UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
FOURTH YEAR SECOND SEMESTER EXAMINATION – JULY 2015
PHADD 4202 DRUG DISCOVERY AND DEVELOPMENT

Date: 09.07.2015 **Time: 3 hours**

ANSWER ALL SIX QUESTIONS

1	1.1	What is the aim of the High throughput screening (HTS)?	(10 Marks)
	1.2	Briefly explain the major five components in the HTS.	(30 Marks)
	1.3	List the advantages and disadvantages of cell based assays.	(30 Marks)
	1.4	Briefly describe two fluorescence techniques that can be used for HTS.	(30 Marks)
2	2.1	Explain the following with examples,	
		2.1.1 Optimizing the yield and purity of the product from each chemical reaction.	(60 Marks)
		2.1.2 Scaling up the reaction.	(40 Marks)
3	3.1	Define following terms	
		3.1.2 Combinatorial synthesis	(10 Marks)
		3.1.2 Parallel synthesis.	(10 Marks)
	3.2	What are the advantages of solid phase techniques?	(30 Marks)
	3.3	Explain the *Fmoc* protection strategy using examples.	(50 Marks)
4	4.1	Briefly explain the phases of clinical trials.	(40 Marks)
	4.2	What factors would you consider when you select a subject for Phase 1 clinical trial.	(30 Marks)
	4.3	What are the roles and responsibilities of a regulatory authority?	(30 Marks)
5	5.1	Write an account on	
		5.1.1 Structure based virtual screening.	(50 Marks)
		5.1.2 Ligand based virtual screening.	(50 Marks)
6		Explain methods used to improve the kinetics of a drug during development.	(100 Marks)