

UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons- 2023

PHACN 3124 CHEMISTRY OF NATURAL PRODUCTS

Date: 29.11.2024

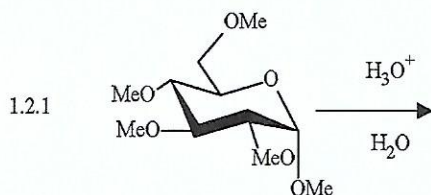
Time: 03 Hours

Answer All EIGHT Questions.

Answer Part A, Part B in separate answer books

PART A

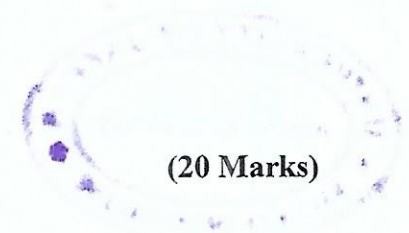
1. 1.1 Define mutarotation. (10 Marks)
1.2 Deduce the structure of the product of following reaction and give a mechanism involved in its formation. (20 Marks)



- 1.3 List the identification tests for carbohydrates. (20 Marks)
1.4 Write an account on carbohydrate-based vaccine. (50 Marks)

PART B

2. 2.1 Define alkaloids. (20 Marks)
2.2 Write the functions of alkaloids. (25 Marks)
2.3 Briefly explain chemical characteristics of alkaloids. (25 Marks)
2.4 Discuss the importance of isomerism of alkaloidal drugs in the therapeutic activity. (30 Marks)
3. 3.1 Define glycosides. (20 Marks)
3.2 Write the types of glycosides based on linkage with examples. (40 Marks)
3.3 Briefly explain the physical properties of glycosides. (40 Marks)
4. 4.1 Define terpenoids. (20 Marks)
4.2 List the pharmaceutical applications of volatile oils. (50 Marks)
4.3 Briefly explain the chemical properties of terpenoids. (30 Marks)

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5. 5.1 What are unsaturated fatty acids? (20 Marks)
5.2 Discuss pharmaceutical uses of
5.2.1 DHA (25 Marks)
5.2.2 EPA (20 Marks)
5.3 Write down the physical properties of
5.3.1. Lipids (20 Marks)
5.3.2 Triglycerides (15 Marks)
6. 6.1 Write the chemical properties of protein. (20 Marks)
6.2 Write a brief account on Gelatin. (40 Marks)
6.3 Briefly discuss the application of proteomics in medicine. (40 Marks)
7. 7.1 Write the functions of carotenoids in plants (20 Marks)
7.2 Briefly explain the properties and uses of
7.2.1 Lycopene (30 Marks)
7.2.2 Vitamin A (50 Marks)
8. Write a short note on the followings:
8.1 Liquorice. (25 Marks)
8.2 Cardiac glycosides. (25 Marks)
8.3 Trans fat. (25 Marks)
8.4 Piperine alkaloid. (25 Marks)