



UOE027 PHARMACEUTICAL MICROBIOLOGY

Course Code	Course Title	L	T	P	C	Exam	WT	Passing Min. (%)
UOE027	Pharmaceutical Microbiology	2	-	-	2	CA	20	50
						Sessional-1	30	
						Sessional-2	30	

Objectives:

Upon completion of this course the student should be able to:

CLO1. Demonstrate³ the basic concept, types of microorganism and equipments/instruments used in microbiology

CLO2. Evaluate⁵ microbes type, count, growth, motility, isolation, using biochemical tests, culturing and staining techniques in microbiology.

CLO3. Measure⁶ the growth of microorganism in presence and absence of antibiotics.

CLO4. Perform and report⁶ sterility of pharmaceuticals and analysis of water.

Description:

Unit 1

Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.

Sterilization of glassware, preparation and sterilization of media.

Unit 2

Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.

Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).

Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.

Unit 3



Microbiological assay of antibiotics by cup plate method and other methods

Motility determination by Hanging drop method.

Sterility testing of pharmaceuticals

Unit 4

Bacteriological analysis of water

Biochemical test

Recommended Books: (Latest Editions)

1. **Prescott and Dunn's Industrial Microbiology.** Delhi: CBS Publishers & Distributors
2. **United State Pharmacopoeia (USP).**
3. Bergey DH, Breed RS, Murray EGD, Hitchens AP **Bergey's Manual of Determinative Bacteriology.** Baltimore: The Williams & Wilkins Co.
4. Anonymus. **Indian pharmacopoeia.** Ghaziabad: Indian Pharmacopoeia Commission Ministry of Health & Family Welfare, Govt. of India
5. Anonymus. **British pharmacopoeia.** UK: The British Pharmacopoeia Commission (BPC), The Department of Health and Social Care



Sanjay Ghodawat University Kolhapur

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