

M.D. (HOMOEOPATHY) DEGREE EXAMINATION

PART – I

COMMON TO ALL BRANCHES

RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code : 443002

Time: Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Data, write about different methods of collection of Data.
2. Write about different types of research techniques, need and scope of research in homoeopathy.

II. Write notes on:

(10 x 6 = 60)

1. Cohort study.
2. Write in brief about different measures of central tendency.
3. t- test – definition and types.
4. Define Sampling explain about the simple random method of sampling.
5. Correlation and Regression.
6. Probability.
7. Write in brief Quantitative and Qualitative research.
8. Steps involved in the research process.
9. What are the health indicators, what is the importance of these indicators?
10. Research design.

[LN 3002]

OCTOBER 2018

Sub. Code: 3002

M.D. (HOMOEOPATHY) DEGREE EXAMINATION

PART – I

COMMON TO ALL BRANCHES

RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code : 443002

Time: Three Hours

Maximum : 100 Marks

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

1. Define and classify research design. Explain in detail about descriptive research design.
2. Each of 11 hypertensive patients was administered 2 drugs on two occasions. Each patient received the placebo first and on one month later they each received the drug. Blood pressure was recorded similarly on these occasions. The data given below as systolic blood pressure on the basis of these experimental results. Is there any evidence of differences in mean blood pressure due to the use of these two drugs.

Placebo	212	210	210	204	196	190	192	178	174	170	162
Drug	180	172	196	190	166	160	178	160	148	118	156

(t value at 1% level of significance for df =20 is 2.845).

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

1. What is the need for research and what are the research challenges in homoeopathy?
2. Preparation of report.
3. Describe sampling and its types.
4. Professional conduct.
5. CCRH and its guidelines for homoeopathic researches.
6. Use of “information technology” tools in biostatistical data analysis.
7. P value.
8. Tests for significance.
9. Quartile, range, and standard deviation.
10. Poisson distribution.

[LO 3002]

MAY 2019

Sub. Code: 3002

M.D. (HOMOEOPATHY) DEGREE EXAMINATION

PART – I

COMMON TO ALL BRANCHES

PAPER - II

RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code : 443002

Time: Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write in detail about evolution of biomedical ethics and its principles in biomedical research.
2. Calculate the arithmetic mean, median, mode and standard deviation from the following on serum albumin values in gm/ltr of blood of 10 patients admitted in a hospital. The values are 42, 41, 39, 42, 37, 41, 39, 35, 45 and 39. The mean haemoglobin values in gm% of these patients are 12 with a standard deviation of 1.4. compare the variability of serum albumin values with that of haemoglobin values.

II. Write notes on:

(10 x 6 = 60)

1. What is CCH and its functions?
2. Explain the guidelines of ICMR.
3. Clinical trials.
4. Presentation of data.
5. Demography.
6. Central tendencies.
7. Skewness and kurtosis.
8. Types of error.
9. ANOVA.
10. Binomial distribution.

[LP 3002]

OCTOBER 2019

Sub. Code: 3002

M.D. (HOMOEOPATHY) DEGREE EXAMINATION

PART – I

COMMON TO ALL BRANCHES

RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code : 443002

Time: Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Data. Write different types and levels of Data.
2. Write in brief about Measures of central tendency.

II. Write notes on:

(10 x 6 = 60)

1. Ethical issues in conducting biomedical research.
2. Define sample. What are the characteristics of a good sample design.
3. T-paired test.
4. Hypothesis.
5. Standard deviation.
6. What is Analytical research and types of Analytical research?
7. Importance of research in homoeopathy.
8. Explain about Analysis of variance and covariance.
9. Steps involved in research.
10. Bio medical ethics.

[LQ 3002]

**NOVEMBER 2020
(MAY 2020 SESSION)**

Sub. Code: 3002

M.D. (HOMOEOPATHY) DEGREE EXAMINATION

PART – I

COMMON TO ALL BRANCHES

RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code : 443002

Time: Three Hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Answer the following questions with suitable example.
 - a. Explain the steps involved in ecological studies.
 - b. Discuss ecological fallacy.
2. Write a note on test of significance, explain in details about chi-square test.

