2021-2022

MICROBIOLOGY

Assignments

Introductory to microbiology and microbical diversity

Unit-I
classification of microorganisms- Haeckel's three kingdoms

Textbook

Unit-II
Principles of microscopy

practical

Unit-III
Nutritional types of bacteria

Internet

Unit-IV
Requirement for growth - Physical

Mo chart

Unit-V

Differentiation of prokaryotes and eukaryotes

Homework

Semester III

Microbial genetics and molecular microbiology

Unit- I

DNA and RNA as genetic material

Internet

Unit- II

DNA damage and repair mechanism

Textbook

Unit- III

Write a concept of gene

Homework

Unit - IV

What are type of genes

Chart

Unit - V

What are gene cloning methods

Innovative

Semester - V

3A. Microbial diagnosis in health Clinics

Unit - I

Describe the viral fungal and Protozoan Diseases

Internet

Unit - II

methods of transport of clinical samples to laboratory and storage

chart

Unit - III

Sample by staining - Gram stain ziehl-neelson staining for tuberculosis

Practical

Unit - IV

write a note down typhoid, dengue and Hiv Swine flu.

Homework

Unit- V

Determination of minimal inhibitory concentration (MIC)

Textbook

Semester - V

4A. Diagnostic microbiology

Unit-I

Study of causative organism and pathogenesis of bacterial.

Text book

Unit- II

transport of clinical samples to laboratory and storage

Practical

Unit- III

Preparation and use of culture media blood agar chocalate agar

practical

Unit- IV

What are serological methods and Explain the ELISA

Internet

Unit - V

agar dilution and application advantages and disadvantages of these methods

Homework

microbial physiology and Biochemistry

Unit-I

what are carbohydrates - classification of carbohydrates with examples

Textbook

Unit- II

Structure of DNA & RNA

chart

Unit- III

Lock and key hypothesis

Model

Unit- IV

TCA cycle, Electron transport chain and oxidative phosphorylation.

Homework

Unit - V

Lactic acid and ethanol fermentations

Internet

Immunology and medical microbiology

Unit - I
differences between primary and secondary lymphoid organs

Internet

Unit - II
types of Hypersensitivity with Examples

Textbook

Unit - III
General account on nosocomial infection

Homework

Unit - IV
Viral Diseases - hepatitis - A; AIDS

Practical

Unit - V
Principles of chemotherapy

food and industrial microbiology

Unit - I
food intoxication (botulism)

Textbook

Unit - II
fermented dairy foods - cheese and yoghurt

chart

Unit - III
Isolation and screening techniques

Homework

Unit - IV
Basic concept of design of fermenter

Model

Unit - V
what are microbial production of alcoholic

Practical

Industrial microbiology

cluster - I

Unit - I

Industrially important metabolites from microbes

Textbook

Unit- II

Types of fermenter - batch, continuous and fed batch

Model

Unit- III

Roles of microorganisms in bioleaching and textile industry

chart

Unit- IV

chemical composition of media and components of production.

Practical

Unit - V

Basic structure of bioreactor, types of bioreactor

Homework

Cluster - II food microbiology

Unit - I
food borne diseases (Salmonellosis and Shigellosis)

Textbook

Unit - II
General account of food Peservation

Internet

Unit - III
mechanism of acidic fermentation, Commer-cial vinegar Production Processing

Practical

Unit - IV
Radications of uv light

Homework

Unit - V

Common properties of probiotics and explain vitamin B_{12}

Internet

Cluster - III management of human microbial diseases

Unit - I
Definition and concept of health, disease infection, and pathogen

Textbook

Unit - II
Biological warfare and Biological weapons

Internet

Unit - III
Pathogenesis diagnosis, drug and inhibitors

chart

Unit - IV
avoidance of host defense mechanisms

Model

Unit - V

Epidemalogical investigations are to identify a disease

Homework