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Section	A
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Assignment	Microbiology

Q 1.

Ans. **Analytic**

Disinfection and sterilization are both decontamination processes. While disinfection is the process of eliminating or reducing harmful microorganisms from inanimate objects and surfaces, sterilization is the process of killing all microorganisms. That is the main difference between sterilizing and disinfecting.

As they are highly precise and based on advanced technology, analytical balances are explicitly used in laboratories for the effective completion of tasks like weighing test materials and sampling amounts, formulation, density determination, purity analysis, quality control testing, and material and conformance testing.

Autoclave Autoclaves are mostly used for the sterilization of medical or laboratory equipment with the capacity of sterilizing a large number of materials at once.

Bunsen burner It is commonly used for processes like sterilization, combustion, and heating. In medical or microbiology laboratories, it is commonly used for micro-loop sterilization.

Centrifuge The primary application of a centrifuge is the separation of particles suspended in a suspension. It can be used for the separation of cell organelles, nucleic acid, blood components, and separation of isotopes.

Colony counter: colony counter is primarily used for counting the number of colonies present on a culture plate to estimate the concentration of microorganisms in liquid culture.

Deep freezer: A deep freeze can be used for the preservation of different things used in the laboratories for a very long period of time. Deep freezers are used in laboratories to store and preserve medical equipment, food items, blood samples, medicines, and injections,

Homogenixer A homogenizer is primarily used to disrupt cells to acquire cell organelles for different microbiological processes.

Hot plate In a laboratory, hot plates are used to heat glassware and their components

Incubators Incubators can also be used in the steam cell research area.

Microscope Based on the type of microscopes, different microscopes are used for different purposes.

They are primarily used for the observation of minute particles which cannot be observed with naked eyes.

Ph meter A pH meter is primarily used to measure the acidity of pharmaceutical chemicals, cultures, soil, and water treatment plant.

Q 2.

Ans: Sterilization can be achieved through various means, including heat, chemicals, irradiation, high pressure, and filtration. Sterilization is distinct from disinfection, sanitization, and pasteurization, in that those methods reduce rather than eliminate all forms of life and biological agents present.

Methods Of Disinfection And Disinfectant Agents Used. Generally, two methods of disinfection are used: chemical and physical. The chemical methods, of course, use chemical agents, and the physical methods use physical agents. Historically, the most widely used chemical agent is chlorine

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