

# UGHSCDS E1751(2): (1987): Food Microbiology

Credits(Theory:4, Practical:2)

## Unit I Introduction

- Brief history of Food Microbiology
- Occurrence, Morphology and economic importance of:
  - Bacteria
  - Moulds
  - Yeast.

## UNIT II FOOD SPOILAGE

- General principles underlying microbial spoilage of foods
- Factors effecting growth of microbes in food.
- Sources of Contamination, causes of food spoilage.
- Criteria for judging fitness of food for consumption.

## UNIT III Food Borne Infections and Intoxication

Symptoms, modes, sources, transmission and control of following:

- Salmonellosis
- Botulism
- Shigellosis
- Listeriosis
- Aflatoxicosis
- Ergotism
- Lathyrism
- Epidemic dropsy

## UNIT IV Control of Microorganisms

- By Use of high temperature(Sterilization and pasteurization)
- By use low temperature(Refrigeration and Freezing)
- Drying and Dehydration
- Irradiation and use of chemical preservatives

## PRACTICALS:

1. Morphological study of various prepared slides :
  - Bacteria(Bacillus, Coccus, vibrio, spirilla)
  - Yeast(Reproductive and Vegetative)
2. Sterilization of various equipments /glassware used for microbiological work.
3. Preparation of bacterial smear
4. Gram staining of Bacteria

## References

- Frazier, W.C & Westhoff, D.C.(1988):4<sup>th</sup> Edition, Food Microbiology, McGraw Hill Inc.
- Jay James, M.(1986):3<sup>rd</sup> Edition, Modern Food Microbiology, Van.Nostrand Reinhold Company Inc.
- Benson. Harold, J.(1990):Microbiological Applications, Wn.C. Brown Publishers, U.S.A.