

Add-On Advanced Diploma in Medicinal Chemistry

(Medicinal Plants and Their Chemistry)

SESSION: 2020-21

PAPER –I

MAXIMUM MARKS : 50

NUMBER OF UNIT :V

MANIMUM MARKS : 17

Unit – I

Antibiotics – Introduction, History of antibiotics, Classification of antibiotics

- Properties of useful antibiotics
- Types of antibiotics - Penicillin, Streptonujein, Erythromycin, Chloramphenicol, Tetrocyclines, Cephalosporins, Nystatin, Griseofulvin, Viomycin, Vanomyjain, Novobiocin, Cycloserine, Amphotericin- B
- Bacterial and fungal products useful as antibiotics

Unit-II

Plant allergens:- Introduction,-Types of allergens involved in

- i. Type - I hypersensitivity (Antibody mediated)
 - ii. Type II hypersensitivity- Rhinitis
 - iii. Type III hypersensitivity- pneumonitis,
 - iv. Type IV hypersensitivity- (Cell mediated)
- Precautions and therapy

Unit-III

Psychoactive Plants:- Introduction,

- Stimulants = Cocoa and cocaine, stimulating beverages, Tobacco and nicotine, Hazards of tobacco and smoking, cure the smoking habits.
- Hallucinogens - Peyote, Nutmeg, A mphetanines sacred mushrooms, lysergic acid derivatives, Ergot, Tropane alkaloids, Belladonna, Datura and allied genera, Marihuana
- Depressants- Alcohol, Alcoholic beverages, Effect of alcohol, Barbiturates, Tranquilizers

Unit- IV

Pharmacognosy and pharmacology of following plants : -

Withania somnifera- Ashwagandha, *Glycyrrhiza Glabra*- Mulathi

Terminalia arjuna- Arjun, *Terminalia chebula*- Harra

Terminalia bellarica- Baheda, *Andrographis paniculata*- Bhui-neem.

Unit -V

Pharmacognosy and pharmacology of following plant : -

Thuja occidentalis- Thuja, *Arnica montana* - Arnica

Gloriosa superba- Kalihari, *Allium sativum*- Lahsun,

Pongamia pinnata- Karanj, *Aegle marmelos*- Bel

DEPARTMENT OF BOTANY

Add-On course- Advanced Diploma in Medicinal Chemistry

(Medicinal Plants and Their Chemistry)

SESSION: 2020-21

PAPER –II

MAXIMUM MARKS : 50

NUMBER OF UNIT :V

MANIMUM MARKS : 17

Unit–I

***Plant Hormones :** Introduction, structure, types and role of following hormones, Auxins, Cytokinines, Gibberllines, Ethylens*

Unit- II

Biotechnology production of secondary plant metabolites

1. Tissue culture and secondary plant metabolites products
2. Production of pharmaceutical compounds
3. Evaluation of Antimicrobial and Antifertility activity.
4. Biological central on production of secondary metabolites
5. Growth regulators and secondary metabolites
6. Steroids
7. Ergot, Ergotism and Ergot alkaloids.

Unit -III

Role of medicinal plants for Heart and Respiratory Cystoms : Heart system, Hypotensive drugs, Antihypotensive drugs, Anti arrhythmic drugs, Vasopressor agents from plants, Anticoagulant drugs, Blood coagulant drugs.

Respiratory system: Introduction, Bronchodilators drugs, **Expectorants** and nucolytics drugs, Antitussive drugs, Drugs for cold remedies

Unit -IV

Antimalarials drugs of plant origin , Antidiabetic drugs from plants, Plants as source of traditional and modern drug for cancer , Anti ageing constituents of plant origin, Plant constituents in AIDS therapy

Unit- V

***Medicinal properties of Mushrooms:** Introduction,Chemical composition,Mushrooms in traditional medicine,Mushrooms in modern medicine, Anti tumour activities, Anti bacterial activities, Anti fungal activities, Anti viral activities, Poisonous mushrooms*

Practical Scheme 2020-21

Add-On Course Advanced Diploma in Medicinal Chemistry

(Medicinal Plants &their chemistry)

M.M: 50

1	Identification and uses of medicinal plants	08
2	Preparation of extract from aromatic plants	05
3	Preparation of herbal medicine	10
4	Spotting	10
5	Project work	07
6	Viva	05
7	Sessional	05