

PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY, PANIPAT



DEPARTMENT OF PHARMACY

Course: Bachelor in Pharmacy

LESSON PLAN

Faculty Name: Dr. Shiva TushirSubject Name: Pharmacognosy & Phytochemistry-IIClass: B. Pharmacy - 5th SemesterSubject Code: BP504T

Scope of the Subject: The main purpose of subject is to impart the students the knowledge of how the

secondary metabolites are produced in the crude drugs, how to isolate and identify and

produce them industrially. Also this subject involves the study of producing the plants and

phytochemicals through plant tissue culture, drug interactions and basic principles of

traditional system of medicine

Objectives: Upon completion of the course the student shall be able to:

- > To know the modern extraction techniques
- > Characterization and identification of the herbal drugs and phytoconstituents
- > To understand the preparation and development of herbal formulation.
- > To understand the herbal drug interactions
- > To carry out the isolation and identification of phytoconstituents

Number of Lectures: 45

Each lecture: 01 hour

Lecture No.	Particular	Remark/	
		Date	
UNIT-I : Introduction to Pharmacognosy:			
1.	Introduction to basic metabolic pathways		
2.	Detailed study of Shikimic acid pathway		
3.	Detailed study of Acetate malonate pathway		
4.	Detailed study of Acetate mevalonate pathway		
5.	Detailed study of Amino acid pathway		
6.	Introduction to radioactive isotopes		
7.	Investigation of Biogenetic studies		
8.	General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of Vinca & Rauwolfia		
9.	General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of Belladonna & Opium		
10.	General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of Lignans, Tea, Ruta		
11.	General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of Liquorice, Dioscorea, Digitalis		
12.	General introduction, composition, chemistry & chemical classes, biosources, therapeutic uses and commercial applications of Volatile oil- Mentha & Clove		

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36. Industrial production, estimation and utilization of Vincristine	36.	Industrial production, estimation and utilization of Vincristine	
37. Industrial production, estimation and utilization of Vinblastine	37.	Industrial production, estimation and utilization of Vinblastine	
38. Taditional methods of extraction	38.	Taditional methods of extraction	
39. Modern methods of extraction	39.	Modern methods of extraction	
40. Study of Spectroscopy techniques	40.	Study of Spectroscopy techniques	
41. Role of Spectroscopy techniques in Pharmacognosy	41.	Role of Spectroscopy techniques in Pharmacognosy	
42. Study of Chromatographic techniques	42.	Study of Chromatographic techniques	
43. Role of Chromatographic techniques in Pharmacognosy	43.	Role of Chromatographic techniques in Pharmacognosy	<u> </u>
44. Study of Electrophoresis	44.	Study of Electrophoresis	<u> </u>
45. Role of Electrophoresis in Pharmacognosy	45	Role of Electrophoresis in Pharmacognosy	<u> </u>

Dr Shiva Tushir **Teacher in-charge**

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Principal