

NRT/KS/19/3170

B.Pharm. Semester–V (C.B.S.) Examination

PHARMACOGNOSY AND PHYTOCHEMISTRY–III (CHEMISTRY OF NATURAL PRODUCTS)

Paper–4

Time : Three Hours]

[Maximum Marks : 80

N.B. :— (1) Question No. **1** is compulsory.

(2) Attempt any **four** questions out of remaining.

(3) Draw neat labelled diagram wherever necessary.

1. Solve any **five** from the following :

- (a) What are resins ? Give physical and chemical properties of resins.
- (b) Explain maceration process.
- (c) Differentiate between Tolu Balsam and Peru Balsam.
- (d) Write a note on theory of mass transfer.
- (e) Give biological source, chemical constituents and uses of Peppermint.
- (f) Describe the principle and applications of paper chromatography.
- (g) Write isolation and purification method for camphor.

5×4=20

2. (a) Define and classify volatile oils with examples. Give methods of extraction for volatile oils.

8

(b) Write pharmacognostic account on clove.

7

3. (a) Write a note on High performance thin layer chromatography.

8

(b) Give isolation, purification and chromatographic profile of Eugenol.

7

4. (a) Write structure elucidation of camphor.

7

(b) Define and classify extraction methods. Write an account on super critical fluid extraction.

8

5. (a) Define chromatography. Describe the principle, procedure and applications of thin layer chromatography.

8

(b) Explain biosynthetic pathways of terpenoids.

7

6. Give biological source, chemical constituents, chemical tests and uses of the following (any **three**) :

(a) Tulsi

(b) Colophony

(c) Ginger

(d) Asafoetida

(e) Fennel.

5×3=15

7. Write short notes on (any **three**) :

(a) Turmeric

(b) Soxhlet Extraction

(c) Boswellia

(d) Cinnamon

(e) Structural Elucidation of taxol

5×3=15