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UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND B. PHARM PART I EXAMINATION – NOVEMBER/DECEMBER 2015

PH 2123: PHARMACEUTICS II B (SEQ)

TIME: TWO 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. Pharmaceutical incompatibility is one of the important areas for pharmacists, all the pharmacists should have comprehensive knowledge on incompatibility in order to help the patients with better combination of interventions and counseling.

1.1 Define Pharmaceutical incompatibility.

(10 marks)

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1.2 Compare the different types of chemical incompatibilities with example.

(30 marks)

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1.3 Answer questions 1.3.1, 1.3.2 and 1.3.3, using the following prescription.

Rx

Aspirin	300 mg
Probenecid	500 mg

Prepare capsules.

Label: One capsule a day for gout.

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1.3.1 Identify general and specific type of incompatibility exists in this prescription.

(10 marks)

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1.3.2 Describe the mechanism of the incompatibility.

(20 marks)

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1.3.3 As a Pharmacist what are the measures should be taken to correct this incompatibility?

(20 marks)

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1.4 What are the effects of incompatibilities on Pharmaceutical products?

(10 marks)

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2. There are many pharmaceutical dosage forms available in the market. Each of them possesses a unique characteristics and identity. Pharmaceutical Scientists are working on different techniques to improve the quality, safety, compliance and therapeutic effects of the pharmaceutical products.

2.1 Define the following terms. ***(30 marks)***

2.1.1 Tablet

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2.1.2 Parenteral product

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2.1.3 Sustained release products

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2.2 Compare the capsules with parenteral products. ***(30 marks)***

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2.3 "Direct compression is the most suitable method of preparation for the aspirin tablets"

Do you agree with the above statement? Justify your answer. **(*20 marks*)**

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2.4 State five different types of microencapsulation methods. **(*20 marks*)**

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3.1. Define the term "Pharmaceutical Aerosols". ***(10 marks)***

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3.2. Describe briefly, the factors influencing on aerosols absorption. ***(20 marks)***

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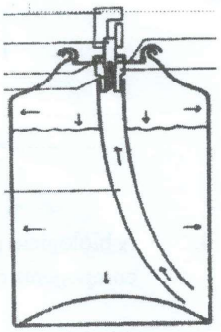
3.3. A cross section of the aerosols container is given below.
Answer questions 3.3.1 and 3.3.2 using the figure.



3.3.1. Identify the each part and give their functions. ***(15 mark)***

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3.3.2. What are the main two liquid components should be included in the container? state importance of each of the ingredient. ***(15 marks)***

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3.4. Compare & contrast deferent filling operation methods available for aerosols. ***(40 marks)***

4. A biological products include therapeutic serum, toxin, antitoxin, vaccine, blood, blood components or derivatives, allergenic product.

4.1. Discuss specific characteristics of biological products compare to chemical synthetic products.

(20 marks)

4.2. List main production stages of biotechnological pharmaceuticals. ***(10 marks)***

4.3. Describe basic quality control parameters to be tested on biological products. ***(10 marks)***

4.4. Explain the reasons for physical & chemical instability problems of biological products. ***(30 marks)***

4.4.1. Physical instability

4.4.2. Chemical instability

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4.5. Classify the different types of vaccines and highlight their advantages & limitations.

(30 marks)