

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FACULTY OF ALLIED HEALTH SCIENCES**  
**THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons - 2022**  
**PHACG 3143 PHARMACOGNOSY III**

**Date: 27. 12. 2023**

**Time: 02 Hours**

**Answer all four questions.**

1.
  - 1.1 List the natural sources of caffeine. (10 Marks)
  - 1.2 Describe the mechanism of action of caffeine. (30 Marks)
  - 1.3 Briefly explain the clinical significance of the followings.
    - 1.3.1 Theophylline. (30 Marks)
    - 1.3.2 Theobromine. (30 Marks)
2.
  - 2.1 List the steps involved in the cholesterol biosynthesis and mention the rate limiting step. (20 Marks)
  - 2.2
    - 2.2.1 Draw the structure of cholesterol. (10 Marks)
    - 2.2.2 How the structure of cholesterol affects its solubility in water? (40 Marks)
  - 2.3 Discuss the biological significances of bile acids. (30 Marks)
3.
  - 3.1 Name two (02) synthetic analogues oestrogens. (10 Marks)
  - 3.2 State the biological functions of oestrogens. (20 Marks)
  - 3.3 List the structural features of the followings.
    - 3.3.1 Progesterone. (20 Marks)
    - 3.3.2 Testosterone. (20 Marks)
  - 3.4 Describe how progesterone is isolated from minced ovaries of pregnant sows. (30 Marks)
4.
  - 4.1 Name two (02) natural glucocorticoids. (20 Marks)
  - 4.2 State the functions of glucocorticoids. (30 Marks)
  - 4.3 Describe the chemical properties of cortisol. (50 Marks)