

Total No. of Questions :6]

SEAT No. :

**P1461**

**[5049]-605**

[Total No. of Pages :2

**Third Year B. Pharmacy**  
**NATURAL PRODUCT CHEMISTRY**  
**(2013 Pattern) (Semester - VI)**

*Time : 3 Hours]*

*[Max. Marks :70*

*Instructions to the candidates:*

- 1) All questions are compulsory.*
- 2) Answers to the two sections should be written in separate answer books.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right indicate full marks.*

**SECTION-I**

**Q1)** Attempt any one of the following: **[10]**

- a) Explain various analytical methods of characterization of natural products.
- b) Describe characterization and structural elucidation of alkaloids by chemical methods.

**Q2)** Attempt any five of the following: **[15]**

- a) Define natural colors and dyes and give its classification.
- b) Write a note on melting point and boiling point.
- c) Write a note on mutant strains and grafts.
- d) What are natural sweeteners and give meaning and non nutritive sweeteners.
- e) Add a note on henna and stevia.
- f) Explain chirality and complexity.
- g) Write a note on ozonolysis.

**P.T.O.**

**Q3)** Attempt any two: [10]

- a) Explain cardiovascular active drugs from marine source.
- b) Explain contribution of natural products in new drug discovery.
- c) Explain principle and application of HPLC.
- d) Describe turmeric and gymnema.

### SECTION-II

**Q4)** Attempt any one of the following: [10]

- a) Describe in detail method of HPTLC along with its advantages and applications.
- b) Explain characterization and structural elucidation of flavonoids by spectral methods.

**Q5)** Attempt any five of the following: [15]

- a) Write a note on oxidative strategies.
- b) Explain theory of optical rotation.
- c) Write a note on serendipity berry.
- d) Explain optical rotator dispersion.
- e) Write a note on annatto.
- f) Give applications of UV spectroscopy.
- g) Explain relative molecular mass.

**Q6)** Attempt any two: [10]

- a) Explain principle and applications of NMR.
- b) Describe anticancer active agents of marine source.
- c) Write a note on strategies on new drug discovery.
- d) Explain in detail liquorice as a sweetner.

