



UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

FIRST B. PHARM PART I EXAMINATION – JUNE 2015

PH 1132: PHARMACEUTICS IA (SEQ)

TIME: 2 Hours

INSTRUCTIONS

- Answer all questions.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

1.

1.1 Define following terms.

1.1.1 Pharmacy

(10 marks)

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1.1.2 Clinical Pharmacist

(10 marks)

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1.2 It is important to understand particle sizes, shapes and distribution in the formulation of pharmaceutical dosage forms. There are many methods available for determining particle size.

1.2.1 Describe briefly any **three (03)** different methods used to determine particle size.

(30 marks)

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1.2.2 Describe briefly **three (03)** different tests to evaluate the flow ability of a powder. **(30 marks)**

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1.2.3 State the factors affecting flow properties of powders. **(20 marks)**

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2. Different physicochemical properties of drug molecules influence on the drug properties and biological process of drug action.

2.1 Explain how the changes in crystal habit can influence on drug properties. **(30 marks)**

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2.2 Describe briefly **four (04)** different types of intermolecular forces you have studied in physical pharmacy. **(40 marks)**

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2.3 Describe the factors affecting solubility. *(30 marks)*

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3.

3.1 State the appropriate equivalent for following weights and volume measurements. (25 marks)

- 10 oz (avo) = gr
- 3.5 gr = mg
- 1816 g = pounds (avo)
- 1/3 ss = mL
- 5 pints = mL

3.2 Calculate the amount of each ingredient that should be used to make **one pint** of cocoa syrup.

The master formula for the preparation is given below. (25 marks)

Cocoa Syrup

Cocoa	180	g
Sucrose	600	g
Liquid glucose	180	mL
Glycerin	50	mL
Sodium chloride	2	g
Vanillin	0.2	g
Sodium benzoate	1	g
Pure water qsad	1000	mL

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3.3 The following formula gives the amount of ingredients required to prepare 25 suppositories.

(25 marks)

Metoclopramide Hydrochloride	1.2 g
Haloperidol powder	30 mg
Lorazepam	30 mg
Benztropine	30 mg
Fatty base	56 g

Estimate the number of 2.5 mg lorazepam tablets required to prepare 60 suppositories.

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3.4 Calculate the quantity of each ingredient in **grams** to prepare 40 mL of following nutritional supplement. The quantities of 0.5 mL the preparation are given below.

(25 marks)

Thiamine Hydrochloride	1 mg
Riboflavin	400 µg
Ascorbic acid	50 mg
Nicotinamide	2 mg

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4.

4.1 State **two** primary information sources. Give **two** examples for each. (20 marks)

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4.2 Write short notes on following.

4.2.1 British Pharmacopoeia (15 marks)

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4.2.2 Databases important for pharmacists

(15 marks)

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4.3 List **five(05)** important factors to be considered when determining dose of a drug suitable for a particular patient. *(10 marks)*

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4.4 Calculate the number of tablets to be administered to a child, who is 125 cm tall and weighs 35 kg. The tablet strength is 5 mg and the required dose is 10 mg/m² po.

(25 marks)

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4.5 How many **milliliters** of an antibiotic suspension A to be administered as a single dose to a child weighs 16 Kg. The strength of the suspension is 200 mg/5 mL and the dosage regimen is 10 mg/kg po q8 hourly for 5 days. *(15 marks)*

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