

**DEPARTMENT OF PHARMACEUTICAL SCIENCES & TECHNOLOGY**

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(Internal Assessment I)**

<b>CLASS: BPHARM</b>		<b>SEMESTER: V</b>
<b>BRANCH: PHARMACY</b>		<b>SESSION: MO/2025</b>
<b>SUBJECT: BP504T PHARMACOGNOSY &amp; PHYTOCHEMISTRY-II</b>		
<b>TIME: 2.00 Hour</b>		<b>FULL MARK: 30</b>

**PART I**

A. Objective type questions (Answer all questions) Or Multiple type questions (Answer all questions)	(5 x 02 = 10 marks) (10 x 01 = 10 marks)
1. Write down the biological source, chemical constituents of Rauwolfia.	[2.0]
2. Write down the structure of Pyridine, Piperidine, Quinoline and Isoquinoline.	[2.0]
3. Draw/depict the structures of: a) Amino acids that possess a <b>sulfhydryl (-SH) group</b> b) An amino acid that contains a <b>guanidine group</b> c) <b>Aromatic amino acids</b> d) Amino acids carrying a <b>hydroxyl (-OH) group</b>	
4. Illustrate the two structural representations of <b>acidic, basic, and amphoteric</b> amino acids.	
5. Specify the fundamental building blocks involved in the biosynthesis of various classes of phytoconstituents	

**PART II**

B. Long Answers (Answer any one out of two)	(01x10=10 marks)
1. List and describe the major techniques employed in the elucidation of biosynthetic pathways?	
2. Define Alkaloids. Discuss the classification of alkaloids based on their chemical structure, pharmacological activity, and biosynthetic origin, giving suitable examples. Write the general method of extraction of alkaloids?	

**PART III**

C. Short Answers (Answer any two out of three)	(02x05=10 marks)
1. Write short notes on biological source, chemical constituents and uses of Vinca.	
2. <b>Outline the biosynthetic pathway for the production of an aromatic alkaloid.</b>	
3. <b>Describe the biosynthesis of different classes of terpenoids in plants from acetyl-CoA.</b>	

:22/09/2025 :M