



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – APRIL 2018

PB 5411- PHYTOCHEMICALS

Date: 10-05-2018
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 is menstruum?
2. List any 2 uses of phytochemicals.
3. What are glycosides?
4. Give an identification test for flavonoid.
5. Write notes on polyphenol compounds.
6. Give the structure of coumarin.
7. What are lignans?
8. Give the empirical formula of mono - and diterpenes.
9. Draw the structure of β -carotene.
10. Cite any 2 anti-cancer alkaloids.

PART – B

(5 X 7 = 35 Marks)

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

11. (a) Discuss the classification of plant natural products.
(or)
(b) Write notes on the history of phytochemistry.
12. (a) Explain briefly on the biosynthesis of coumarins.
(or)
(b) Discuss briefly on the significance of glycosides.
13. (a) List out the types of anthocyanins with suitable examples.
(or)
(b) Discuss on the therapeutic applications of coumarins.
14. (a) Write notes on the extraction of volatile oils.
(or)
(b) Give a brief account on the classification of terpenes.
15. (a) List the therapeutic applications of alkaloids.
(or)
(b) Discuss the classification of carotenoids with suitable examples.

PART – C

(3 X 15 = 45 Marks)

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

16. Give a detailed account on extraction methods of phytochemicals.
17. Write in detail on the classification, biosynthesis and therapeutic applications of flavanoids.
18. Discuss in detail on the importance, structure, biosynthesis and applications of anthocyanins.
19. Write in detail on the sources, classes, physical and biological properties of saponins.
20. Write short notes on : i) Extraction and biosynthesis of carotenoids
ii) Nomenclature and criteria for alkaloids.
