

SARDAR PATEL UNIVERSITY
Programme: MSc (Botany)
Semester: IV
Syllabus with effect from: June 2011

Paper Code: PS04CBOT02	Total Credits: 4
Title Of Paper: Medical Botany & Phytochemistry	

Unit	Description in detail	Weightage (%)
1	Plants as sources of drugs, pharmaceuticals and pharmaceutical aids. Ethnomedicobotany: Basic approaches to study traditional knowledge on herbal medicine; Scope and potential applications. Collection methods of ethnomedicobotanical data: Field methods and scrutiny of Herbarium specimens and folklore; verification of data; collection of materials for voucher specimen and for phytochemical screening; application of ethnomedicobotany. Creating indigenous knowledge base of traditional medicines of plant origin. Pharmacognosy of drugs derived from alkaloids, glycosides, volatile oils, lipids, gums, resins, tannins and saponins. Drugs of botanical origin: Structure, physical properties, biosynthesis and chemistry of secondary metabolites: phenols, phenolic glycosides, saponins, steroids, alkaloids, vitamins and hormones and natural antibiotics. Methods for screening natural sources for bioactive principles.	
2	Secondary metabolites: Major pathways, structure and biosynthesis of plant pigments, alkaloids, glycosides and lignin.	

Basic Text & Reference Books:

- Dennis, D. T., D. H. Turpin, D. D. Lefebvre and D. B. Layzell: Plant Metabolism. Addison Wesley Longman Ltd. England.
- Doby, G.: Plant Biochemistry. Inter Science Publishers, New York
- Dey, P. M. and J. B. Horborne: Plant Biochemistry. Academic Press, London.
- Lehninger, A. L., D. L. Nelson and M. M. Cox 2000: Principles of Biochemistry. CBS Publishers and Distributors, New Delhi.
- Sadasivam, S. and A. Manickam : Biochemical Methods. 2nd edition. New Age International (P) Ltd. New Delhi.
- Voet, D., J. G. Voet and C. W. Pratt : Fundamentals of Biochemistry. John Wiley & sons, Inc. New York.
- Zubay, G.: Biochemistry. Vol. 1 –3. Wm. C. Brown Publishers, Oxford, England
- Chadwick, D.J. & Marsh, J.: Bioactive compounds from plants
- Wiley Chichester, CIBA Foundation Symposium 185: Ethnobotany and the search for new drugs
- J.B. Harborne: Phytochemical methods
- J.C. Willis: Pharmacognosy
- C.K. Kokate: Pharmacognosy
- Trease, G.E and Evans, W.C.: Pharmacognosy

