



Date: 21-04-2018  
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

**Part-A**

**Answer all the questions**

**(10x2=20)**

1. What are the biological properties of coniine?
2. Draw the structure of nicotine.
3. How is menthone converted to menthol?
4. What is isoprene rule?
5. Write down the short synthesis of cyanidin chloride.
6. Quercetin, which is a flavonoid, is also known as a phenolic. Why?
7. What are steroids?
8. Draw the structure of caffeine.
9. What type of dye is indigatin?
10. Draw the structure of alizarin and write the chromophore present in it.

**Part-B**

**Answer any eight questions**

**(8x5=40)**

11. How are alkaloids extracted from plants?
12. Explain the biological significance of nicotine.
13. Write the synthesis and functions of citral.
14. Explain the geometrical isomerism in carotenoids.
15. Explain Hofmann's exhaustive methylation, reaction with an example.
16. Write any one method of synthesis of flavone.
17. Explain Robinson synthesis of anthocyanin.
18. How is caffeine synthesized?
19. Explain the stereochemistry of steroids.
20. What happens when uric acid is treated with  $\text{PCl}_5$  at low and high temperatures?
21. What are chromophores and auxochromes? Cite an example for each.
22. How are dyes classified? Explain.

**Part-C**

**Answer any four questions**

**(4x10=40)**

23.a) What are the functions of alkaloids? **(5)**

b) Draw the structure of papaverine and explain its biological significance. **(5)**

24. Explain the structure and synthesis of camphor.

25. Write a note on the general methods of structural determination of terpenoids.

26. What are anthocyanins? Discuss the structure and any two general methods of synthesis of anthocyanins.

27. Explain the biosynthesis of cholesterol.

28. a) What are vat and mordant dyes? List any two examples. **(5)**

b) Write the structural elucidation of alizarin with equations. **(5)**

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