

**QP Code: 821006**

**Reg. No.....**

**Eighth Semester B. Pharm Degree Supplementary Examinations  
November 2024**

**Biostatistics and Research Methodology**

**(2017 Scheme)**

**Time: 3 Hours**

**Max. Marks: 75**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

**Essays**

**(2x10=20)**

1. Write the criteria for selecting a good research problem. Discuss the steps involved in research process.
2. Describe the procedure to test the Null and Alternative hypothesis. Explain with suitable example.

**Short Notes**

**(7x5=35)**

3. Enumerate and explain about ethics in research.
4. Give different types of graphical methods used for presenting qualitative data.
5. Describe different types of epidemiology studies.
6. Differentiate between descriptive and inferential statistics.
7. Describe cluster sampling with an example.
8. Institutional Review Board.
9. Explain steps to calculate the Chi-Square ( $\chi^2$ ) test. Write the applications of Chi-Square ( $\chi^2$ ) test.

**Answer Briefly**

**(10x2=20)**

10. What are the different types of research.
11. Write the limitations of secondary data collection.
12. What are the guiding considerations in the development of questionnaire.
13. Define bias in clinical studies.
14. Explain confounding. Give an example of confounding.
15. Write the disadvantages of cohort study.
16. Explain informed consent
17. How will you determine the optimal sample size
18. Why are probability sampling methods generally preferred than non-probability sampling methods
19. Write the characteristics of good hypothesis.

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