Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

Pharma.D (Post Baccalaureate) (Sem.–4)

BIOSTATISTICS AND RESEARCH METHODOLOGY

Subject Code : PD-404T-19

M.Code : 78150

Date of Examination : 08-07-22

Time : 3 Hrs. Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A contain SEVEN questions. Attempt any FIVE questions. Each question will carry TWO marks each.**
2. **SECTION-B contains EIGHT questions (Short Essay Type). Attempt any SIX questions. Each question will carry FIVE marks.**
3. **SECTION-C contains THREE questions (Long Essay Type). Attempt any TWO questions. Each question will carry FIFTEEN marks.**

SECTION-A

Write briefly :

1. Define biostatistics. Mention two softwares used in biostatistics.
2. What do you mean by standard deviation?
3. Define regression.
4. Define hypothesis.
5. What do you mean by central tendency?
6. What do you mean by correlation?
7. Write the significance of F-test.

SECTION-B

8. Define chi-square test. What is the significance of chi square analysis?
9. Briefly, explain the various type of data used in research with examples.
10. Whit do you mean sample size calculation? Discuss one method to calculate the sample size for observational studies.

11. Write a note on role of computer in drug information services & hospital/community pharmacy

12. What do you mean by hypothesis testing? Write a detailed note on errors in research.

13. Define Mann Whitney U Test. Explain with one suitable example.

14. Write a short note on Karl Pearson coefficient of correlation.

15. Define relative and attributable risk. Write a note on statistical methods used in epidemiology.

SECTION-C

16. To carry out one factor analysis of variance of the given observations of three different groups of student performance in grades. Find out the mean difference between the groups and state the hypothesis, **[alpha level : 0.05 = F = 5.41]**

Group A	Group B	Group **C**
3	3	4
4	4	2
5	3	4

17. Define study design. Write classification of descriptive and analytical study design. What is the difference between descriptive and analytical study design?

18. Explain normality distribution. Write the role of skewness and kurtosis. List out the various methods of evaluating normality with examples.

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