

B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR
PAPER IV – SOCIAL RESEARCH

Q.P. Code: 802254

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Define research? Explain the steps involved in research process?
2. Bring out the steps involved in testing of hypothesis?
3. Nutritional status of children based on their socio economic classes are given below. Check whether there is any association by using a suitable statistical test. (Reference table value = 5.99)

| <i>Socio economic class</i> | <i>Nutritional status of children</i> | | |
|-----------------------------|---------------------------------------|---------------|--------------|
| | <i>Malnourished</i> | <i>Normal</i> | <i>Total</i> |
| <i>High</i> | 12 | 38 | 50 |
| <i>Middle</i> | 10 | 50 | 60 |
| <i>Low</i> | 30 | 60 | 90 |
| Total | 52 | 148 | 200 |

II. Write Notes on:

(8 x 5 = 40)

1. Data coding and preparation of master sheet.
2. Features of SPSS.
3. Confidence interval Vs P Value.
4. Randomization.
5. How will you test the association between two categorical variable?
6. In an experiment to determine the effect of a certain drug on serum cholesterol level (Measured in mg/100 ml) in 30 year old males, The following range of data were recorded for the drug treated group. Calculate the Arithmetic mean and interpret your result?
Cholesterol level : 120-140 140-160 160-180 180-200 200-220 220-240 240-260
No: of patients : 1 2 3 5 7 6 3
7. Following are the distribution of nursing students according to ABO blood group and Rh type. Prepare a component bar diagram?

| Blood group | A | B | AB | O |
|--------------------|----|---|----|----|
| Rh positive | 12 | 2 | 8 | 17 |
| Rh Negative | 4 | 2 | 2 | 3 |

8. In a study, 12 arthritis patients were subjected to ESR Estimation. The data were as follows. Calculate Standard deviation and interpret your result?

35, 33, 32, 30, 36, 31, 63, 37, 30, 30, 72, 35

III. Short Answers on:

(10 x 3 = 30)

1. Replication.
2. Clinical Interview.
3. Scatter diagram.
4. Confounding.
5. Plagiarism.
6. Statistics and preventive medicine.
7. Point estimation.
8. Types of hospital statistics.
9. Replicated or interpenetrating sampling.
10. Standard error.

[LK 0217]

FEBRUARY 2017

Sub.Code :2254

B.Sc. MEDICAL SOCIOLOGY

SECOND YEAR

PAPER IV – SOCIAL RESEARCH

Q.P. Code: 802254

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Explain the Role of statistics in clinical Medicine.
2. Write in detail about types of report writing.
3. In a clinical laboratory, tests were run on three new instruments used for making a certain blood chemistry measurement. Tests solutions were prepared containing a known concentration (10mg/dl) of the substance to be measured. The following result were obtained with the three experimental instrument.

| | | | | | | | | |
|-------------|-------|----|----|----|----|----|----|----|
| | I : | 5 | 10 | 7 | 15 | 16 | 12 | 4 |
| Instruments | II : | 10 | 6 | 10 | 9 | 11 | 8 | 9 |
| | III : | 10 | 11 | 9 | 10 | 10 | 9 | 11 |

- a) Determine the mean and standard deviation for the three instruments. In clinical measurements, three terms that are used frequently are precision, unbiasedness, and accuracy. Precision refers to the spread of a set of observations and is measured by the standard deviation. Unbiasedness refers to the tendency of a set of measurements to be equal to a "true value". For an instrument to be accurate, its reading must be both precise and unbiased.
- b) Describe all three instrument in terms of above definition.
- c) Which instrument would you purchase, Why?

II. Write Notes on:

(8 x 5 = 40)

1. Content Validity.
2. Stratified Vs Cluster Sampling.
3. Statistical Package for Social Science.
4. Ethical Issues in Research.
5. Properties of good estimator.
6. Parametric Vs Non Parametric test.

