

[KZ 1011]

Sub. Code: 3001

**MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY  
(MASLP) DEGREE EXAMINATION**

**FIRST YEAR**

**PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : 3 hours  
(180 Min)**

**Maximum : 100 marks**

**Answer ALL questions in the same order.**

**I. Elaborate on :**

<b>Pages (Max.)</b>	<b>Time (Max.)</b>	<b>Marks (Max.)</b>
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- |  |    |    |    |
|--|----|----|----|
| 1. Research designs in behavioural sciences. | 17 | 40 | 20 |
| 2. Research report writing and presentation. | 17 | 40 | 20 |

**II. Write notes on :**

- |  |   |    |   |
|--|---|----|---|
| 1. Dependability of the descriptive measures of the sample in research applications.       | 4 | 10 | 6 |
| 2. Differentiate between skewness and kurtosis.  | 4 | 10 | 6 |
| 3. Use of regression equations in research.  | 4 | 10 | 6 |
| 4. Explain the analysis of covariance technique by giving examples in your field of study. | 4 | 10 | 6 |
| 5. Item pool and difficulty index.   | 4 | 10 | 6 |
| 6. Nonparametric measures of association and their interpretation.                         | 4 | 10 | 6 |
| 7. Statistical techniques used in epidemiological research.                                | 4 | 10 | 6 |
| 8. Scientific approach to solving research problems.                                       | 4 | 10 | 6 |
| 9. Purposive and incidental sampling methods.  | 4 | 10 | 6 |
| 10. Explain the importance of variance control in experimental research.                   | 4 | 10 | 6 |

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[LB 1012]

OCTOBER 2012

Sub. Code: 3001

MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

(MASLP) DEGREE EXAMINATION

FIRST YEAR

PAPER I – STATISTICS AND RESEARCH METHODS

*Q.P. Code : 433001*

Time : 3 hours  
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages Time Marks  
(Max.)(Max.)(Max.)

- |   |    |    |    |
|---|----|----|----|
| 1. Best measure of dispersion and explain its need in research. | 17 | 40 | 20 |
| 2. Methods of Sampling.   | 17 | 40 | 20 |

II. Write Notes on :

- |  |   |    |   |
|--|---|----|---|
| 1. Skewness and Kurtosis.              | 4 | 10 | 6 |
| 2. Limitations of Statistics.          | 4 | 10 | 6 |
| 3. Properties of Normal distribution.  | 4 | 10 | 6 |
| 4. MANOVA and MANCOVA.                 | 4 | 10 | 6 |
| 5. Time validity and difficulty index. | 4 | 10 | 6 |
| 6. Tests of Similarity.                | 4 | 10 | 6 |
| 7. Randomized Control Trial.           | 4 | 10 | 6 |
| 8. SPSS.                               | 4 | 10 | 6 |
| 9. Reliability and Validity.           | 4 | 10 | 6 |
| 10. Time Series Analysis.              | 4 | 10 | 6 |

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[LC 0413]

APRIL 2013

Sub. Code: 3001

MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

(MASLP) DEGREE EXAMINATION

FIRST YEAR

PAPER I – STATISTICS AND RESEARCH METHODS

*Q.P. Code : 433001*

**Time : 3 hours**

**Maximum : 100 marks**

**I. Elaborate on:**

**(2x20=40)**

1. Non Parametric Tests.
2. The applications of group and single subject Research designs.

**II. Write Notes on :**

**(10X6=60)**

1. Best measure of Variability.
2. Merits and Demerits of an Average.
3. Laws of Probability.
4. Rank Correlation.
5. Chisquare test.
6. Partial and Multiple correlation.
7. Case Control Study.
8. Emphirical Rationale.
9. Incidental Sampling.
10. Variance Control.

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[LD 1013]

OCTOBER 2013

Sub.Code :3001

MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY

(MASLP) DEGREE EXAMINATION

FIRST YEAR

PAPER-I STATISTICS AND RESEARCH METHODS

Q.P. Code: 433001

Time: Three hours

Maximum : 100 Marks

Answer All questions

I Elaborate on:

(2x20 =40)

1. Define sampling. Discuss about various sampling methods with suitable examples.
2. Mention the various study designs and discuss in detail about the observational study design.

