



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

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

FIFTH SEMESTER – NOVEMBER 2016

**PB 5411 - PHYTOCHEMICALS**

Date: 09-11-2016  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**Part A**

**(10 x 2 = 20 Marks)**

*Answer the following, each within 50 words.*

1. What are phytochemicals?
2. Define menstruum.
3. Draw the flavan nucleus.
4. What are Glycosides?
5. Name any two Anthocyanins.
6. What are Coumarins?
7. List any two features of neolignans.
8. What is *enfleurage*?
9. List any two sources of Alkaloids.
10. Give a test for detection of carotenoids.

**PART B**

**(5 x 7 = 35 Marks)**

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

11. a) Write a short note on the history of phytochemicals.  
Or  
b) Elucidate the classification of plant natural products.
12. a) Give a short account on Glycosides.  
Or  
b) Explain the biogenesis of Flavonoids.
13. a) Describe the chemical structure and applications of Coumarins.  
Or  
b) Enumerate the steps in extraction and isolation of Anthocyanin.
14. a) Write short notes on volatile oils.  
Or  
b) Give a short account on Saponins.
15. a) Briefly account for the sources, biogenesis, nomenclature of Alkaloids.  
Or  
b) Write notes on the therapeutic uses of Carotenoids.

**PART C**

**(3 x 15 = 45 Marks)**

Answer **any three** of the following, each within 1200 words only. Draw diagrams and flowcharts wherever necessary.

16. Write in detail on the extraction procedures for plant metabolites.
17. Give an account on the properties and therapeutic applications of Flavonoids.
18. Write an essay on Anthocyanin and its therapeutic applications.
19. Give a detailed account on the classification, biosynthesis and applications of Terpenes.
20. Discuss in detail on the sources, biogenesis, classification and therapeutic values of Carotenoids.

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