



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**

FIFTH SEMESTER – NOVEMBER 2017

**PB 5411 - PHYTOCHEMICALS**

Date: 13-11-2017  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**PART A**

*Answer the following, each within 50 words*

*(10 x 2 = 20 marks)*

1. What is decoction?
2. Expand AYUSH.
3. What is aglycone group?
4. List any 2 uses of flavonoids.
5. Write notes on polyphenolic compounds.
6. Draw the structure of benzo -2 – pyrone.
7. What are essential oils?
8. What are saponins? Give an example.
9. Write notes on tetraterpenoids.
10. What are the alkaloids obtained from *Vinca rosea*?

**PART B**

*Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary*

*(5 x 7 = 35 Marks)*

11. a) Briefly discuss the classification of plant natural products.

OR

- b) Describe briefly about any 5 extraction methods for phytochemicals.

12. a) Write short notes on flavan derivatives with suitable examples.

OR

- b) Discuss briefly on the role of glycosides in maintaining health.

13. a) Write short notes on the types of anthocyanins with suitable examples.

OR

- b) Explain briefly on the therapeutic applications of coumarins.

14. a) Write short notes on volatile oils with suitable examples.

OR

- b) Briefly explain the importance and uses of saponins.

15. a) Write notes on the therapeutic roles of carotenoids.

OR

- b) Discuss the classification of alkaloids with suitable examples.

### **PART C**

Answer **any three** of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary. (3 x 15 = 45 Marks)

16. Give a detailed account on the history of phytochemicals.
17. Discuss in detail on the classification, biosynthesis and therapeutic applications of flavonoids.
18. Write in detail on the importance, structure, biosynthesis and applications of anthocyanins.
19. Give an account on the sources, classes, biosynthesis and biological properties of terpenes.
20. Write short notes on : i) Extraction and biosynthesis of carotenoids  
ii) Therapeutic role of alkaloids.

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