

UNIVERSITY OF JAFFNA, SRI LANKA

FACULTY OF ALLIED HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION IN BPharmHons – 2022

PHARM 3173 RESEARCH METHODOLOGY AND MEDICAL STATISTICS

Date: 03.01.2024

Time: 03 Hours

ANSWER ALL THE FOUR QUESTIONS

Answer Part A, Part B and Part C in separate answer books

PART A

1. 1.1 1.1.1 What is Literature search. (10 Marks)
- 1.1.2 Briefly explain how to do a literature search on a topic. (30 Marks)
- 1.2 Briefly discuss the purpose of the literature review. (30 Marks)
- 1.3 1.3.1 Define study design. (10 Marks)
- 1.3.2 A study was done on the title “*In vitro* comparative quality evaluation of different brands of carbamazepine tablets commercially available in Dessie town, Northeast Ethiopia”. State the appropriate study design of this study and define it. (20 Marks)

PART B

2. 2.1 2.1.1 What are primary and secondary data? (20 Marks)
- 2.1.2 List the advantages and disadvantages of primary and secondary data. (20 Marks)
- 1.2 List the different elements of proposal. (20 Marks)
- 1.3 Write an account on pretest. (40 Marks)

PART C

3. A hospital pharmacist is working in Teaching hospital, Jaffna and observed that tablet enalapril consumption is increased in the hypertension patient. The anticipated enalapril consumption in diabetic and hypertension patients is 10% and 20 %, respectively. The registered hypertension patients in Teaching hospital, Jaffna are 28,800. About 1000 prescriptions were dispensed daily for hypertension patients. The hypertension clinic is conducted 6 days in a week. The pharmacist would like to estimate the present enalapril consumption with 95% confidence level and 2% margin of error.

24000

- 3.1 What is the suitable research type. (10 Marks)
- 3.2 Write the suitable study design above issue. (10 Marks)
- 3.3 Write a suitable objective for the study. (10 Marks)
- 3.4 State the population of the study. (10 Marks)
- 3.5 Write the population size of the study. (10 Marks)
- 3.6 Briefly explain the sampling frame of the study. (20 Marks)
- 3.7 Calculate the sample size for the study. (30 Marks)
4. 4.1 List five (05) different sampling methods. (15 Marks)
- 4.2 Write most appropriate population for each sampling method mention in 2.1. (25 Marks)
- 4.3 A researcher would like to find association between the following variables.
Write the more suitable statistical tests and conditions.
- 4.3.1 Age of the patient (in years) and type of non-communicable diseases. (10 Marks)
- 4.3.2 Gender and ethnicity. (10 Marks)
- 4.3.3 Age of the patient and patient body weight. (10 Marks)
- 4.4 Explain the result which given in table. (30 Marks)

		Type of prescription		P Value
		Polypharmacy	Not a polypharmacy	
Age of the patients in years (SD)		62 (14)	45 (15)	< 0.001
Type of disease n (%)	Hypertension	158 (35)	112 (25)	0.06
	Diabetes mellitus	45 (10)	135 (30)	

N = 450

Alpha (α)	$Z \alpha$	
	One sided α	Two sided $\alpha/2$
0.1	1.282	1.6
0.05	1.645	1.96
0.025	1.96	2.24
0.01	2.326	2.576