**Food and Industrial Microbiology BVOMLT-501**

UNIT I

Food as a substrate for microorganisms, Nutritive value of food stuffs, effect of Hydrogen ion concentration (pH), moisture requirement on food, Important food borne diseases viz. Staphyococcal intoxication, Botulism. Salmonellosis, Shigillosis, Qualitative and Quantitative analysis of food components (proteins, fats, lipids, carbohydrates), Microbiological examination of food products including dairy products, food poisoning caused by bacteria and fungi.

UNIT II

Contamination, Preservation and Spoilage of Food

Contamination, preservation and spoilage in various foods viz. cereals & cereal products (cereal grains, flour, bread, pasta, macroni), sugars & sugars products (Maple, Syrup, Honey, Candy), Vegetables & Fruits, Meat (Fresh meat, fresh beef, hamburger, fish), Milk and Milk products (cheese, butter).

UNIT III

Production Strains Isolation and Screening Techniques

Production strains Isolation & screening techniques, preservation and genetic modification of Industrial Microorganisms, Fermentation Media, characteristics of ideal production media, common substrates used in ideal fermentations, Batch and continuous fermentations.

UNIT IV

Fermentation Products

Yeasts (Baker’s) and its uses, fermentation of Beer, Wine and Alcohol, Production of organic acids viz. acetic acid, lactic acid, propionic and butyric acid and mixed acids. Mass transfer in aerobic fermentation.