II. Write Short notes on:

(10 x 6 = 60)

1. Standard Deviation Versus coefficient of variation.
2. Receiver operator characteristic curve.
3. Blinding in Randomized Control Trial.
4. List the application of correlation analysis.
5. Describe analysis of Variance and its application.
6. Explain time series analysis.
7. Types of validity.
8. Regression
9. Briefly describe factor analysis.
10. What is hypothesis and its type? How do you test the hypothesis?

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[LE 0414]

APRIL 2014

Sub.Code :3001

**MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY  
(MASLP) DEGREE EXAMINATION  
FIRST YEAR  
PAPER-I STATISTICS AND RESEARCH METHODS**

**Q.P. Code: 433001**

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All Questions**

**I Elaborate on:**

**(2x20 =40)**

1. Explain in detail about parametric and non-parametric test with an example and write its application.
2. Mention the various study designs and discuss in detail about the Cohort study and its merits and demerits with an example.

**II. Write Short notes on:**

**(10 x 6 = 60)**

1. Difference between ANOVA and MANOVA and its application.
2. Define correlation and rank correlation.
3. Blinding in Randomized Control Trial.
4. Descriptive study design.
5. State and explain the basic principle of random sampling.
6. Measures of central tendency.
7. Explain binominal distribution.
8. Advantage and disadvantage of case control study.
9. Various methods of research report.
10. How will you interpret data using the normal probability curve?

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[LF 1014]

OCTOBER 2014

Sub.Code :3001

**MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY  
(MASLP) DEGREE EXAMINATION  
(2010-2011 Session onwards)  
FIRST YEAR  
PAPER-I STATISTICS AND RESEARCH METHODS**

*Q.P. Code: 433001*

**Time: Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Need for Measures of Averages and Measures of variability in speech and hearing field.
2. Principles and properties of normal distribution. Also explain the interpretation of probability curve and its causes and deviations from the form.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Standard score and its importance in the field of speech and hearing
2. Addition and Multiplication Law of Probability
3. Assumptions involved in ANOVA, MANOVA, ANCOVA AND MANCOVA
4. Test of difference with correlated and uncorrelated data
5. Kruskal Wallis Test and Mann Whitney U Test
6. Differentiate between group designs and single subject research design
7. Export Factor Research Design
8. Probability Sampling
9. Role of variance in Research and how to control it
10. Time series Analysis

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[LH 0415]

OCTOBER 2015

Sub. Code: 3001

**MASTER OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY**  
**(from 2011-2012 Session onwards)**  
**FIRST YEAR**  
**PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : Three hours**

**Maximum : 100 marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Describe probability distribution and discuss standard normal curve and its Application.
2. Write in detail the steps in conducting a randomized clinical trial (RCT). Mention the principles of Randomization.

**II. Write notes on :**

**(10 x 6 = 60)**

1. Parametric test.
2. Types of Diagrammatic Representation in report writing.
3. Normal distribution.
4. Cohort Study.
5. Advantages and disadvantages of non parametric test.
6. Principles of sample size calculation.
7. Mention various style in writing the References.
8. Average, Mean, Median and Mode.
9. Types of Validity.
10. Field Studies.

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[LJ 1016]

OCTOBER 2016

Sub. Code: 3001

**MASTER OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY EXAMS  
FIRST YEAR  
PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Types of statistical research in clinical study.
2. Structure, presentation and writing style of research report.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Measures of variability in research applications.
2. Standard scores and its importance in Audiology and speech language.
3. Addition theorem on probability.
4. Differences between product moment, rank, biserial and tetracoric correlation.
5. Assumptions involved in ANOVA and MANOVA.
6. Nature and conditions of non-parametric statistics.
7. Fundamental research epidemiology.
8. Methods of research in behavioural sciences.
9. Analysis and interpretation adopted in factor analysis.
10. Methods of sampling.

