LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

DEGREE EXAMINATION – **FOOD CHEMISTRY AND FOOD PROCESSING**

SECOND SEMESTER – **APRIL 2014**

FP 2806/2800 - ORGANIC CHEMISTRY OF FOOD - II

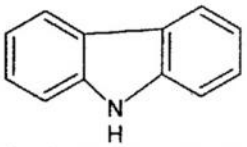
Date : 28/03/2014 Dept. No. Max. : 100 Marks

Time : 09:00-12:00

Part A

Answer ALL THE questions. **10x2=20 marks**

1. Write the structure of anthocyanin. What is the difference between anthocyanin and anthocyanidin?
2. Write the structural difference between thiazole and thiazine.
3. Define isoprene rule.
4. Write the structure of menthol.
5. "Squalene is considered as an important precursor in cholesterol biosynthesis". Justify the statement.
6. What are ephedrines? Under which classification of alkaloids it belong to?
7. What are flavanols?
8. What are auxochromes? Give two examples.
9. Identify this heterocycle. Mention the substrate involved in synthesizing this heterocycle through Graebe Ullmann reaction.



10. List the food applications of sunset yellow.

Part B

Answer ANY EIGHT questions. **8x5=40 marks**

11. Explain the mechanism of imidazole formation during thermal processing of foods.
12. What are the products obtained by the alkaline fusion of cyanidin and malvidin?
13. Explain the isolation procedure of morphine alkaloid.
14. Explain the physiological effects of consuming morphine and codeine alkaloid.
15. Establish the structure of nucleotides. How are they classified as heterocyclic compound?
16. Write a note on isoflavones.
17. Write the structural relationship between quercetin and cyaniding chloride.
18. How the colors of anthocyanidins are affected by substituents?
19. Explain the term chromogen, and chromophore, with suitable example.
20. What are solanaceous alakloids ? Explain with an example.
21. Explain the application of heterocyclic compounds in biological systems.
22. Write a note on Benzedrine.

Part C

Answer ANY FOUR questions. **4x10=40 marks**

23. Explain the occurrence of pyrroles during thermal processing of foods.
24. Discuss the chemical properties and extraction procedures of alkaloids.
25. Explain the base hydrolysis of anthocyanin.
26. Explain the chemical classification of dyes with its suitable food applications.
27. What are flavanoids? Explain the base hydrolysis pattern of daidzen.
28. Explain the following terpenoids.
    i) Phytol ii) abeitic acid

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