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UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
FOURTH YEAR FIRST SEMESTER EXAMINATION IN BPharm
PHANP 4124 NATURAL PRODUCT CHEMISTRY
PART II

Date: 15.03.2023

Time: 02 Hours

Answer all six questions.

1. 1.1 List the natural sources of caffeine. (20 Marks)
1.2 Describe the mechanism of action of caffeine. (30 Marks)
1.3 Briefly discuss how to confirm that the basic skeleton of caffeine and uric acid are same? (50 Marks)

2. 2.1 Draw the structures of theophylline and theobromine. (20 Marks)
2.2 Describe the cocoa seeds processing in theobromine extraction. (30 Marks)
2.3 Explain the clinical significance of theophylline. (50 Marks)

3. 3.1 List the physico chemical properties of cholesterol. (20 Marks)
3.2 Briefly explain the biological significance of cholesterol. (20 Marks)
3.3 3.3.1 Draw the structure of cholesterol. (20 Marks)
3.3.2 Briefly describe how the structure of cholesterol affects its solubility? (40 Marks)

4. 4.1 Name two (02) synthetic analogues of oestrogens. (20 Marks)
4.2 Describe the isolation of oestrogens from the urine of pregnant mare. (30 Marks)
4.3 Explain the biological significance of oestrogens. (50 Marks)

5. 5.1 Name two (02) natural glucocorticoids. (20 Marks)
5.2 State the functions of glucocorticoids. (30 Marks)
5.3 Describe the chemical properties of cortisol. (50 Marks)

6. 6.1 Name two (02) sulphonamide analogues. (20 Marks)
6.2 List the clinical applications of sulphonamides. (30 Marks)
6.3 Describe the mechanism of action of sulphonamides. (50 Marks)