

Table of Contents

UNIT - I

Chapter - 1 Herbs as Raw Materials

1.1 Definition	2
1.2 Sources of Herbs Selection	2
1.3 Selection, Identification and Authentication of Herbal Materials	3
1.3.1 Technique and Methods for Selection Herbal Materials	3
1.3.2 Identification and Authentication of Herbal Material	4
1.4 Processing of Herbal Raw Materials	7
1.4.1 Processing of Herbs into Herbal Materials	7
1.4.2 Processing of Herbal Materials into Herbal Preparations	8
1.4.3 Processing of Herbal Materials or Herbal Preparations into Herbal Dosage Forms.....	8
1.4.4 Drying	8
1.4.5 Special Processing Procedures	10
Multiple Choice Questions with Answers.....	11
Short Answer Questions.....	12
Long Answer Questions.....	12

Chapter - 2 Biodynamic Agriculture

2.1 Good Agricultural Practices in Cultivation of Medicinal Plants	14
2.2 Organic Farming	19
2.3 Pest and Pest Management in Medicinal Plants	22
2.3.1 Biopesticides/Bioinsecticides	24
Multiple Choice Questions with Answers.....	26
Short Answer Questions.....	28
Long Answer Questions.....	28

Chapter - 3 Indian Systems of Medicine

3.1 Basic Principles Involved in Ayurveda, Siddha, Unani and Homeopathy	30
3.1.1 Ayurveda	30
3.1.2 Siddha	43
3.1.3 Unani	49
3.1.4 Homeopathy	57
3.2 Preparations and Standardization of Ayurvedic Formulations	60
3.2.1 WHO Guidelines for Quality Standardized Herbal Formulations.....	60
3.2.2 Asava and Arishta	61
3.2.3 Gutika	64
3.2.4 Churna	66
3.2.5 Lehya	68
3.2.6 Bhasma	70
Multiple Choice Questions with Answers.....	75
Short Answer Questions.....	78
Long Answer Questions.....	78

Chapter - 4 Pharmacognosy in Various Systems of Medicine

4.1 Introduction	80
4.2 Role of Pharmacognosy in Allopathy	80
4.3 Role of Pharmacognosy in Ayurvedic System of Medicine	81
4.4 Role of Pharmacognosy in Unani	83
4.5 Role of Pharmacognosy in Siddha	84
4.6 Role of Pharmacognosy in Homeopathy	84
4.7 Role of Pharmacognosy in Chinese System of Medicine	85
Multiple Choice Questions with Answers.....	86
Short Answer Questions.....	86
Long Answer Question	86

UNIT - II**Chapter – 5 Nutraceuticals**

5.1 Introduction	89
5.2 History.....	89
5.3 Related Terminology of Nutraceuticals	90
5.4 Classification of Nutraceuticals	90
5.5 Global Nutraceutical Market and Growth	91
5.6 Government Regulations - NLEA 1990	93
5.7 Health Benefits and Role of Nutraceuticals in Ailments	94
5.7.1 Health Benefits of Nutraceuticals in Diabetes	94
5.7.2 Health Benefits of Nutraceuticals in Cardiovascular Disease	96
5.7.3 Health Benefits of Nutraceuticals in Cancer	97
5.7.4 Health Benefits of Nutraceuticals in Irritable Bowel and Gastrointestinal Disease.....	98
5.8 Study of Herbs as Health Food	99
5.8.1 Alfaalfa	99
5.8.2 Chicory	100
5.8.3 Ginger	101
5.8.4 Fenugreek	103
5.8.5 Garlic	104
5.8.6 Honey	105
5.8.7 Amla	106
5.8.8 Ginseng	108
5.8.9 Ashwagandha	109
5.8.10 Omega-3-Polyunsaturated Fatty Acids.....	110
5.8.11 Dietary Fibers	111
5.8.12 Carotenoids	112
5.8.13 Proanthocyanidins	113
5.8.14 Resveratrol	114

Multiple Choice Questions with Answers	115
Short Answer Questions	117
Long Answer Questions	117