II. Write notes on:

(10 x 6 = 60)

1. Define research. Discuss the need and challenges of research in homoeopathic practice.
2. Discuss various levels of measurement.
3. Explain retrospective cohort study, Discuss the advantages and disadvantages of cohort study.
4. Explain randomized controlled trial with an example.
5. Compare and contrast qualitative and quantitative research.
6. Discuss the need for research design, Describe the features of good research design.
7. Discuss measures of dispersion and its application in health sciences.
8. Define Population and Sample for a research. Explain the characteristics of a good sample design.
9. Discuss probability and non-probability sample with suitable example.
10. Discuss meaning and techniques of interpretation.

M.D. (HOMOEOPATHY) DEGREE EXAMINATION
PART – I (For candidates admitted from 2016-2017 onwards)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS
Q.P. Code : 443002

Time : Three Hours

Answer all questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define health information system and explain their components and application.
2. Test whether there is any association between the severity of a disease and nutritional status.

Nutritional status

Severity	Good	Moderate	Poor	
Mild	25	40	75	140
Moderate	60	70	150	280
Severe	20	40	180	240
Total	105	150	405	660

(chi square value at 5% level of significance for df = 4 is 9.488)

II. Write notes on:

(10 x 6 = 60)

1. AYUSH and its scheme for homoeopathic research.
2. Declaration of Helsinki.
3. Historical cohort.
4. Qualities of a researcher.
5. Plagiarism.
6. Probability and its laws.
7. Correlation.
8. Hypothesis testing/tests.
9. Vital statistics.
10. F-test.

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

[MD(HOM.) 0222]

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

Sub. Code: 3002

**M.D. (HOMOEOPATHY) DEGREE EXAMINATION
PART – I (For candidates admitted from 2016-2017 onwards)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS
Q.P. Code : 443002**

Time : Three Hours

Answer all questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define data. Discuss various types of data and its presentation.
2. Describe cross-sectional study to enumerate the use of arnica Montana for injuries.

II. Write notes on:

(10 x 6 = 60)

1. A homoeopathic researcher identified the efficacy of FerrumPhos in anaemia among adolescent females. The following data was recorded.

Before intervention		After intervention	
Age	Haemoglobin %	Age	Haemoglobin %
14	8	14	12
13	7	13	10
12	10	12	13
14	11	14	13
16	9	16	12
11	8	11	10
12	7	12	10
13	9	13	13

- (a) Compare the results and construct a frequency table
 - (b) Draw appropriate graph for the above data and justify.
2. Explain double blind clinical trials with suitable homoeopathic remedy as an example.
 3. Discuss research design.

4. A Homoeopathic researcher compared the efficacy of chelidonium and lycopodium for cholelithiasis patients. The following are the weights (kgs) and heights (cm) of the 10 subjects in the sample studied.

Weight: 83 99 63 71 65 79 70 69 56 66

Heights: 185 180 173 168 175 183 184 174 164 169

Answer the following questions based on above given data.

- a. For each variable compare the mean, median, variance and standard deviation.
 - b. Which set of measurement is more variable weight or height.
5. Explain variance and standard deviation.
6. Discuss the steps involved in sampling design.
7. Discuss non-probability sampling in detail. Explain the disadvantages of non-probability sample in medical research.
8. Explain the steps in Chi-square test with appropriate example.
9. Discuss the concept of life table with suitable example.
10. Describe in brief the layout of a research report with suitable example.

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

[MD(HOM.) 0822]

**AUGUST 2022
(MAY 2022 EXAM SESSION)**

Sub. Code: 3002

**M.D. (HOMOEOPATHY) DEGREE EXAMINATION
PART – I (For candidates admitted from 2016-2017 onwards)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS
Q.P. Code : 443002**

Time : Three Hours

Answer all questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define research. Explain types and techniques of research.
2. Define sampling. Write about different sampling techniques.

II. Write notes on:

(10 x 6 = 60)

1. Test for significance.
2. Case control study.
3. Describe the measures of central tendency.
4. Scope of biostatistics in homoeopathic research.
5. Write about Morbidity and Mortality.
6. Chi square test.
7. Co-relation and regression.
8. Write about the features of a good research design.
9. Fundamental research.
10. Probability.

