

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BACHELOR OF PHARMACY**  
**Semester: VII**

Subject Name: **Pharmacognosy VII (Herbal Formulations & Complimentary Therapies)**

Subject Code: **280005**

**[THEORY]**

Sr. No	Course Content	Total Hrs.
1.	The holistic concept for drug administration in traditional systems of medicine. Introduction to Ayurvedic preparation like Churna, Kwath, Gutika, Taila, Ghrita, Lehya, Asavas and Arista, Bhasma and Pisti.	10
2.	Phytopharmaceutical evaluation and modern analytical techniques for screening of herbal drugs.	8
3.	A brief account of plant based industries & institutions involved in work of medicinal & aromatic plants in India.  Sources, utilization, production and estimation of phytoconstituents such as – calcium sennoside, diosgenin, quinine, tropane alkaloids, vincristine, podophyllotoxin, geranium oil, sandalwood oil, mentha oil, vetiver oil, lemongrass oil.	10
4.	Poisonous plants.	2
5.	Traditional drugs (Part III)  <b>Seed-</b> Karanj  <b>Entire herb-</b> <u>Kantakari</u>  <b>Bark-</b> <u>Shirish</u>  <b>Underground Stem-</b> Garlic  <b>Wood-</b> <u>Pterocarpus</u>  <b>Root and Rhizome-</b> <u>Majith</u> , <u>Vaj</u>  <b>Fruit-</b> Harde, Baheda, Vidang, Bhilama, <u>Piper</u>  <b>Leaf-</b> <u>Tylophora</u> , Gymnema, <u>Nagod</u>  <b>Flower-</b> Palash	15

## [PRACTICAL]

1. Identification of crude drugs mentioned in theory.
2. Microscopic study of underlined drugs.
3. Preparation and evaluation of Ayurvedic formulation like churna, kwath and gutika.
4. Isolation, estimation and chromatographic studies of the phytoconstituents mentioned in theory.
5. List of practicals
  1. Morphology and microscopy of – Nagod  
Morphology of Karanj
  2. Morphology and microscopy of – Tylophora  
Morphology of Gymnema
  3. Morphology and microscopy of- Pterocarpus  
Morphology of Bhilama
  4. Morphology and microscopy of- Majith  
Morphology of Harde
  5. Morphology and microscopy of- Vaj  
Morphology of Palash
  6. Morphology and microscopy of- Piper  
Morphology of Bheda
  7. Morphology and microscopy of- Shirish  
Morphology of Garlic
  8. Morphology and microscopy of- Kantakari
  9. Morphology and chemical tests of Vidang
  10. Isolation of-Psoralen
  11. Estimation of-Sennoside
  12. Isolation and estimation of - Embelin
  13. Preparation and standardization of churna
  14. Preparation and standardization of gutika

### **Text books:**

1. Mukherjee Pulok, Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals.
2. Kalia A.N., Textbook of industrial Pharmacognosy, C.B.S. Publisher, New Delhi.

### **Reference Books:**

1. Anonymous, Ayurvedic Formulary of India, Part- I and II.
2. S.K. Jain, B.K. Sinha and R.C. Gupta, Notable Plants in Ethnomedicine of India, National Botanical Research Institute, Lucknow, Deep Publications.
3. Kirtikar K.R., Basu B.D., Medicinal plants, Volume-III, 2<sup>nd</sup> edition (reprint), M/S Periodical experts.
4. Trease E. and Evans W.C., Pharmacognosy, 16<sup>th</sup> edition, Balliere Tindall. Eastbourne, U.K.
5. Anonymous, Ayurvedic Pharmacopoeia of India, Govt. of India.
6. Anonymous, Wealth of India, CSIR.
7. M.G. Chauhan, Microscopy of Leaf Drugs, Jamnagar Ayurveda University.