

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code:2801

M.Sc. AUDIOLOGY

FIRST SEMESTER (Candidate admitted from 2021-2022 onwards)

PAPER I – RESEARCH METHODS, EPIDEMIOLOGY AND STATISTICS

Q.P. Code: 282801

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Describe various research designs and discuss in detail about the case control study and its merits and demerits with an example.
2. Structure, presentation and writing style of research report.

II. Write notes on:

(10x6=60)

1. Sampling Techniques.
2. Explain various Central Tendency with examples.
3. Discuss about Null hypothesis, level of significance, power of test and P value.
4. Write briefly on Non probability sampling.
5. Describe bias in epidemiological studies.
6. Discuss the five major elements of medical ethics.
7. Rank Correlation.
8. Effect Modification.
9. Blinding in a Clinical Trial.
10. Scatter diagram.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0523]

MAY 2023

Sub. Code: 2801

**M.Sc. AUDIOLOGY DEGREE EXAMINATION
FIRST SEMESTER (From 2021-2022 onwards)
PAPER I – RESEARCH METHODS, EPIDEMIOLOGY AND STATISTICS**

Q.P. Code: 282801

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Describe the basic steps involved in conducting randomized controlled trials and discuss about the types of R.C.T.
2. Explain in detail about parametric and non-parametric test with an example and write its application.

II. Write notes on:

(10x6=60)

1. How will you interpret data using the normal probability curve?
2. Descriptive study design.
3. Time series Analysis.
4. Principles of sample size calculation.
5. Standard score and its importance in the field of speech and hearing.
6. Average, Mean, Median and Mode.
7. Methods of research in behavioural sciences.
8. Presentation of data.
9. Distinguish between privacy and confidentiality.
10. Confidence interval.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1023]

OCTOBER 2023

Sub. Code: 2801

**M.Sc. AUDIOLOGY
FIRST SEMESTER (From 2021-2022 onwards)
PAPER I – RESEARCH METHODS, EPIDEMIOLOGY AND STATISTICS**

Q.P. Code: 282801

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. a) What are the differences between Experimental studies and Observational studies?
b) Discuss selection of controls in case-control studies.
2. a) Principle of probability sampling.
b) Types of probability sampling.
c) Merits and demerits of each of the sampling techniques.

II. Write notes on:

(10x6=60)

1. Ecological study.
2. Charts and Graphs.
3. Systematic error.
4. Ethics review of research proposals.
5. Reliability and Validity.
6. Elements of an Informed Consent
7. Steps in developing a research question.
8. Skewness and Kurtosis.
9. Blinding.
10. Analysis of variance.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0524]

MAY 2024

Sub. Code: 2801

M.Sc. AUDIOLOGY
FIRST SEMESTER (From 2021-2022 onwards)
PAPER I – RESEARCH METHODS, EPIDEMIOLOGY AND STATISTICS

Q.P. Code: 282801

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Why we need a Design for Research? Explain the various study designs for Research in Epidemiology.
2. Describe the tools of Data collection and Presentation of Data.

II. Write notes on:

(10x6=60)

1. Types of Research.
2. e-search for sources of data.
3. Non-Probability sampling.
4. SPSS.
5. Tabulation of Data.
6. Art of Report writing for research.
7. Methods and Measurement of Health Information System.
8. Demography details for Research.
9. Retrospective study.
10. Role of Processing and analysis of Research Design.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0525]

MAY 2025

Sub. Code:2801

M.Sc. AUDIOLOGY
FIRST SEMESTER (From 2021-2022 onwards)
PAPER I – RESEARCH METHODS, EPIDEMIOLOGY AND STATISTICS

Q.P. Code: 282801

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Explain Clinical Trial research designs in audiology. Discuss their applicability with suitable examples.
2. Define Epidemiology. Explain various study designs in epidemiology with their advantages and limitations.

II. Write notes on:

(10x6=60)

1. Ethical considerations in research and international guidelines.
2. Measures of association: Relative risk, ODDS ratio and Attributable risk.
3. Probability concepts and their applications in hypothesis testing.
4. Parametric vs. Non-parametric statistical tests: Differences and examples.
5. Regression analysis and its applications in audiology research.
6. Importance of systematic reviews and meta-analysis in evidence-based practice.
7. Importance of confidence intervals in statistical inference.
8. Bias in epidemiological studies and methods to reduce it.
9. Methods of observational studies in audiology research.
10. Application of ANOVA and ANCOVA in research studies.