Chapter - 6 Herbal-Drug and Herb-Food Interactions

6.1 General Introduction to Interaction and Classification	120
6.2 Study of Drugs and their Possible Side Effects and Interactions	122
6.2.1 Hypericum	122
6.2.2 Kava-Kava	124
6.2.3 Ginkobiloba	125
6.2.4 Ginseng	127
6.2.5 Garlic	128
6.2.6 Ephedra	130
6.2.7 Pepper	131
Multiple Choice Questions with Answers	133
Short Answer Questions	133

UNIT - III

Chapter - 7 Herbal Cosmetics

7.1 Introduction	136
7.2 Market Overview	137
7.3 Classification of Cosmetics	137
7.4 Sources and Description of Raw Materials of Herbal Origin Used	139
7.4.1 Fixed Oil	139
7.4.2 Waxes	143
7.4.3 Gums	146
7.4.4 Colors	151
7.4.5 Perfumes.....	154
7.4.6 Protective Agent	158
7.4.7 Bleaching Agent	162

7.4.8 Antioxidant	166
Multiple Choice Questions with Answers	168
Short Answer Questions	170
Long Answer Question	170

Chapter - 8 Herbal Excipients

8.1 Introduction	172
8.2 Classification of Excipients	173
8.3 Colorants	174
8.4 Sweeteners	178
8.5 Binders	180
8.6 Diluent	182
8.7 Viscosity Builder	184
8.8 Disintegrants	185
8.9 Flavours and Perfume	186
Multiple Choice Questions with Answers	190
Short Answer Questions	192
Long Answer Questions	192

Chapter - 9 Herbal Formulations

9.1 Global Market Overview of Herbal Formulations	194
9.2 Conventional Herbal Formulations	195
9.2.1 Herbal Syrup	195
9.2.2 Herbal Mixtures	197
9.2.3 Tablets	198
9.2.4 Novel Dosage Form: Phytosomes	203
Multiple Choice Questions with Answers	207
Short Answer Questions	208
Long Answer Questions	208

UNIT - IV**Chapter - 10 Evaluation of Drugs**

10.1 Introduction	210
10.2 WHO Guidelines for Quality Standardized Herbal Formulations.....	212
10.3 Methods of Standardization of Ayurvedic Medicines	213
10.4 WHO Guidelines for Quality Standardized Herbal Drug	214
10.5 ICH Guideline for Herbal Drugs	215
10.6 Stability Testing of Herbal Products	215
Multiple Choice Questions with Answers	217
Short Answer Questions.....	218
Long Answer Question	218

Chapter - 11 Patenting and Regulatory Requirement of Natural Products

11.1 Definition of the Terms	220
11.2 Patenting Aspects of Traditional Knowledge and Natural Products	221
11.2.1 Patents and Traditional Knowledge in India.....	222
11.3 Case Study of Neem and Turmeric	228
Multiple Choice Questions with Answers	229
Short Answer Questions.....	231
Long Answer Question	231

Chapter - 12 Regulatory Issues

12.1 Regulations in India (ASU DTAB, ASU DCC)	234
12.1.1 Ayurvedic, Siddha and Unani Drugs Technical Advisory Board (ASU DTAB)	234
12.1.2 The Ayurvedic, Siddha and Unani Drugs Consultative Committee	235
12.2 CITES Certificate	243
12.3 DGFT Notification.....	244
12.4 Traffic	248
Multiple Choice Questions with Answers	249

Short Answer Questions	250
Long Answer Questions	250

UNIT - V

Chapter - 13 Herbal Drug Industry

13.1 Introduction.....	252
13.2 Present Scope and Future Prospects	253
13.2.1 Future Prospects	254
13.3 Plant Based Industries and Institutions Involved in Work on Medicinal and Aromatic Plants in India	255
13.3.1 Plant Based Institutions in India.....	257
Multiple Choice Questions with Answers.....	265
Short Answer Questions.....	266
Long Answer Questions	266

Chapter - 14 Schedule T - Good Manufacturing Practice of Indian Systems of Medicine

14.1 Component of GMP (Schedule-T) and its Objectives.....	268
14.2 Schedule M.....	269
14.3 Shudle T.....	271
14.4 Infrastructural Requirements	272
Multiple Choice Questions with Answers.....	286
Short Answer Questions.....	287
Long Answer Question	287