Original

Index No:.....

UNIVERSITY OF RUHUNA – FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME

SECOND B. PHARM PART I EXAMINATION – JUNE 2016

PH 2114: PHARMACEUTICS IIA (SEQ)

TIME: THREE 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

1.1.1 State two (02) different ways of classifying pharmaceutical dosage forms, giving two (02) examples each.

(15 marks)

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1.1.2 State the need for different types of pharmaceutical dosage forms. ***(25 marks)***

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Index No:.....

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1.2 The following table describes different galenical preparations.

Preparation	Basic description	Examples
A. Infusions	Dilute solutions containing readily soluble constituents of drug with cold or boiling water and the microbial contamination is E	G .....
B.	Saturated solutions of volatile oils or other aromatic substances in water which are used for F ..... properties	H.....
C.	Liquid preparations usually prepared by extracting plant materials with alcohol or hydroalcoholic mixtures	I .....
D. Powdered extracts	Solid preparations having a powdery consistency obtained by evaporation of the solvent used for extraction	J.....

1.2.1 Identify **B** and **C**. ***(18 marks)***

B ..... C .....

1.2.1 Fill in the blanks, **E** and **F** with a suitable word or a phrase. ***(12 marks)***

E .....

F .....

1.2.2 Give examples (**G, H, I** and **J**) for each preparation. ***(10 marks)***

G..... I.....

H..... J.....

1.2.3 Describe the method of preparing A. ***(20 marks)***

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2.

Mr. ABC is a graduate pharmacist working as a research scientist in a pharmaceutical manufacturing company in Sri Lanka. The manager of the company has asked him to develop a monophasic liquid dosage form (Z) to be used for cough. The product should have an acceptable taste and odour, with a shelf life of three years.

2.1 Name one (01) type of monophasic liquid dosage form to be used as Z. ***(10 marks)***

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2.2 State the different types of vehicles found in monophasic liquid dosage forms.

(20 marks)

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2.3 Describe favorable characteristics of a suitable colouring agent to be used in Z.

(20 marks)

2.4 Discuss four (04) factors you should consider in selecting a flavouring agent to Z.

(20 marks)

Index No:.....

2.5 Discuss briefly the advantages and disadvantages of monophasic liquid dosage forms.

(30 marks)

3.

3.1 Define the term 'ophthalmic dosage form'. *(10 marks)*

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3.2. Classify ophthalmic dosage forms giving an example each. *(10 marks)*

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3.3 List five (05) characteristics of an ideal ophthalmic drug delivery system. *(10 marks)*

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3.4 Define the term 'ophthalmic inserts'. *(05 marks)*

3.5 State four (04) advantages of ophthalmic inserts *(08 marks)*

3.6 List five (05) factors affecting drug absorption in nasal drug delivery systems. *(10 marks)*

3.7 State five (05) physico-chemical properties of a drug that needs to be considered when developing a nasal preparation. *(10 marks)*

3.8 Briefly explain the effect of one parameter mentioned in 3.7 above. *(20 marks)*

3.9 Define 'otic preparations'. *(10 marks)*

3.10 State the importance of controlling viscosity when formulating otic preparations? *(03 marks)*

3.11 State two examples for viscous vehicles that could be used in otic preparations. *(04 marks)*

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4.1 Define the term 'gel'. *(10 marks)*

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4.2 Define the term 'surgical dressing'. *(10 marks)*

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4.3 State five (05) methods of mixing powders. *(10 marks)*

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4.4 Briefly describe simple powders and compound powders giving an example each. *(10 marks)*

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4.5 Classify surgical dressings. *(20 marks)*

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4.6 Describe briefly ten (10) functions of surgical dressings. *(40 marks)*

5 Answer **all** the questions

5.1 Define the term 'pharmaceutical suppository'. *(10 ma*

5.2. Define the term 'density displacement value'. ***(10 marks)***

5.3. Assume that you are requested to prepare 2 sets of 1 g suppositories (set A and set B). Set A requires 15 suppositories each containing 100 mg of drug X only. Set B requires 15 suppositories each containing 50 mg of drug X and 300 mg of drug Y in all 15 suppositories.
Theobroma oil is used for the base of both sets of suppositories. ***(40 marks)***

Density Displacement Value of drug X=0.7
Density Displacement Value of drug Y=1.5

Fill the below table

	Set A	Set B
Drug amount	(Drug X)	(Drug X) ..... (Drug Y).....
Base (Theobroma oil) amount		
Total weight		
Weight of 1 suppository		

5.4. State five (05) factors that affect percutaneous absorption. ***(10 marks)***

5.5. Briefly describe first generation transdermal drug delivery system including a labeled diagram.

(30 marks)

Index No:.....

6.

6.1. State two (02) advantages of pharmaceutical suspensions. ***(10 marks)***

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6.2. List five (05) characteristics to test in quality control of suspensions. ***(10 marks)***

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6.3. Describe briefly six (06) characteristics of an ideal pharmaceutical suspension. ***(30 marks)***

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6.4. Define the term 'emulsion'. *(10 marks)*

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6.5. List four (04) stability problems of emulsions. *(10 marks)*

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6.6. Briefly explain the wet gum method. *(30 marks)*

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