


Name:			
Enrolment No:			
<p style="text-align: center;"><b>UPES</b> <b>End Semester Examination, May 2025</b></p> <p><b>Course: HERBAL DRUG TECHNOLOGY</b> <b>Program: B. Pharmacy</b> <b>Course Code: BP603T</b></p> <p style="text-align: right;"><b>Semester : VI</b> <b>Duration : 03 Hours</b> <b>Max. Marks: 75</b></p> <p><b>Instructions: Draw neat labelled diagrams wherever necessary</b></p>			
<b>SECTION A</b> <b>(20Qx1M=20 Marks)</b>			
	<b>Attempt all questions from section A</b>	<b>Marks</b>	<b>COs</b>
<b>Q 1</b>	Medicinal plants obtained from cultivated sources are..... a. Uniform in growth b. Expensive c. Can fulfill the demand when required d. All of the above	<b>1</b>	<b>CO1</b>
<b>Q 2</b>	Homoeopathy was introduced as a scientific system of drug therapeutics by a German Physician, Dr. Christian Frederick Samuel Hahnemann in 1905-True/False.	<b>1</b>	<b>CO1</b>
<b>Q 3</b>	Hippocratic theory is followed by ..... a. Homoeopathy b. Unani c. Siddha d. Aromatherapy	<b>1</b>	<b>CO1</b>
<b>Q 4</b>	Semi solid Ayurvedic formulation is..... a. Lehya b. Asava c. Churna d. Arishta	<b>1</b>	<b>CO1</b>
<b>Q 5</b>	Anti diabetic medicinal herbs act on the liver and decrease the glucose production-True/False.	<b>1</b>	<b>CO2</b>
<b>Q 6</b>	Expand ICH.	<b>1</b>	<b>CO2</b>
<b>Q 7</b>	Kava kava is a popular social drink in South Pacific is known as..... a. <i>Allium sativum</i> b. <i>Apis dorsata</i> c. <i>Embellica officinalis</i> d. <i>Piper methysticum</i>	<b>1</b>	<b>CO2</b>
<b>Q 8</b>	Garlic..... the absorption of isoniazid. a. Increases b. Decreases c. Maintains d. None of the above	<b>1</b>	<b>CO2</b>
<b>Q 9</b>	<i>Cocus nucifera</i> is .....	<b>1</b>	<b>CO3</b>

	a. Almond b. Castor seeds c. Coconut d. Groundnut		
<b>Q 10</b>	Lawson is obtained from..... a. Henna b. Bixa c. Cochineal d. Saffron	<b>1</b>	<b>CO3</b>
<b>Q 11</b>	List two herbs used to hydrate skin.	<b>1</b>	<b>CO3</b>
<b>Q 12</b>	Enumerate any two herbal drugs widely used in perfumery.	<b>1</b>	<b>CO3</b>
<b>Q 13</b>	Starch is used as a. Diluent b. Disintegrant c. All of the above d. None of the above	<b>1</b>	<b>CO4</b>
<b>Q 14</b>	List two advantages of phytosome.	<b>1</b>	<b>CO4</b>
<b>Q 15</b>	Phytosomes of Curcumin enhanced..... a. Anti-inflammatory b. Better systemic delivery c. Better bioavailability d. All of the above	<b>1</b>	<b>CO4</b>
<b>Q 16</b>	..... protects inventions, granting the inventor exclusive rights to make, use, and sell the invention for a certain period. a. Trademarks b. Copyright c. Patents d. None of the above	<b>1</b>	<b>CO4</b>
<b>Q 17</b>	HPTLC is used in the stability studies of non-volatile components in herbs- True/ False.	<b>1</b>	<b>CO5</b>
<b>Q 18</b>	Drugs and Cosmetics Act was enacted to regulate the import, manufacture, distribution, and sale of drugs and cosmetics in India- True/False.	<b>1</b>	<b>CO5</b>
<b>Q 19</b>	Schedule T was introduced in..... a. 1940 b. 2000 c. 1970 d. None of the above	<b>1</b>	<b>CO5</b>
<b>Q 20</b>	List two plant-based institutions in India.	<b>1</b>	<b>CO5</b>
<b>SECTION B (20 Marks)</b> <b>(2Qx10M=20 Marks)</b> <b>Attempt 2 Question out of 3</b>			
<b>Q 1</b>	Critically analyze the core principles of Ayurveda, and how they guide diagnosis and treatment. Evaluate the traditional and modern methods involved in the preparation of Lehyas, and propose a standardized protocol for ensuring their quality, safety, and efficacy in contemporary practice.	<b>5+5</b>	<b>CO1</b>

<b>Q 2</b>	Critically evaluate the legal and ethical complexities involved in the patenting of traditional knowledge and natural products, with special reference to Turmeric and Neem. Propose a balanced framework that addresses the rights of indigenous communities while allowing for responsible commercialization under intellectual property laws.	<b>7+3</b>	<b>CO5</b>
<b>Q 3</b>	Compare and contrast the pharmacological uses and drug interactions of Ephedra, Garlic, St. John's Wort, Ginkgo biloba, and Ashwagandha. Based on current evidence propose guidelines for their safe use in patients undergoing pharmacotherapy.	<b>5+5</b>	<b>CO4</b>
<b>SECTION-C (35 Marks)</b> <b>(7Qx5M=35 Marks)</b> <b>Attempt 7 Question out of 9</b>			
<b>Q 1</b>	Illustrate how you would prepare and standardize an Asava in a laboratory or industrial setting.	<b>5</b>	<b>CO1</b>
<b>Q 2</b>	List the role of different nutraceuticals in the management of cancer.	<b>5</b>	<b>CO2</b>
<b>Q 3</b>	Explain how garlic and ginseng interact with conventional drugs. What is the pharmacological basis for these interactions?	<b>5</b>	<b>CO3</b>
<b>Q 4</b>	Classify various natural excipients and suggest their applications in pharmaceutical or cosmetic formulations.	<b>5</b>	<b>CO4</b>
<b>Q 5</b>	Demonstrate the step-by-step formulation process of a herbal tablet in a laboratory setting and evaluate the standardization techniques necessary to ensure consistent efficacy and shelf life of the final product.	<b>5</b>	<b>CO3</b>
<b>Q 6</b>	With suitable diagrams explain a novel herbal drug delivery. How do they differ from conventional herbal formulations?	<b>5</b>	<b>CO3</b>
<b>Q 7</b>	Quote the requirements of part 1 and part 2 of schedule T with relevant examples.	<b>5</b>	<b>CO5</b>
<b>Q 8</b>	Propose the scientific and legal criteria that govern the patentability of natural products. Analyze why certain natural substances are excluded from patent protection under intellectual property laws?	<b>5</b>	<b>CO5</b>
<b>Q 9</b>	Describe the concept of natural colorants and discuss their components and sources with suitable examples.	<b>5</b>	<b>CO2</b>