



ROYAL COLLEGE OF PHARMACY

COURSE: DIPLOMA IN PHARMACY

LESSON PLAN

Name of faculty	
Discipline	D. pharmacy
Year	2nd
subject	Community pharmacy and management

Scope: This course is designed to impart knowledge on the medicinal uses of various drugs of natural origin. Also, the course emphasizes the fundamental concepts in the evaluation of crude drugs, alternative systems of medicine, nutraceuticals, and herbal cosmetics.

Course Objectives: This course will discuss the following aspects of drug substances derived from natural resources.

1. Occurrence, distribution, isolation, identification tests of common phytoconstituents
2. Therapeutic activity and pharmaceutical applications of various natural drug substances and phytoconstituents
3. Biological source, chemical constituents of selected crude drugs and their therapeutic efficacy in common diseases and ailments
4. Basic concepts in quality control of crude drugs and various system of medicines
5. Applications of herbs in health foods and cosmetics

Course Outcomes: Upon successful completion of this course, the students will be able to

1. Identify the important/common crude drugs of natural origin
2. Describe the uses of herbs in nutraceuticals and cosmeceuticals
3. Discuss the principles of alternative system of medicines
4. Describe the importance of quality control of drugs of natural origin

Theory Lecture No.	Theory topics	Practical lecture no.	Practical topics	Remarks / date
		Unit -1:- Introduction (2 hrs)		
1	Definition,history,present status of Pharmacognosy	1	To study morphological identification of ispaghula.	
2	Scope of Pharmacognosy			
		Unit -2:-Classification of drugs:(4 hrs)		
3	Alphabetical and Taxonomical	2	To study morphological identification of senna.	
4	Morphological land Pharmacological			
5	Chemical Classification			
6	Chemo-taxonomical Classification			
	CLASS TEST			
		Unit -3 :-Quality control of crude drugs: (6hrs)		
7	Introduction to Adulteration	3	To study morphological identification of coriander.	
8	Different Methods of Adulterations			
9	Types of Adulterants and effects on drug quality			
10	Evaluation of Crude drugs			
11	Evaluation of crude drugs			
12	Assignment and Class test	4	To study morphological identification of fennal.	
Unit - 4:-Brief outline of volatile oil : (6hrs)				
13	Alkaloids types and classification			
14	Isolation and identification of Alkaloids.			
15	Terpenoids types and classification	5	To study morphological identification of cardamom.	
16	Glycosides types and classification and Properties			
17	Volatile oils, tannins			
18	Resins and its properties.	6	To study morphological identification of Nutmeg.	
	CLASS TEST			

Unit - 5:- Biological source, chemical constituents and therapeutic efficacy of the following Categories of crude drugs. (8 hrs)				
19	Biological source, chemical constituents and therapeutic efficacy of The Laxatives Aloe, Castor oil, Ispaghula, Senna	7	To study morphological characters of black pepper.	
20	Biological source, chemical constituents and therapeutic efficacy of The Cardiotonic Digitalis, Arjuna			
21	Biological source, chemical constituents and therapeutic efficacy of the Carminatives and G.I. regulators Coriander, Fennel, Cardamom, Ginger, Clove			
22	TEST			
23	Biological source, chemical constituents and therapeutic efficacy of The Carminatives and G.I . regulators Black Pepper, Asafoetida, Nutmeg, Cinnamon			
24	Biological source ,chemical constituent and therapeutic efficacy of The Astringents Myrobalan, Black Catechu, Pale Catechu			
25	Biological source, chemical constituents and therapeutic efficacy of the Drugs acting on nervous system Hyoscyamus, Belladonna, Ephedra, Opium	8	To study morphological identification of cinnamon.	
26	TEST			
27	Biological source , chemical constituent sand therapeutic efficacy of The Drugs acting on nervous system Tealeaves, Coffee seeds, Coca			
28	Biological source, chemical constituents and therapeutic efficacy of the Anti-hypertensive Rauwolfia			
29	Biological source, chemical			

