SEM-1 MICROBIOLOGY

SKILL ENHANCEMENT COURSE

Disinfection and Sterilization

SEC-DAS-116

CREDIT-02

UNIT -1 Introduction of Disinfection and sterilization

- Basics of disinfection, sterilization, sanitization, degermination, asepsis, antisepsis, bacteristatic, bacteriocidal.
- Factors influencing the effectiveness of antimicrobial treatments.
- Mode of action ofsterilization.
- Physical methods of sterilization: Temperature, Filtration,desiccation,osmotic pressure, Radiation
- Applications of sterilization:

UNIT -2 Control of microorganism by chemical Sterilization methods.

- Characteristics of an ideal antimicrobial chemical agents
- Chemical methods of disinfection: Phenolic compounds, Halogens, Alcohols and heavymetals
- Other chemical compounds as sterilisers i.e. detergents, quaternary ammonium compound, aldehydes and gaseous steriliser
- Chemotherapeutic agents: antibiotics and synthetic drugs.
- Applications of Disinfection

Practicals:

- Exhibition of normal Air Flora
- Exhibition of normal Skin Flora
- Exhibition and demonstration of hand washing.

References:

1. **Microbiology,**Pelczar Jr M. J., Chan E. C. S., Krieg N. R. 5th edition (1986), McGraw Hill Book Company NY
2. **Prescott, Harley, and Klein's Microbiology**, J. M. Willey, L. M. Sherwood, C. J. Woolverton, 7 th Edition (2008), McGraw Hill Higher Education- USA

Course specific Outcome

Disinfection and Sterilization Sem - 1

Students holding certificate of B.Sc with this course can handle and operate for thefollowing.

1. Sterilization of media , equipment and lab ware.
2. Disinfection procedure in hospitals and laboratories.
3. Knowledge of sterile environment and know how of microbial significance.