

Roll No.

Total No. of Pages : 02

Total No. of Questions : 08

Ph.D in Faculty of Pharmacy
RESEARCH METHODOLOGY
M.Code : 77399

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT question.
2. Each question carry FOURTEEN marks.

1. a) A group of 5 patients treated with medicine A weights 42, 62, 48, 60, 41 kg. A second group of 6 patients from same hospital treated with medicine B with weights 38, 42, 56, 64, 67 and 69. Do you agree with the claim that the medicine B increases weight significantly?

b) What are the properties and assumptions of Chi square test? When it is applied? In which situation yate's correction factor is applied?
2. a) What is the difference between Pearson and Spearman correlation? Also differentiate Pearson correlation and linear regression analysis.

b) Compare one way and two way ANOVA.
3. a) What are primary and secondary data? Give classification of secondary data.

b) What are different types of research designs? Compare observational and interventional research study designs.
4. a) Discuss the significance of literature review in report writing.

b) What is descriptive research? Describe in detail case study method of descriptive research.
5. Explain in detail various non probability sampling methods.
6. Write short notes on :

a) Criterion related validity

b) Skewness and kurtosis

7. Distinguish between :
- Stratified and cluster sampling.
 - Completely randomized and Latin square experimental design.
8. a) Test at 5% level of significance whether the data of sample 1 and 2 come from populations with the same mean using Mann whitney U test.

Sample 1	Sample 2
53 44 38 40 69 61 57 52	46 32 39 44 73 70 48 41
73 67 74 72 60 53 78 72	

- b) Describe validity and reliability. Explain in detail test-retest reliability.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.