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Total No. of Printed Pages: 1

Total No. of Questions: [13]

**M. Pharma (Pharmacognosy) (Semester – 1<sup>st</sup>)**

**PHYTOCHEMISTRY**

**Subject Code: MPG103T**

**Paper ID: [17250203]**

**Time: 03 Hours**

**Maximum Marks: 75**

**Instruction for candidates:**

1. Section A is compulsory. It carries 20 marks. It consists of 5 questions of 4 marks each.
2. Section B consist of 9 questions of 5 marks each. The student has to attempt any 7 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A**

**(4 marks each)**

Q1. Attempt the following:

- a. Define and classify glycosides.
- b. Give a brief account on the lead structure selection process.
- c. Briefly explain the CCCET and SCFE techniques.
- d. Define and classify alkaloids.
- e. Give a short note on structure elucidation of luteolin by UV- spectroscopy.

**Section – B**

**(5 marks each)**

- Q2. Write a brief note on Flash column chromatography.
- Q3. Give the applications of GCMS in the characterization of herbal extracts.
- Q4. Explain the structure elucidation of Citral by NMR spectroscopy.
- Q5. Give the biosynthesis and isolation of digitoxin.
- Q6. Briefly describe the history of herbs as source of drugs and drug discovery.
- Q7. Write in detail about the recent advances in extractions with emphasis on selection of method and choice of solvent for extraction.
- Q8. Explain the applications of IR in the structure elucidation of caffeine.
- Q9. Give a brief note on the different phases of Clinical trials.
- Q10. Write a note on HPTLC.

**Section – C**

**(10 marks each)**

- Q11. Give the biosynthesis, isolation and characterization of Quinine.
- Q12. Write a detail note on selection and optimization of lead compounds with suitable examples.
- Q13. Discuss in detail about the separation of phytoconstituents by HPLC.