BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MPHARM **SEMESTER: I**
BRANCH: PHARMACY **SESSION: MO-24**

SUBJECT: MPG103T PHYTOCHEMISTRY

TIME: 3.00 Hours **FULL MARK: 75**

INSTRUCTIONS:

1. The missing data, if any, may be assumed suitably.
2. Before attempting the question paper, be sure that you have got the correct question paper.
3. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
5. Answer any five questions.

1a.	Explain the Shikimic Acid pathway and provide two examples of compounds derived from it.	[7]
1b.	Discuss the concept of drug discovery from natural sources, outlining the process and stages involved.	[8]
2a.	Provide examples of widely used drugs derived from traditional medicinal plants and explain their significance in modern medicine.	[7]
2b.	Explain how drugs are synthesized using lead molecules obtained from natural sources, and provide examples of such drugs	[8]
3a.	Describe the Amino Acid pathway, its key components, and provide an example?	[7]
3b.	Discuss various methods used to elucidate biosynthetic pathways?	[8]
4a.	Explain the Mevalonic Acid pathway in detail, including its role in the biosynthesis of essential compounds.	[7]
4b.	Describe the different types of chromatographic techniques, including their principles and applications.	[8]
5a.	Summarize the concept of building blocks in natural products, focusing on their role and significance	[7]
5b.	Compare and contrast different extraction methods, discussing their advantages and disadvantages in the context of natural product isolation.	[8]
6a.	Outline the principles and applications of electrophoresis, focusing on its utility in biological research	[7]
6b.	Discuss the spectroscopic techniques used for determining the structure of natural compounds and their applications	[8]
7a.	Describe the general properties of cardiac glycosides and their biosynthesis.	[7]
7b.	Outline the general characteristics of steroidal saponins and explain their biosynthesis in detail.	[8]

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