Topic _____ Date __/__/__ Page No. _____

Bacteriology

Q1. Differentiate between Sterilization and disinfection

Disinfection	Sterilization
① Microorganisms (not including their spores) from surfaces or objects, inactivate viruses	① Whether harmful or not and their spores present on a surface or object.
② Phenolic disinfectants, heavy metals, halogens, bleach alcohols, hydrogen peroxide heating and pasteurization.	② Heat, chemicals, irradiation, high pressure and filtration.
③ Air disinfectants, alcohol aldehydes, oxidizing agents phenolics.	③ Steam, heating, chemical sterilization, radiation sterilization, Sterile filtration
④ Disinfection is used mostly to decontaminate surfaces and air.	④ Sterilization is used for food, medicine and surgical instruments.

Q2. List the methods of physical and chemical sterilization

Physical methods of sterilization

- Heat method of sterilization
  - (a) Moist heat methods
  - (b) Dry heat methods
- Radiation → (a) non-ionic (b) Ionizing radiation
- Filtration

(a) Membrane filters (b) Seitz filters

(c) Sintered glass filters
(d) Candle filters

Chemical Methods of Sterilization

① Methods of Sterilization of surgical instruments are Boiling, Incineration and Autoclave.

② Methods of Sterilization of glass ware are autoclave boiling and also the hot air oven.

③ Methods of Sterilization of water we use filtration and for other moist liquid materials autoclave.

④ For powders and other dry forms, it is hot air oven if thermo stable or gaseous methods and radiation.

⑤ Methods of Sterilization in hospitals are for surgical metallic instruments boiling, autoclave, incineration can be done. To prevent microbial contamination due to air. UV radiation lamps for Sterilization can be arranged at doors.

Q3. Mention some features of effective antimicrobial agents

→ Antimicrobial agents, any of a large variety of chemical compounds and physical agents that are used to destroy microorganisms or to prevent their development From a chemical standpoint, there are three basic chemical compositions used in carpet application. These are organo-phenols, organo-silanes and organometallics. They also can be combined with each other. Antibiotics are used against bacteria and antifungals are used against fungi. They can also be classified according to their function. Agents that kill microbes are microbicidal while those that merely inhibit their growth are called "Biostatic"