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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND BPHARM PART II EXAMINATION – JUNE 2013

PH 2254: PHARMACOGNOSY IB

TIME: 9.00 am. - 12.00 noon

INSTRUCTIONS

- Answer all questions.

1

1.1 Discuss briefly the advantages and disadvantages.

1.2 Write short notes on two of the following

(50 marks)

- a) Acacia
 - b) Alginate
 - c) Honey

6) 11

(25 x 2 marks)

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2.

2.1 Comment on the following statement.

"All animal fats are solids at room temperature"

(20 marks)

2.2 What do you mean by "virgin oils"?

(10 marks)

2.3 Name three chemical tests that are used to determine the identity, quality, and purity of fixed oils.

(30 marks)

2.4 Complete the following table.

Type of oil	Source	Uses
Arachis oil	1.....
Castor oil	1.....
Cotton seed oil	1.....
Olive oil	1.....

(40 marks)

3.

3.1 Describe the terms oleoresins, gum- resins and oleo- gum resins.

(Column 01)

(20 marks)

3.2 List three principal constituents found in resins.

(Column 02)

(20 marks)

3.3.1 Write accounts on three main types of narcotic products obtained from *Cannabis sativa*.

(Column 03)

(60 marks)

(Column 04)

21

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4.

4.1 Name two important alkaloids isolated from opium.

(10 marks)

4.2 Describe briefly how tannins are classified.

(values 0%)

(60 marks)

4.3 List three Hallucinogens found in nature indicating their origin.

(30 marks)

5.1. List **six** pharmacognostically important chemical compounds that can be obtained from natural sources.

(10 marks)

5.2 Briefly describe the physico-chemical properties of glycosides.

(30 marks)

5.3 Classify glycosides according to their aglycones.

(20 marks)

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5.4 Describe the following giving emphasis to their habitat, plant parts used and medicinal uses.

5.4.1 *Digitalis purpurea*

Indica molti vantaggi se no ieri che ne ha le sue parti medicinali.

(20 marks)

5.4.2. *Ginkgo biloba*

Esce sempre di nuovo ogni giorno.

(20 marks x 2)

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6.

6.1.1 What are the main characteristics of alkaloids?

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6.1.2 List three chemical tests (or names of the reagents) which can be used to test the presence of alkaloids in a plant extracts or in a powdered plant material.

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6.1.3 Give names for three plants belonging to Solanaceae family which are the main sources for tropane alkaloids.

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6.1.4 Explain the pharmacological effects associated with atropine.

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(24 marks)

6.2.1 Nicotine is categorized as a tobacco alkaloid. Give its chemical structure.

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6.2.2 Name another main alkaloid present in tobacco giving its chemical structure.

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(24 marks)

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6.2.3 What is the crude drug which contains Arecoline as the main alkaloid? Give the health care effects associated with Arecoline.

To some extent of basis on the following information about biology of plant kingdom
6.2.4 Name the precursor molecules involved in the biosynthesis of quinine and cinchona alkaloids.

6.2.5 Give the names of the alkaloids present in opium crude drug mentioning their approximate percentages.

(40 marks)

6.3.1 Give the names of two active *vinca* alkaloids.

6.3.2 Briefly explain the therapeutic importance of *vinca* alkaloids.

6.3.3 List the main alkaloids present in *Nux vomica*. Indicate the most active alkaloid from this list.

6.3.4 Explain the therapeutic value of reserpine.

6.3.5 Draw the chemical structure of Ephedrine and explain why it is not considered as a typical alkaloid.

(36 marks)