

Paper 1b PHARMACOGNOSY

M. Sc. va (Candidates admitted from the academic year 2021-2022)

Course Code 212BO1E02

Total Hours 60

Credits 5

CORE ELECTIVE

Learning Objective	To understand the concepts and importance of Pharmacognosy To get acquainted with plant drug evaluation and adulteration To identify the phytochemicals, present in various crude drugs To familiarize with information about applications of secondary metabolites in modern medicine.
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CO No.	Course Outcome	PSO Addressed	CL
	Upon the completion of this course, students will be able to		
CO - 1	Outline the concept and scope of Pharmacognosy.	PSO-2	U
CO - 2	Understand the classification of Crude drugs.	PSO-2	AP
CO - 3	Learn about the adulteration and evaluation of plant based crude drugs.	PSO-2	U, AP
CO - 4	Classify the different types of crude drugs from various botanical sources.	PSO-2	Ap
CO - 5	Discuss on the application of Secondary Metabolites in modern medicine.	PSO-2	E, C

UNIT I**HOURS 12**

Introduction to Pharmacognosy - Definition, History, Scope and Development of Pharmacognosy. Introduction about Alternative Systems of Medicines (Ayurveda, Siddha, Homeopathy and Unani).

UNIT II**HOURS 12**

Sources of crude drugs. Organized and Unorganized Crude drugs. Classification of crude drugs - Alphabetical, Morphological, Taxonomical, Chemical, Pharmacological, Chemotaxonomical and Serotaxonomical Classification. Cultivation, Collection, Processing and Storage of crude drugs.

UNIT III**HOURS 12**

Pharmacopoeias in the world and India. Adulteration and Evaluation of Crude Drugs by Organoleptic, Microscopic, Physical, Chemical & Biological methods and their Formulation as per Standard Pharmacopoeia and WHO guidelines.

UNIT IV**HOURS 12**

Study of Traditional Drugs - Common Vernacular names, Botanical sources, Morphology, Chemical nature of Active Constituents, Pharmacology, Uses and Marketed Formulations of Following Drugs: Ashoka, Amla, Brahmi, Bilawa, *Gymnema*, Neem, *Rawolfia*, Satavari, Senna and Vetiver.

UNIT V**HOURS 12**

Herbal remedies. Biological Screening of Herbal drugs. WHO and AYUSH guidelines for Safety Monitoring of Natural Medicine. Linking Indigenous Traditional Knowledge on Herbal medicine. Plant products in Pharmaceuticals and Nutraceuticals.

TEXT BOOKS

ARUMUGAM, K.R. AND N. MURUGAN. 2011. Text book of Pharmacognosy. Sathya Publishers, India.

BIREN SHAH AND A.K. SETH. 2010. Textbook of Pharmacognosy and Phytochemistry. Elsevier, Haryana, India.

KALIA, A.N. 2005. Textbook of Industrial Pharmacognosy. CBS Publishers, New Delhi, India.

PUROHIT, A.P., S.B. GOKHALE AND C.K., KOKATE. 2008. Pharmacognosy. Nirali Prakashan, Arihant Printers, Pune, India.

WALLIS, T. E. 1985. Text book of Pharmacognosy, Jain Publisher, New Delhi, India.

SUGGESTED READING

EVANS, W.C. 2002. Trease and Evans Pharmacognosy. 15th edition, W.B. Saunders & Co., London.

NADKARINI, K.M. 1976. Indian materia medica. Popular Prakashan Private Limited, Bombay, India.

SINGH, G. K. AND ANIL BHANDARI. 2008. Textbook of Pharmacognosy. CBS Publishers & Distributors, New Delhi, India.

VASUDEVAN NAIR, R. 2003. Controversial drug plants. Universities Press, New Delhi, India.

REFERENCES

ANONYMOUS. 1998. Macroscopic and microscopic examination: quality control methods for medicinal plant materials. WHO, Geneva.

FAROOQI, A.A. AND B.S. SREE RAMU. 2004. Cultivation of medicinal and aromatic crops. Universities Press, New Delhi, India.

INDIAN PHARMACOPOEIA. 1996. Controller of Publications, Ministry of Health and Family Welfare, Government of India, New Delhi, India.

KRITIKA K.R. AND B.L. BASU. 2003. Indian Medicinal plants with illustrations. Oriental Enterprises, Dehradun, India.

MUKHERJEE, P.K. 2008. Quality control of herbal drugs. 3rd edition. Business Horizons Pharmaceutical Publishers, New Delhi, India.