

SHAMBHUNATH INSTITUTE OF PHARMACY

Lecture Plan

for

SEMESTER: 5th, ACADEMIC SESSION: 2025-26



Subject: Pharmacognosy & Phytochemistry-II

Subject Code: BP504T

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Designation: Associate Professor

**DEPARTMENT OF PHARMACY
SHAMBHUNATH INSTITUTE OF PHARMACY-
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Unit	Topic	Lecture No.
I	Introduction about Pharmacognosy and Phytochemistry	L1
	Metabolic pathways in higher plants and their determination	L2
	study of basic metabolic pathways	L3
	Formation of different secondary metabolites through these pathways- Shikimic acid pathway.	L4
	Acetate pathways	L5
	Amino acid pathway	L6
	Study of utilization of radioactive isotopes in the investigation of Biogenetic studies.	L7
	Class Test-1	
II	General introduction, composition, chemistry & chemical classes, bio -sources, therapeutic uses and commercial applications of following secondary metabolites: Alkaloids	L8
	Vinca, Rauwolfia, Belladonna, Opium.	L9
	Phenylpropanoids and Flavonoids: Lignans, Tea, Ruta.	L10
	Steroids, Cardiac Glycosides & Triterpenoids:	L11
	Liquorice, Dioscorea, Digitalis.	L12
	Volatile oils: Mentha	L13
	Clove, Cinnamon, Fennel, Coriander.	L14
	Tannins: Catechu, Pterocarpus.	L15
	Resins: Benzoin, Guggul,	L16
	Ginger, Asafoetida, Myrrh, Colophony.	L17
	Glycosides	L18
	Senna, Aloes, Bitter Almond.	L19
	Iridoids, Other terpenoids & Naphthaquinones: Gentian	L20
	Artemisia, Taxus, carotenoids.	L21
	Class Test-2	
III	Isolation, Identification and Analysis of Phytoconstituents. Terpenoids	L22
	Menthol, Citral, Artemisin.	L23
	Glycosides: Glycyrrhetic acid & Rutin.	L24
	Alkaloids: Atropine	L25
	Quinine, Reserpine, Caffeine	L26
	Resins: Podophyllotoxin, Curcumin.	L27
IV	Industrial production, estimation and utilization of the following phytoconstituents: Forskolin	L28
	Sennoside	L29
	Artemisinin	L30
	Diosgenin	L31
	Digoxin	L32
	Atropine	L33
	Podophyllotoxin	L34
	Caffeine	L35
	Taxol	L36
	Vincristine and Vinblastine	L37
	Class Test-3	
	Basics of Phytochemistry: Modern methods of extraction	L37
	Modern methods of extraction	L38
	Modern methods of extraction	L39

V	application of latest techniques like Spectroscopy	L40
	application of latest techniques like Spectroscopy	L41
	Chromatography	L42
	Chromatography	L43
	Chromatography	L44
	Electrophoresis in the isolation, purification and identification of crude drugs.	L45
	Revision	L46
	Revision	L47
	Revision	L48