

UNIVERSITY OF JAFFNA, SRI LANKA
BACHELOR OF PHARMACY
FOURTH YEAR SECOND SEMESTER EXAMINATION - APR 2020
PHADD 4223 DRUG DISCOVERY AND DEVELOPMENT



Date: 22.07.2020

Time: 03 Hours

Answer All Questions

1.
 - 1.1 List five (05) *in silico* methods used in drug discovery process. (10 marks)
 - 1.2 Briefly explain four (04) of the *in-silico* methods mentioned in 1.1. (40 marks)
 - 1.3 Discuss on “High-through put screening”. (50 marks)

2.
 - 2.1 List the factors that are considered when performing cell-based assay. (20 marks)
 - 2.2 Give five (05) examples for benchtop assays with their indications. (20 marks)
 - 2.3 List and explain *in-vitro* toxicological studies used in drug development process. (60 marks)

3.
 - 3.1 List five (05) local toxicity studies induced by drugs. (10 marks)
 - 3.2 List four (04) main drug safety activities that are executed in the various stages of the drug discovery process. (20 marks)
 - 3.3
 - 3.3.1 Explain clinical signs of toxicity observed in animal testing. (20 marks)
 - 3.3.2 Discuss pros and cons of animal testing in drug discovery. (50 marks)

4.
 - 4.1 Define “Orphan drug”. (10 marks)
 - 4.2 Explain how pharmaceutical companies can be encouraged for drug discovery of orphan disease? (30 marks)
 - 4.3 Explain the levels in target selection in a pharmaceutical company. (60 marks)

5.
 - 5.1 Explain the steps to be followed before conducting clinical trial. (40 marks)
 - 5.2 Describe the stages in phase 1 clinical trial. (60 marks)

6.
 - 6.1 Define “Druggable targets”. (10 marks)
 - 6.2 Explain genetic approach in target validation. (30 marks)
 - 6.3 Briefly describe the steps involved in drug development after validating the target. (60 marks)