

UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
FOURTH YEAR FIRST SEMESTER EXAMINATION – OCTOBER 2019
PHANP 4124 NATURAL PRODUCT CHEMISTRY

PAPER II

Date: 31.10.2019

Time – 2 hours

Answer all Six questions.

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| 1 | 1.1 | Name the natural sources of purine. | (20 Marks) |
| | 1.2 | Give the different reactions to prepare the 8-hydroxy purines. | (30 Marks) |
| | 1.3 | Explain the position of third methyl group in caffeine. | (50 Marks) |
| 2 | 2.1 | List five systemic corticosteroids. | (15 Marks) |
| | 2.2 | Give the structures of above mentioned steroids and briefly describe their structure modifications. | (35 Marks) |
| | 2.3 | Sketch out the synthesis of cortisone from progesterone. | (50 Marks) |
| 3 | Write a note on: | | |
| | 5.1 | sterol. | (30 Marks) |
| | 5.2 | bile acid. | (35 Marks) |
| | 5.3 | oestradiol. | (35 Marks) |
| 4. | 4.1 | Discuss the chemical and structural requirements of chloramphenicol for its antibacterial activity. | (30 Marks) |
| | 4.2 | Discuss the structure activity relationship of chloramphenicol. | (30 Marks) |
| | 4.3 | Write the chemical evidences for the structure of chloramphenicol. | (40 Marks) |
| 5. | 5.1 | Explain how carbenicillin exhibit better antibacterial activity than amoxicillin. | (20 Marks) |
| | 5.2 | Briefly explain the advantages in combination of β - lactamase inhibitors with β -lactam antibiotics. | (30 Marks) |
| | 5.3 | Give the synthesis of Penicillin V starting from Pthalamide | (50 Marks) |
| 6. | 6.1 | Give the structure of tetracycline. | (20 Marks) |
| | 6.2 | Draw the structures of three naturally occurring tetracyclins. | (30 Marks) |
| | 6.3 | Classify the cephalosporins with examples and their structures. | (50 Marks) |