Roll No……..….. **Total No. of Printed Pages: 1**
Total No. of Questions: [13]

M. Pharma (Pharmacognosy) (Semester – 1st)
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.