(1)P.T.O. WWW.UPTUNOTES.COM

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(d) Define isoprene rule.

What are lignans?

(b) Differentiate between biosynthesis and biogenesis with examples.

Give the identification tests for alkaloids. (a)

Attempt all questions of this section. All questions carry 1. equal marks.  $(2 \times 10 = 20)$ 

## Theory Examination (Semester-VIII) 2015-16

## NATURAL PRODUCTS

**B. PHARM.** 

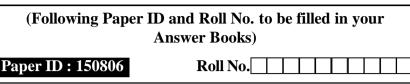
Time : 3 Hours

(c)

Max. Marks : 100

**PHARM-482/PHAR-482** 

**Printed Pages: 4** 



Section-A

- (e) Name the alkaloids derived from tryptophan.
- (f) Write the Von Braun method for identification of secondary cyclic amines.
- (g) Give the structure and biological source of morphine.
- (h) Enumerate various methods for isolation of essential oils.
- (i) Give any four herbal drugs used as immunomodulator.

(j) Write the differences between sesuquiterpenes and diterpenes with examples.

Section-B

- 2. Attempt any five questions from this section. All questions carry equal marks. (10×5=50)
  - (a) Describe the EMF and Shikimic acid pathways.
  - (b) What are the recent developments of natural products used as anticancer agents?
  - (c) Define glycosides and give the structure elucidation of digitoxin.

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- (d) Give general methods for structural determination of terpenes.
- (e) Write note on (any two)
  - i) Herbal cosmetics
  - ii) Natural allergens
  - iii) Photosensitizing reactions
- (f) Write the extraction, isolation and chemistry of flavonoids.
- (g) Discuss the chemical and spectral approaches in identification of simple molecule of natural origin.
- (h) Describe the biogenesis and chemistry of Quinine.

## Section-C

## 3. Attempt any two questions. All questions carry equal marks. (15×2=30)

(a) Define and classify alkaloids with suitable examples. How will you elucidate the structure of Atropine?

- (b) What are terpenoids? Classify them with suitable example. Give the structure elucidation of (3- carotene.
- (c) Discuss the extraction, isolation and chemistry of Diosgenin and Sarsapogenin.