M.D. (HOMOEOPATHY) DEGREE EXAMINATION
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PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS
Q.P. Code : 443002

Time : Three Hours

Answer all questions

Maximum : 100 Marks

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

1. Define cohort studies. Discuss the types of cohort studies in details.
2. Discuss Chi-square as a non-parametric test with suitable example.

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

1. Discuss the scope of biostatistics and social research in homoeopathic practice.
2. As a homoeopathic researcher if you are conducting qualitative research mention various levels of measurement for enumerating the following
 - a. Pain of rheumatism
 - b. Number of villagers using homoeopathic medicine.
3. Explain randomized controlled trial using rhustox, ledum pal and rutagrav for small joint pains.
4. Design a qualitative study using any homeopathic drug and mental health.

A homoeopathic researcher administered a drug 'X' to twenty patients. The following table shows the number of hours 20 patients slept following the administration of the drug 'X'.

7	10	12	4	8	7	3	8	5	16
12	11	3	8	1	1	13	10	14	14

From the above data

 - a. Construct a frequency distribution table
 - b. A histogram
 - c. Calculate mean, median, mode, range for number of hours patient slept following administration of the drug.
5. Discuss Mean, standard deviation and variance with suitable example.
6. Explain sampling design with suitable example.
7. Explain the advantages and disadvantages of probability sample.
8. Discuss any two non-parametric tests with appropriate example.
9. Discuss the significance of report writing. Explain the steps in writing a research report.
10. Discuss informed consent. Why is it necessary for medical research?

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PART – I (For candidates admitted from 2016-2017 onwards)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code: 443002

Time : Three Hours

Answer all questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. What is Sampling and different types of sampling methods?
2. Explain the significance of Learning Research Methodology and list down the challenges faced while conducting research in Homoeopathy.

II. Write notes on:

(10 x 6 = 60)

1. Explain the conditions for Type I and Type II error.
2. What is the purpose of Frequency distribution tables, demonstrate an example?
3. Levels of significance and type of tests.
4. What is Mean, Median, Mode and Standard deviation?
5. What is the importance of Bio-Medical research?
6. What are common ethical issues?
7. What is probability and p value?
8. Student's t test.
9. Vital statistics.
10. Standard error.

M.D. (HOMOEOPATHY) DEGREE EXAMINATION
PART – I (For candidates admitted from 2016-2017 onwards)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code: 443002

Time: Three Hours

Answer ALL questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write in detail about Research design and draft a Research design for a Homoeopathic Pathogenetic Trial.
2. What are the important Methods of data collection? Write about the different tools used for data collection.

II. Write notes on:

(10 x 6 = 60)

1. What is the need for clinical research in homoeopathy?
2. What are the two types of hypothesis testing? Explain about both the types.
3. What are common ethical issues in clinical research?
4. Concept of 'Confidence interval' and its importance.
5. What is Paired T test? Write about the steps involved in its computation.
6. How to prevent bias in sampling and explain the methods.
7. List down different types of clinical studies.
8. What is population statistics?
9. Explain about Regression Analysis.
10. What is probability and explain level of significance for biological science studies.

M.D. (HOMOEOPATHY) DEGREE EXAMINATION
PART – I (Candidates admitted during the Academic Year 2023-2024)
COMMON TO ALL BRANCHES
PAPER II - RESEARCH METHODOLOGY AND BIO-STATISTICS

Q.P. Code: 443002

Time: Three Hours

Answer ALL questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Define sampling and explain the type of sampling. Write in detail about the importance of Probability Sampling.
2. Explain the Analytical studies and their types.

II. Write notes on:

(10x6=60)

1. Explain kurtosis and its importance.
2. Write about the 'F' test.
3. What is ANOVA? – Explain about the application.
4. What is statistics? Write notes on the uses of medical statistics.
5. Prospective and Retrospective research study.
6. Write notes on clinical trial and its Phases.
7. Write a note on citation styles.
8. Type 1 and Type 2 errors.
9. Explain paired 't' test and its utility in Homoeopathy.
10. Correlation Analysis – Explain about its utilization.
