

SKILL ENHANCEMENT COURSE-I (SEC-I)

Dept. Microbiology: Osmania University

Proposed scheme for B.Sc Microbiology program under choice based credit system (CBCS)

With effect from 2020-21

Syllabus for B.Sc Microbiology

Code: BS, SEC-1

B.Sc II year: III Semester

Title: HAEMATOLOGY

2HPW-Credits-2

UNIT-1: INTRODUCTION TO BLOOD


Blood: definition, characters, composition. Collection of blood – capillary blood: from adults and infants, examinations employed. Venous blood: from adults and infants, examinations employed. Composition of blood (RBC, WBC, Plasma, Serum, Platelet cells), Staining of blood films. Total blood picture, Differential count. Blood grouping, Rh-typing. Haemoglobin: composition and normal values, haemoglobin estimation Anti-coagulants.

UNIT-2: BLOOD TRANSFUSION

Principles of blood transfusion, Donor screening – cross matching, collection of blood, preservation and storage. Precautions of handling blood and its products. Challenges in management of Hemophilia and Anaemia. General account on spread of diseases through blood and blood products. Coagulation mechanism: factors, bleeding time, clotting time. Haematological indices: packed cell volume. Erythrocyte sedimentation: principle – determination.

References:

1. Kawthalkar.Essentials of Haematology Paperback – 2013
2. Lokwani.D.P.The ABC of CBC Interpretation of Complete Blood Count and HistogramsPaperback – 2013
3. RamnikSood . Medical Laboratory technology Methods and Interpretation Jaypee Publications.
4. ShirishMKawthalkar. Essential Of Hematology. Jaypee Publications.


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SKILL ENHANCEMENT COURSE-III (SEC-3)

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Syllabus for B.Sc Microbiology

Code: BS, SEC-3

B.Sc III year: IV Semester

Title: MUSHROOM CULTIVATION

2HPW-Credits-2

UNIT-1

- Introduction to mushroom cultivation
- Importance and history of mushroom cultivation in India
- Global status of mushroom production
- Edible mushrooms (white button oyster, Paddy straw).
- Nutritional value and health benefits of mushrooms

UNIT-2

- Steps in mushroom cultivation
 - a. Selection of site and types of mushroom
 - b. Mushroom farm structure, design layout
 - c. Principle and techniques of compost and composting
 - d. Principle of spawn production
 - e. Casing and crop production
 - f. Harvesting and marketing
 - g. Entrepreneurship development in Mushroom cultivation
- Pest and pathogens of mushrooms
- Post harvest handling and preservation of mushrooms

Reference:

1. Mushroom cultivation in india by B.C.Suman and V.P. Sharma Published by Daya publishing house New Delhi.
2. Mushrooms Cultivation, Marketing and Consumption Manjit Singh Bhuvnesh Vijay Shwet Kamal G.C. Wakchaure Directorate of Mushroom Research (Indian Council of Agricultural Research) Chambaghat, Solan –173213 (HP)


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