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[LL 1017]

OCTOBER 2017

Sub. Code: 3001

**MASTER OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY EXAMS  
FIRST YEAR  
PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Parametric and non-parametric test by explaining its procedure with an example.
2. The various research designs and discuss in detail about the Cohort study and its merits and demerits with an example.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Randomized control trail.
2. Normal probability curve and its interpretation.
3. Correlation, partial and multiple correlation.
4. Probability sampling.
5. Factor research laboratory experiments.
6. Methods of research in behavioural sciences.
7. Time series analysis.
8. Merits and demerits of case control study.
9. Measures of Central Tendency.
10. Presentation of data.

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[LN 1018]

OCTOBER 2018

Sub. Code: 3001

**MASTER OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY EXAMS  
FIRST YEAR  
PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Explain correlation and regression analysis with suitable example.
2. Discuss in detail about various study designs used in research methodology.

**II. Write notes on:** **(10 x 6 = 60)**

1. Explain the various measures of central tendency with suitable examples.
2. Describe merits and demerits of measures of variability.
3. Define normal probability curve. How will you interpret data using the normal probability curve?
4. Explain analysis of variance (ANOVA).
5. Discuss about Null hypothesis, level of significance, power of test and P value.
6. Summarize measures of association.
7. Discuss briefly on the needs and classification of Research study.
8. Distinguish between the applications of group design and single subject design.
9. Outline research report writing and presentation.
10. Explain experimental group and control groups.

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[LP 1019]

OCTOBER 2019

Sub. Code: 3001

**MASTER OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY EXAMS  
FIRST YEAR  
PAPER I – STATISTICS AND RESEARCH METHODS**

*Q.P. Code : 433001*

**Time : Three hours**

**Maximum : 100 Marks**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Explain in detail about parametric and non-parametric test with an example and write its application.
2. Mention the various study designs and discuss in detail about the Cohort study and its merits and demerits with an example.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Skewness and Kurtosis.
2. How will you interpret data using the normal probability curve?
3. Assumptions involved in Anova, Manova, Ancova and Mancova.
4. Correlation, partial and multiple correlations.
5. Merits and demerits of case control study.
6. Clinical and applied research.
7. Time series analysis.
8. Distinguish between the applications of group design and single subject design.
9. Discuss about Null hypothesis, level of significance, power of test and P value.
10. Technique of sampling.

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

**[AHS 0321]**

**MARCH 2021**

**Sub. Code: 3001**

**(OCTOBER 2020 EXAM SESSION)**

**MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY**

**FIRST YEAR (From 2010-2011 onwards)**

**PAPER I – STATISTICS AND RESEARCH METHODS**

***Q.P. Code : 433001***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 100 Marks**

**I. Elaborate on :**

**(2x20=40)**

1. Explain Correlation and Regression with suitable example.
2. Mention the various study designs and discuss in detail about the observational study design.

**II. Write notes on :**

**(10x6=60)**

1. Types of Validity.
2. Blinding in Randomized Control Trial.
3. Factor research Laboratory experiment.
4. Time series Analysis.
5. Normal distribution.
6. Types of Diagrammatic Representation in report writing.
7. Methods of research in behavioral sciences.
8. Addition Theorem in Probability.
9. Explain Analysis of variance.
10. Skewness and Kurtosis.

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

**[AHS 0222]**

**FEBRUARY 2022  
(OCTOBER 2021 EXAM SESSION)**

**Sub. Code: 3001**

**MASTER OF AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY  
FIRST YEAR (From 2010-2011 onwards)  
PAPER I – STATISTICS AND RESEARCH METHODS  
*Q.P. Code : 433001***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 100 Marks**

**I. Elaborate on :**

**(2x20=40)**

1. Explain in details about parametric test with a suitable example.
2. Write in details the steps in conducting a randomized clinical trial. Mention the principles of Randomization.

**II. Write notes on :**

**(10x6=60)**

1. Explain the measures of central tendency.
2. Correlation with example
3. Merits and demerits of case control study design.
4. Probability sampling.
5. Measures of association.
6. Time series analysis.
7. Outline research report writing and presentation.
8. Explain Binomial Distribution.
9. Addition and Multiplication Law of Probability.
10. Field Studies.

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