	constituents and therapeutic efficacy of the Anti-tussive Vasaka, Tolu Balsam			
30	TEST			
31	Biological source, chemical constituents and therapeutic efficacy of the Anti-rheumatics Colchicum seed			
32	Biological source, chemical constituents and therapeutic efficacy of The Anti-tumour Vinca, Podophyllum	9	To study morphological identification of clove.	
33	Biological source, chemical constituents and therapeutic efficacy of The Antidiabetics Pterocarpus, Gymnema			
34	TEST			
35	Biological source, chemical constituents and therapeutic efficacy of the Diuretics Gokhru, Punarnava			
36	Biological source ,chemical constituents and therapeutic efficacy			
37	Biological source, chemical constituents and therapeutic efficacy of the Antiseptics and disinfectants Benzoin, Myrrh, Neem, Turmeric			
38	Test			
39	Biological source, chemical constituents and therapeutic efficacy of the Antimalarials Cinchona, Artemisia	10	To study morphological identification of Ephedra.	
40	Biological source, chemical constituents and therapeutic efficacy of the Oxytocic Ergot Vitamins Cod liver oil, Shark liver oil			
41	Biological source,chemical constituents and therapeutic efficacy of the Enzymes Papaya, Diastase, Pancreatin, Yeast			
42	Biological source, chemical constituents andtherapeutic efficacy of the Pharmaceutical Aids Kaolin, Lanolin, Beeswax, Acacia, Tragacanth, Sodium alginate, Agar, Guar gum, Gelatine			
43	Biological source, chemical constituents and therapeutic efficacy of the	11	To study morphological identification Rauwolfia.	

44	Biological source, chemical constituents and therapeutic efficacy of the Miscellaneous Squill, Galls, Ashwagandha, Tulsi, Guggu			
45	Test			
Unit - 6:- Plant fibres used as surgical dressings (3 hrs)				
46	Plant fibres used as surgical dressings: Cotton, silk, wool and regenerated fibres Sutures –			
47	Plant fibres used as surgical dressings:–Surgical Cat gut and Ligatures			
48	CLASS TEST			
Unit – 7:- Basic principles involved in the traditional systems of medicine like (8 hrs)				
23	Basic principles involved in the traditional systems of medicine like: Ayurveda, Siddha, Unani and Homeopathy	13	To study morphological identification of Gokhru.	
24	Method of preparation of Ayurvedic formulations like: Arista, Asava.			
25	Method of preparation of Ayurvedic formulations like: Gutika, Taila,			
26	Method of preparation of Ayurvedic formulations like: Lehya and Bhasma			
27	Assignments			
Unit – 8:-Role of medicinal and aromatic plants in national economy and their export potential (2 hrs)				
31	Role of medicinal and aromatic plants in national economy and their export potential	14	To study morphological identification of punarnawa.	
32	Test			
Unit – 9:-Herbs as health food (4 hrs)				
35	Herbs as health food: Brief introduction and therapeutic applications of: Nutraceuticals			
36	Herbs as health food: Brief introduction and therapeutic applications of: Antioxidants			
37	Herbs as health food: Brief introduction and therapeutic applications of: Pro-biotics			
38	Assignment	15	To study morphological identification of Cinchona.	
39	Herbs as health food: Brief			

	introduction and therapeutic applications of: Dietary fibres, Omega-3-fatty acids.			
40	Herbs as health food: Brief introduction and therapeutic applications of Spirulina, Carotenoids.			
41	Herbs as health food: Brief introduction and therapeutic applications of: Soya and Garlic	16	To study morphological identification of agar.	
44	Assignment and test			
	CLASS TEST			
Unit – 11:- UNIT:-10&11:-Introduction to herbal formulations (8hrs)				
47	Introduction to herbal formulations	18	To study the T.S of Datura.	
48	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Aloe vera gel			
49	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Almond oil			
50	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Lavender oil			
51	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Olive oil			
52	Assignment and test			
53	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Rosemary oil	19	To study the T.S of cinnamon.	
	Herbal cosmetics: Sources, chemical constituents, commercial preparations, therapeutic and cosmetic uses of: Sandal Wood oil			
54	Assignment and test			
	CLASS TEST			
Unit – 12:- Phyto chemical investigation of drugs (2 hrs)				
56	Phyto chemical investigation of drugs	20	To study the T.S of Coriander.	

57	Phyto chemical investigation of drugs			
58	Phyto chemical investigation of drugs			
59	Assignment			
60	Revision			