

**NTK/KW/15/6996**

**Faculty of Pharmacy**

**B.Pharm. Fifth Semester (C.B.S.) Examination**

**PHARMACOGNOSY AND PHYTOCHEMISTRY—III**

**(Chemistry of Natural Products)**

**Paper—IV (5-T-4)**

Time—Three Hours]

[Full Marks—80

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

(2) Solve any **FOUR** questions from the remaining.

(3) Draw neat labeled diagram wherever necessary.

(4) Discuss the reaction, mechanism wherever necessary.

1. Solve any **five** questions of the following :

5×4=20

(a) Write a note on theory of mass transfer.

(b) Write mevalonic acid pathway for terpenoids.

(c) Write method of extraction for resins from plant material.

(d) Differentiate between Tolu Balsam and Peru Balsam.

- (e) Write isolation and purification method for Camphor.
- (f) Differentiate between transverse section of Caraway and Dill fruits.
- (g) Write a note on Peppermint.
2. Classify extraction method. Write an account on Super-critical fluid extraction and maceration. 15
3. (a) What is chromatography ? Describe general principles of adsorption, ion-exchange and size-exclusion chromatography. 8
- (b) Explain high performance liquid chromatography with well-labelled diagram. 7
4. (a) Classify resins and resin combinations with suitable examples. 8
- (b) Write pharmacognostic account of Fennel and Ginger. 7
5. (a) Write structural elucidation of camphor by physical methods. 8
- (b) Write isolation, purification and chromatographic profile of Eugenol. 7
6. (a) Write in brief about high performance thin layer chromatography method. 8

- (b) Describe pharmacognostic account of clove with emphasis on its microscopy. 7
7. Write short notes (any **three**) : 5×3=15
- (a) Soxhlet extraction
- (b) Colophony
- (c) Cinnamon
- (d) Asafoetida
- (e) Boswellia.