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Total No. of Printed Pages: 1

Total No. of Questions: [13]

B. Pharmacy (Semester – 5th)

PHARMACOGNOSY II

Subject Code: BP504T

Paper ID: [17170126]

Time: 03 Hours

Maximum Marks: 75

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two 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

(2 marks each)

Q1. Attempt the following:

- a) How are radioactive isotopes utilized in studying metabolic pathways?
- b) What is the biosource and therapeutic use of Vinca alkaloids?
- c) Mention the chemical class and therapeutic application of Dioscorea.
- d) Define chromatography?
- e) Name two detectors used in UV-spectroscopy.
- f) Define Born Trager test?
- g) What are sesquiterpenes? Give two examples.
- h) Discuss the principle of TLC.
- i) Define alkaloids. Give their identification tests.
- j) Name two therapeutic uses of Rauwolfia.

Section – B

(5 marks each)

- Q2. Discuss the principle, instrumentation and applications of IR spectroscopy.
- Q3. How TLC is differentiated from HPTLC?
- Q4. Explain the biosynthesis of morphine alkaloids.
- Q5. Describe the biological source, chemical structure and therapeutic applications of Curcumin.
- Q6. Explain the modern extraction techniques used in phytochemistry with their advantages.
- Q7. Explain the bioresource, uses and analysis of Reserpine.
- Q8. Describe the biosynthesis pathway of tropane alkaloids, highlighting the key intermediates and enzymes involved in their formation
- Q9. Explain the principle and applications of HPLC in the analysis of phytoconstituents
- Q10. Describe the basic steps in the shikimic acid pathway of secondary metabolite formation

Section – C

(10 marks each)

- Q11. Describe the acetate mevalonate pathway in higher plants and it contribute to secondary metabolite formation.
- Q12. Discuss the industrial production, uses, and analysis of Digoxin and Caffeine.
- Q13. Give an explanatory note on electrophoresis with their applications.