Name:

Enrolment No:

UPES

End Semester Examination, May 2025

Course: Pharmacognosy and Phytochemistry 1 **Semester : 4**

Program: B. Pharm **Duration : 03 Hours**

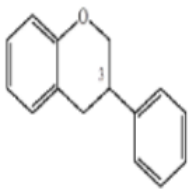
Course Code: BP405T **Max. Marks: 75**

Instructions: Read questions carefully.

SECTION A

(20Qx1M=20 Marks)

S. No.		Marks	COs
Q 1	The classification system which considers part of plant used is ____. A. chemical B. morphological C. pharmacological D. alphabetical	1	CO1
Q 2	Which system of medicine put forth the Laws of Similars? A. Unani B. Siddha C. Ayurveda D. Homeopathy	1	CO1
Q 3	Method used to do quantitative microscopy is _____. A. Karl-fisher method B. lycopodium spore method C. both a and b D. none	1	CO1
Q 4	Type of stomata is determined by examining the position of subsidiary cells to _____cells.	1	CO2
Q 5	Plant tissue culture is an ____ culture technique. A. *ex-vivo* B. *in-vivo* C. *in-vitro* D. *in-silico*	1	CO2
Q 6	Define dibbling.	1	CO2
Q 7	Replacing *Strychnous nux-blanda* or *S. potatorum* in place of S. *nux-vomica* is which type of adulteration? A. Admixture B. Sophistication C. Spoilage D. Substitution	1	CO2
Q 8	*Agrobacterium tumifaciens* is used to create_____. A. Hybrid plants B. Transgenic plants C. Polyploidy	1	CO3

	D. Mutant plants		
Q 9	What is the fundamental principle in Traditional Chinese Medicine?	**1**	**CO3**
Q 10	Which of the following is NOT a physical evaluation parameter of crude drugs? A. Ash value B. Moisture content C. Stomatal number D. Foreign organic matter	**1**	**CO3**
Q 11	Give an example of primary metabolite.	**1**	**CO3**
Q 12	The types of stomata with 2 guard cells covered with 3 subsidiary cells with 1 are extremely smaller than other 2 is _____ A. diacytic. B. anisocytic. C. anomocytic. D. paracytic.	**1**	**CO4**
Q 13	Replacing *Strychnous nux-blanda* or *S. potatorum* in place of *S. nux-vomica* is which type of adulteration? A. Admixture B. Sophistication C. spoilage D. substitution	**1**	**CO4**
Q 14	Which of the following is NOT an example of organized drug? A. Leaves B. Gums C. Barks D. Seeds	**1**	**CO4**
Q 15	Which of the following is NOT a type of phenolic compound found in plants? A. Saponin B. Anthocyanin C. Flavanoids D. Phenolic acids	**1**	**CO4**
Q 16	Vitali morin test: _____+ fuming HNO3 + alc. KOH sol. → violet color	**1**	**CO5**
Q 17	Identify the class of compound from the given basic nucleus A. Isoflavonoid B. Neo Flavonoids C. Flavonoids D. Flavan-3-ol 	**1**	**CO5**
Q 18	_____ : Caffeine (Purine) + KClO3+ HCl → evaporate to dryness → dried residue exposed to NH3 vapors → purple color.	**1**	**CO5**

<table>
<tr><td>Q 19</td><td>The branched chain constituent of starch is _____.
A. cellulose
B. bassorin
C. amylose
D. amylopectin</td><td>1</td><td>CO5</td></tr>
<tr><td>Q 20</td><td>The proteolytic enzyme derived from the bacteria present in the gut of silk worm.
A. Urokinase
B. Streptokinase
C. Serratiopeptidase
D. Pepsin</td><td>1</td><td>CO5</td></tr>
<tr><td colspan="4">SECTION B (20 Marks)
(2Qx10M=20 Marks)
Attempt 2 Question out of 3</td></tr>
<tr><td>Q 1</td><td>a) What is the crucial step in preparing an explant for use in plant tissue culture?
b) Elaborate on the diverse applications of plant tissue culture in detail.</td><td>10</td><td>CO1</td></tr>
<tr><td>Q 2</td><td>Water extract of a crude drug gives positive test with Molish’s and Fehling’s test on hydrolysis. Secondary metabolites present in the extract are soluble in water and insoluble in organic solvent.
Identify the class of secondary metabolites. Illustrate the classification and general chemical tests for using a flow diagram.</td><td>2+4+4</td><td>CO4</td></tr>
<tr><td>Q 3</td><td>Describe the biological sources, active constituent and at least important uses of the following.
a) Castor oil
b) Chaulmoogra oil
c) Tragacanth
d) Papain</td><td>2.5X4</td><td>CO5</td></tr>
<tr><td colspan="4">SECTION-C (35 Marks)
(7Qx5M=35 Marks)
Attempt 7 Question out of 9</td></tr>
<tr><td>Q 1</td><td>Explain the principles of the Ayurvedic system of medicine.</td><td>5</td><td>CO1</td></tr>
<tr><td>Q 2</td><td>Differentiate organized and unorganized drugs.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q 3</td><td>“Soil and pests influence the cultivation of medicinal plants”. Justify the statement.</td><td>5</td><td>CO2</td></tr>
<tr><td>Q 4</td><td>Match the following:
<table><tr><th>Test</th><th>Class of glycoside</th></tr><tr><td>i. Shinoda test</td><td>a) Cardiac glycoside</td></tr><tr><td>ii. Baljet test</td><td>b) Coumarin glycoside</td></tr><tr><td>iii. Fluorescence test</td><td>c) Flavonoid glycoside</td></tr><tr><td>iv. Libermann burchard test</td><td>d) Saponin glycoside</td></tr><tr><td>v. Haemolysis test</td><td>e) Sterol glycoside</td></tr></table></td><td>5</td><td>CO3</td></tr>
<tr><td>Q 5</td><td>Illustrate Agrobacterium tumefaciens method of development of edible vaccine.</td><td>5</td><td>CO3</td></tr>
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Q 6	Discuss method of evaluation of fixed oils with special reference to acid value and iodine number.	**5**	**CO4**
Q 7	Evaluate the role of recombinant DNA technology in transforming traditional methods of crude drug production.	**5**	**CO4**
Q 8	Examine how the applications of pharmacognosy contribute to modern medicine, drug discovery, and quality control.	**5**	**CO5**
Q 9	Analyze different types of adulteration in crude drugs with relevant examples.	**5**	**CO5**