measures are followed. The following are aseptic measures concerning the personnel, instruments and operation theatre complex.

- Precautions taken by the surgeon or paramedics prior to operating on a patient such as scrubbing, gowning and gloving.
- Maintenance of operation theatre environment which includes theatre cleaning, installation of appropriate air filters systems, adhering to policy of separation of sterile and unsterile articles and personnel.
- Preparation of instruments for sterilisation i.e. cleaning and packing.