

UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons - 2023
PHACG 3143 PHARMACOGNOSY III

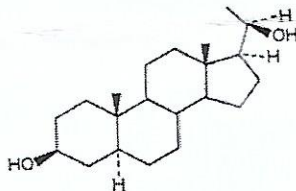
Date: 29.11.2024

Time: 02 Hours

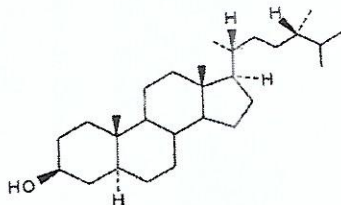
Answer all four questions.

1. 1.1 State two (02) natural sources of theobromine. (10 Marks)
- 1.2 List the physico chemical properties of theobromine. (10 Marks)
- 1.3 Caffeine can be isolated from tea leaves. (10 Marks)
 - 1.3.1 Name a chemical test used for the identification of caffeine. (30 Marks)
 - 1.3.2 Describe the steps involved in the extraction of caffeine. (40 Marks)
 - 1.3.3 Draw an experimental model to carryout purification of crude caffeine, by sublimation and explain the process.

2. 2.1 Write the names of the following steroid compounds. (10 Marks)
 - 2.1.1



2.1.2



- 2.2 Give one example for zoosterol. (10 Marks)
- 2.3 Cholesterol has a significant biological importance in human body. (10 Marks)
 - 2.3.1 List the steps involved in the cholesterol biosynthesis. (10 Marks)
 - 2.3.2 State the rate limiting step of the cholesterol biosynthesis. (20 Marks)
 - 2.3.3 Briefly explain how the cholesterol biosynthesis is regulated by statins. (30 Marks)
- 2.4 Describe the quantification of cholesterol by using cholesterol digitonide formation.

3. 3.1 Draw the structures of the following oestrogens. (10 Marks)
3.1.1 Estradiol (10 Marks)
3.1.2 Estrone (10 Marks)
- 3.2 Name two (02) synthetic analogues of oestrogens. (10 Marks)
- 3.3 Discuss the occurrence of oestrogens. (30 Marks)
- 3.4 Explain the biological significance of oestrogens. (40 Marks)
4. 4.1 Name two (02) natural glucocorticoids. (10 Marks)
- 4.2 List the structural features of the followings. (10 Marks)
4.2.1 Glucocorticoids (10 Marks)
4.2.2 Mineralocorticoids (10 Marks)
- 4.3 Describe the isolation process of adrenocorticoid hormones from the adrenal cortex tissues. (30 Marks)
- 4.4 Explain the chemical properties of cortisol. (40 Marks)