

UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION IN BPHARM (HONS.)- 2021
PHAC/3124 CHEMISTRY OF NATURAL PRODUCTS



Date: 06.03.2023

Time: 03 Hours

Answer All EIGHT Questions.

Answer Part A, Part B in separate answer books

PART A

1. 1.1 Define the followings:
 - 1.1.1 Mutarotation (10 Marks)
 - 1.1.2 Glycosylation (10 Marks)
- 1.2 1.2.1 List the biological functions and applications of carbohydrates. (30 Marks)
- 1.2.2 Explain how 3'-azido-3'-deoxythymidine (AZT) act as anti-HIV drug. (50 Marks)

PART B

2. 2.1 Define alkaloids. (10 Marks)
- 2.2 Briefly explain the chemical characteristics of alkaloids. (45 Marks)
- 2.3 List the functions of alkaloids in plants. (25 Marks)
- 2.4 Discuss the therapeutic importance of isomers of alkaloidal drugs. (20 Marks)
3. 3.1 Write a short on Piperine alkaloid. (40 Marks)
- 3.2 Briefly explain the steps involved in the isolation of alkaloids from plants. (60 Marks)
4. 4.1 Define glycosides. (10 Marks)
- 4.2 Explain the physicochemical properties of glycosides. (30 Marks)
- 4.3 Write a short note on,
 - 4.3.1 cardiac glycosides. (20 Marks)
 - 4.3.2 thioglycosides. (15 Marks)
 - 4.3.3 liquorice. (25 Marks)
5. 5.1 Define unsaturated fatty acids. (15 Marks)
- 5.2 List the pharmaceutical uses of
 - 5.2.1 Docosahexaenoic acid (DHA). (20 Marks)
 - 5.2.2 Eicosapentaenoic acid (EPA). (15 Marks)
- 5.3 Write a short note on,
 - 5.3.1 palmitic acid (20 Marks)
 - 5.3.2 triglycerides. (30 Marks)
6. 6.1 Define monoterpenoids. (10 Marks)
- 6.2 Write a short note on lycopenes. (20 Marks)
- 6.3 List the pharmaceutical applications of volatile oils. (40 Marks)
- 6.4 Explain the pharmaceutical uses of camphor. (30 Marks)

7. ~~7.1~~ Write down the physicochemical properties of amino acids. (30 Marks)
- 7.2 List the pharmaceutically important enzymes. (20 Marks)
- 7.3 Write a short note on gelatin. (50 Marks)
8. 8.1 Write down the functions of carotenoids in plants. (20 Marks)
- 8.2 Briefly explain the properties and uses of
- 8.2.1 Lycopene. (30 Marks)
- 8.2.2 Vitamin A. (50 Marks)