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UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
FOURTH YEAR FIRST SEMESTER EXAMINATION – SEPTEMBER 2018
PHANP 4124 NATURAL PRODUCT CHEMISTRY

Date: 20.09.2018

Time – 2 hours

Answer all Six questions.

- 1
 - 1.1 Name the heterocyclic rings present in purines. (10 Marks)
 - 1.2 Give the different methods for 8-hydroxypurines preparation. (40 Marks)
 - 1.3 Write the therapeutic uses of purine derivatives. (50 Marks)

- 2 Write a note on
 - 2.1 Streptomycin. (30 Marks)
 - 2.2 6-Aminopenicillanic acid. (30 Marks)
 - 2.3 SAR of chloramphenicol. (40 Marks)

- 3
 - 3.1 List the natural steroids. (20 Marks)
 - 3.2 Describe the stereochemistry of steroids. (45 Marks)
 - 3.3 Give the conversion of lithocholic acid into cholanic acid. (35 Marks)

- 4
 - 4.1 Give the oxidation reaction of uric acid. (20 Marks)
 - 4.2 Determine the presence of amido imidol tautomerism in caffeine. (50 Marks)
 - 4.3 Discuss the structural relationship of caffeine and uric acid. (30 Marks)

- 5
 - 5.1 Classify the beta lactam antibiotics with an example for each type. (20 Marks)
 - 5.2 Draw three semisynthetic penicillins having isoxazolyl ring in their structure. (30 Marks)
 - 5.3 Indicate how phenoxymethylpenicillin could be synthesized from pthalamide? (50 Marks)

- 6
 - 6.1 Name the natural occurrence of oestrogenic hormones. (15 Marks)
 - 6.2 Draw the structures of three starting compounds for the progesterone production. (30 Marks)
 - 6.3 Give the synthesis of testosterone from cholesterol. (55 Marks)