

**B.PHARM**  
**(SEM-VIII) THEORY EXAMINATION 2017-18**  
**CHEMISTRY OF NATURAL PRODUCTS**

*Time: 3 Hours*

*Total Marks: 100*

**Note: 1.** Attempt all Sections.

**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. What is Dragendorff's test?
  - b. What is fingerprinting region in IR spectroscopy and what for it is used?
  - c. Name some solvents used in proton NMR.
  - d. Difference between Biogenesis and Biosynthesis.
  - e. Name some methods employed to feed radioactive substances into plants.
  - f. Give example of two Antimalarial compounds from natural origin.
  - g. What is Kuhn-Roth oxidation method?
  - h. Give example of two Fungal toxins.
  - i. What is special Isoprene rule?
  - j. What is  $\alpha$ -tocopherol and what are its uses?

**SECTION B**

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. Discuss briefly about various separation techniques used in purification of phytoconstituents.
  - b. Give the constitution of atropine.
  - c. Give the isolation method of Podophyllotoxin and discuss briefly about chemistry of Podophyllotoxin.
  - d. Give the isolation method and elucidate the structure of Citral.
  - e. What are different types of allergens? Discuss in detail about Inhalant and Contact allergens.

**SECTION C**

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Discuss in detail about UV-Visible spectroscopy in the structural determination of natural products.

(b) Give the biosynthetic route through which Atropine is biosynthesized.

**4. Attempt any *one* part of the following: 10 x 1 = 10**

(a) Give the constitution of Quinine.

(b) Give the isolation method and discuss the chemistry of Reserpine.

**5. Attempt any *one* part of the following: 10 x 1 = 10**

(a) Give the isolation method and elucidate the structure of Quercetin by chemical means.

(b) Give the isolation method and structural elucidation of Caffeine.

**6. Attempt any *one* part of the following: 10 x 1 = 10**

(a) Give the method of isolation and discuss the chemistry of  $\beta$ -carotene.

(b) Give the isolation method of Menthol and elucidate its structure.

**7. Attempt any *one* part of the following: 10 x 1 = 10**

(a) Write notes on natural products used as Anticancer agents.

(b) Define and classify photosensitizing agents. Discuss about photosensitizing agents in therapy.