

# **Gujarat Technological University**

**M. Pharm.**

**Semester – III**

**Paper code -930105**

## **Traditional Drugs**

**Subject of Specialization Paper – V (Pharmacognosy)**

**Theory**

**(Four hours per week, 7 credits)**

1. Distribution and chemotaxonomy of volatile oil in plants. Role of volatile oils in medicine, their industry and industrial importance in India.
2. Biodiversity conservation, economic development and drug discovery from traditional medicinal plants of India.
3. Plant growth regulators.
4. Methods of isolation, purification, identification, estimation, conversion to useful derivatives and importance of following phytopharmaceuticals:
  - a. Vinca alkaloids
  - b. Morphine
  - c. Reserpine
  - d. Quinine
  - e. Diosgenin
  - f. Solasodine
  - g. Glycyrrhizin
  - h. Picroside
  - i. Rutin
  - j. Vasicine
  - k. Ephedrine
  - l. Anthraquinones
5. Herbal medicine information sources, books, journals, online databases.

## **Traditional Drugs**

**Subject of Specialization Paper – V (Pharmacognosy)**

**Practical**

**(Six hours per week, 8 credits)**

Practical exercises based on the relevant topics mentioned in theory syllabus.

### **Reference Books:**

1. Stephen K. Sim, Medicinal Plant Glycosides, University of Toronto Press, Canada.
2. Stephen K. Sim, Medicinal Plant Alkaloids, University of Toronto Press, Canada.

3. Olayiwola Akerele, Vernon Heywood and Hugh Syngé (Editors), *The Conservation of Medicinal Plants*, Printed by Cambridge University Press, Cambridge.
4. Atal C.K. and Kapur B.M., *Cultivation and Utilization of Medicinal Plants*, Published by RRL, Jammu-Tawi, 1982.
5. Handa S.S & Kaul K.L., *Supplement to cultivation and utilization of medicinal plants*, 1996.
6. R.D. Chaudhary, *Herbal Drugs Industry*, Eastern Publishers, New Delhi.
7. Wagner H., Bladt S. and Zgainski, *Plant Drug Analysis* Springer, Verlag, New York.
8. Peach K. and Tracey M.V., *Modern Methods of Plant Analysis*, 1-4, Narosa Publisher House, N.D.
9. *Indian Herbal Pharmacopoeia*, Vol. I and II, Jointly published by RRL, Jammu and IDMA, Mumbai – 1998 and 1999.
10. *British Herbal Pharmacopoeia*, Published by British Herbal Medicines Association 1996.
11. Trease E and Evan's W.C., *Pharmacognosy*, 15th edition, Balliere Tindall. Eastbourne, U.K., 2002.
12. James E. Robbers, Varro E. Tyler, *Herbs of Choice – The Therapeutic Use of Phytomedicinals*.
13. Guenther, *The Essential Oils*, Vol. I and II, Published by D.Van Nostrand Company Inc., 1948.
14. R. H. F. Manske, *The Alkaloids-Chemistry and Physiology*, Published by Academic Press, London.
15. Zechmeister, *Progress in the Chemistry of Organic Natural Products*, Published by Springer-Verlag Wien, Austria.