



UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND BPHARM PART II EXAMINATION – JUNE 2015

PH 2254: PHARMACOGNOSY IB (SEQ)

TIME: THREE HOURS

INSTRUCTIONS

- Answer **all** questions.
- Do not use any correction fluid.
- Answer questions in the given answer book.
- Marks will be deducted for illegible hand writing.

01. Answer **all** parts.

1.1. Name **four** drugs containing fixed oils and **one** drug containing waxes as their main constituents. **(10 marks)**

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1.2. Write the constituents of each crude drug given below. **(18 marks)**

1.2.1. Cotton seed oil

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1.2.2. Sesame oil

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1.2.3. Turkish variety of olive oil

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1.3. State **three** pharmaceutical uses of each crude drug given below. **(18 marks)**

1.3.1. Olive oil

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1.3.2. Cod liver oil

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1.4. Name **three** different fixed oils those can be used as solvent for injections.

(06 marks)

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1.5. Write down the **principle** constituent of each crude drug given below. *(15 marks)*

1.5.1. Peppermint oil

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1.5.2. Clove oil

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1.5.3. Cinnamon oil

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1.6. Draw the chemical structures of following terpenes.

(15 marks)

1.6.1. Myrecene

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1.6.2. Citral

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1.6.3. Geranial

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1.7. Write the products of the following chemical reactions. (15 marks)



1.8. Name an optically active terpene present in both rose oil and orange oil. (03 marks)

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02. Answer **all** parts.

2.1. List **three** physical and **one** chemical property of alkaloids. (12 marks)

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2.2. Define the following terms. (09 marks)

2.2.1. True alkaloids

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2.2.2. Proto alkaloids

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2.2.3. Pseudo alkaloids

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2.3. Briefly explain **three** factors that form the basis for the classification of alkaloids.
(You should give **one** example of alkaloid for each factor). (12 marks)

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2.4. Ephedrine is an alkaloid found in various plants in the genus *Ephedra*.
2.4.1. Draw the chemical structure of ephedrine. (10 marks)

2.4.2. Explain briefly **two** pharmacological effects associated with ephedrine.
(10 marks)

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2.5. Caffeine, theophylline and theobromine are the main alkaloids present in black tea (*Camellia sinensis*).

2.5.1. Draw the chemical structure for **one** of the above mentioned alkaloids.
(06 marks)

2.5.2. State **one** pharmacological effect associated with one of the above mentioned alkaloids. (05 marks)

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2.6. Sketch the general scheme for the biosynthesis of alkaloids. (15 marks)

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2.7. Briefly describe the terms oleoresins, gum-resins and oleo-gum resins. (12 marks)

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2.8. Ginger and turmeric are well known crude drugs for their therapeutic activities in pharmaceutical industry. List **three pharmaceutical uses** of each ginger and turmeric.

(09 marks)

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4.1

4.1.1 Define essential drug list. **(05 marks)**

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4.1.2 Discuss the advantages of a properly formulated essential drug/medicine list. **(25 marks)**

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4.1.3 Give a short description about the essential medicines list of Sri Lanka (no need to mention the names of the drugs). **(20 marks)**

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4.2

4.2.1 State the WHO (World Health Organization) definition of **rational** use of drugs/ medicines? *(10 marks)*

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4.2.2 Discuss briefly **five (05)** major causes for **irrational** use of drugs. *(25 marks)*

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4.2.3 Describe briefly the key elements of a Rational Drug Use Programme. *(15 marks)*

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5. Describe briefly the following,



5.1 Pharmacist's role in dispensing

(20 marks)

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5.2 The dispensing cycle

(40 marks)

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5.3 Factors considered in extemporaneous dispensing (40 marks)

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6.1 Describe briefly the levels of care provided under the Health Care Delivery System of Sri Lanka. **(25 marks)**

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6.2 List **five (05)** strengths and **five (05)** weaknesses of decentralization. **(20 marks)**

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6.3 Describe briefly the role of Regional Epidemiologist (RE) regarding the National Expanded Program on Immunization. *(25 marks)*

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6.4. List the steps in developing a health policy with a brief description. *(30 marks)*

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