

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

**CLASS: B.PHARM  
BRANCH: PHARMACY**

**SEMESTER: V  
SESSION: MO-25**

**SUBJECT: BP504T PHARMACOGNOSY & PHYTOCHEMISTRY-II**

**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.
4. This question paper consists of (03) three parts. Read the part wise instructions before attempting the questions.

**PART-I**

**Objective types questions (Instruction: Answer all questions)**

Q1. (10 x 2 = 20 Marks)

- A. Write down the biological sources, and uses of Senna.
- B. Write down the morphological and identifying characters of Cinchona.
- C. Define Tannin. Give suitable examples of it.
- D. Write down the utilization of sennoside.
- E. Write down the chemical test of asafetida.
- F. Differentiate between Thin Layer Chromatography (TLC) and High-Performance Thin Layer Chromatography (HPTLC).
- G. Identify the building blocks involved in the biosynthesis of different classes of phytoconstituents
- H. Write the structure of amino acids based on pH?
- I. Differentiate between normal-phase and reverse-phase chromatography in brief?
- J. Define electrophoresis? List the different types of electrophoresis?

**PART-II**

**Short Answers**

**(Instruction: Answer seven out of nine questions)**

(7 x 5 = 35 Marks)

- Q2. Describe in brief the classification of Glycosides based on Therapeutic action and glycone basis.
- Q3. Explain the term Resin. Discuss their classification with suitable examples. Write in brief about isolation of Resins.
- Q4. Describe the biological source, geographical sources, chemical constituent, chemical test and uses of Colophony.
- Q5. Write down the isolation method of Flavones and Flavonol.
- Q6. Describe the biological source, isolation method and structure of menthol.
- Q7. Write down the biological source, properties, estimation and utilization of Taxol.
- Q8. Discuss the advantages and disadvantages of various extraction methods used for natural drugs?
- Q9. Describe the different techniques employed for the extraction of volatile oils?
- Q10. Outline the biosynthetic pathway involved in the formation of aromatic alkaloids?

**PART-III**  
**Long Answers**  
**(Instruction: Answer two out of three questions)**

(2 x 10 = 20 marks)

- Q11. Define Alkaloids. Describe its classification, isolation method and chemical test of Alkaloids.
- Q12. Explain the principal techniques used for elucidating biosynthetic pathways.?
- Q13. Describe the various chromatographic methods utilized in the analysis of herbal drugs, supported with neat diagrams?

:::24/11/2025:::M