

UNIVERSITY OF RUHUNA - FACULTY OF MEDICINE

ALLIED HEALTH SCIENCES DEGREE PROGRAMME FOURTH BPHARM PART I EXAMINATION – JUNE 2015 PH 4134: PHARMACEUTICAL TECHNOLOGY (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.	
. A new antihistamine has been trialed to formulate. Each tablet of this new at 2 mg of the active ingredient with an approximate weight of 100 mg after co	
1.1 Briefly explain the following terms.	
1.1.1 Positive and negative mixing	(10 marks)
1.1.2 Convective mixing	(10 marks)
1.1.3 Percolate segregation	(10 marks)

Indev	No:

	At 99.7% the accepted deviations for this tablet is± 4% of the active in	
	number of particles that each sample should contain in order to match	the specifications. (20 marks)
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1.3	If the amount of drug in these tablets has been increased to 4 mg without number of particles what is the effect on the Coefficient of Variation (out changing the show calculations)? (20 marks)
		

Index	No:	 	

1.4.2 What advantages can you get from Degree of Mixing?	(10 marks)
1.5 Briefly describe agitation, brushing methods to improve dry sieving pro	
	(15 marks)
1	
 During tablet compression several deformations can take place. Indicand briefly explain them. 	cate those deformations, (30 marks)

		Index No:	
2.2 Du	wina compre	ession of Salbutamol 2 mg tablets with an average tablet ta	rget weight of
2.2 Dt	ning compic 0 mo -20 tab	blets were randomly taken and individual weights were che	cked.
10	o mg, 20 tao	,	
	101 mg	105 mg	
	89.5 mg	110 mg	
	88 mg	103.6 mg	
	108 mg	89.9 mg	
	111.4 mg	90 mg	
	100 mg	94.6 mg	
	92 mg	101 mg 103.8 mg	
	91.4 mg	110 mg	
	98.8 mg 101 mg	109.2 mg	
2.2.1		sample comply with the weight variation test described in t	he British
	Pharmaco	ppeia?	(25 marks)
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2.2.2	For a 2 mg tablet like this, is the weight variation test a better way of testing quality?
	Justify your answer. (15 marks)
2.3 D	Define following terms (10 marks)
2.3.1	Size separation
2.3.2	Solid separation
2.3.3	Size analysis
	Outline the three main consolidation techniques that occur during tablet compression. (20 marks)

		Index No:
3.1	Explain briefly following terms	
3.1.1		(10 marks)
3.1.2	Shear -thining (Pseudoplastic Behaviour)	(15marks
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3.1.3	3 Shear thickening (Dilatant flow)	(15marks
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	How does viscosity of the fluid, diameter of the pipe and fluid velocity relaminar and turbulent flow of a fluid?	iates with the
3.3	Particle size is an important criterion for many pharmaceutical products. I achieve optimum particle size, reduction of particle size has to be taken p	
3.	3.1 List down five (05) factors that would affect particle size reduction.	(10 ma
3.	3.2 Outline the main mechanisms of particle size reductions?	(20 ma
3.		
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Index No:
3.3.3 How does size of particle would affect mixing and dissolution of the therapeutic agent? (20 marks)
4.1. Compare and contrast Truck and Tray Dryers and Fluidized Bed Dryers. (20 Marks)
4.1. Compare and contrast Truck and Tray Dryers and Fluidized Bed Dryers. (20 Marks)
4.1. Compare and contrast Truck and Tray Dryers and Fluidized Bed Dryers. (20 Marks)

4.

(30 marks)

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4.3	Explain briefly the differences of drying behavior using drying curves for crystalline and	
4.3	amorphous materials. (30 marks)	
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Index No:....

5.1	Explain general considerations of sterile production.	(40 marks)
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5.2	Describe the leakage test for ampoules.	(50 marks)
5.2	Describe the leakage test for ampoules.	(50 marks)
5.2	Describe the leakage test for ampoules.	(50 marks)
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5.3 State methods of measuring physical stability of emulsi	ons. <i>(10 marks)</i>
5.3 State methods of measuring physical stability of emulsi	(10 ////////////////////////////////////
	electing a filtering equipment.
6.1 State product related factors to be considered when so	electing a filtering equipment.
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5.2	Describe with the aid of a diagram the mechanism of plate and frame press in antibiotic slurry.	n filtrating (40 marks)
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<i>.</i>		

Index No:....

	Index No:	
6.3	What are the factors to be considered in the choice of equipment for emulsion in large scale?	preparatio (0 marks)
6.4	Explain briefly the auger system of capsule filling machines.	80 marks)
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