7. The following table gives the weight of cancer patients in a hospital. The frequency of the class interval 49-52 is missing (P). It is given that the average weight of above cancer patients is 47.2. Estimate the missing frequency?

| | | | | | |
|------------------|-------|-------|-------|-------|-------|
| Weight | 40-43 | 43-46 | 46-49 | 49-52 | 52-55 |
| Frequency | 31 | 58 | 60 | P | 27 |

8. In a clinical trial to see the effect of improvement in hemoglobin among anemic children, the following data were obtained. Calculate the Median and interpret your result?

| | | | | | | |
|----------------|---|-----|-----|------|-------|-------|
| HB level | : | 4-6 | 6-8 | 8-10 | 10-12 | 12-14 |
| No of patients | : | 2 | 3 | 15 | 20 | 10 |

III. Short Answers on:

(10 x 3 = 30)

1. Snow-ball sampling.
2. Clinical interview.
3. One dimensional diagram.
4. Non probability sampling techniques.
5. Characteristics of good measurement in research.
6. Power of a test.
7. Uses of chi square test.
8. Types of hospital statistics.
9. Replicated or interpenetrating sampling.
10. P value.

**B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR
PAPER IV – SOCIAL RESEARCH**

Q.P. Code: 802254

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Discuss the purpose and steps in Social Research.
2. Explain tools of data collection.
3. A sample of 100 children had mean hemoglobin of 9.2 gm with a standard deviation of 2.0. Test the hypothesis that they were drawn from a population with mean hemoglobin of 11.5 gm.

II. Write notes on:

(8 x 5 = 40)

1. Sampling techniques.
2. Need for research design.
3. Experimental and Exploratory Studies.
4. Communication of research findings.
5. Draw histogram for

| | | | | | | | |
|-------------|--------|-------|-------|-------|-------|-------|-------|
| Weight (kg) | 10 -12 | 12-14 | 14-16 | 16-18 | 18-20 | 20-22 | 22-24 |
| Persons | 10 | 144 | 35 | 56 | 59 | 40 | 35 |

6. Measures of variation.
7. Write on scientific report.
8. Uses of Statistical Package in Social Sciences.

III. Short answers on:

(10 x 3 = 30)

1. Define Biostatistics.
2. Primary and secondary data.
3. Reliability and Validity.
4. Uses of Check list.
5. Calculate mean, median and mode for the data
7, 9, 6, 5, 3, 1, 8, 6, 4, 2
6. Bar Chart.
7. Type I and Type II errors.
8. Research Hypothesis and Null hypothesis.
9. Level of significance.
10. Bibliography.

**B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR
PAPER IV – SOCIAL RESEARCH**

Q.P. Code: 802254

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Discuss various methods of data collection.
2. Discuss the various sampling techniques used in Social Research.
3. Find the association between the socioeconomic status and place of treatment for common ailments using the following data (5% Table value for reference = 3.84).

| Socioeconomic status | General hospital | Private Practice | Total |
|----------------------|------------------|------------------|-------|
| High | 10 | 40 | 50 |
| Middle | 50 | 100 | 150 |
| Total | 60 | 140 | 200 |

II. Write notes on:

(8 x 5 = 40)

1. Criteria for selection of tools.
2. Sample size and its determination.
3. Cross sectional and longitudinal study.
4. Measures of central tendency.
5. Calculate measures of central tendency for 1, 8, 6, 9, 10, 3, 6, 2, 3, 5.
6. Criteria for selecting research problem.
7. Testing of hypothesis.
8. Role of statistics in preventive medicine.

III. Short answers on:

(10 x 3 = 30)

1. Tabulation of data.
2. Qualitative and quantitative variables.
3. Role of statistics in Preventive Medicine.
4. Pie Diagram.
5. If mean is 50 and standard deviation is 25, calculate coefficient of variation.
6. Types of Variables.
7. Box Plot.
8. Find the mean, median and mode for the data: 33, 44, 55, 66, 55, 77, 88, 888 and 999.
9. Bar Chart.
10. Histogram.

B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR
PAPER IV – SOCIAL RESEARCH

Q.P. Code: 802254

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about types of report writing.
2. Nutritional status of children based on their socio economic classes is given below. Check whether there is any association by using a suitable statistical test. (Reference table value = 5.99)

| <i>Socio economic class</i> | <i>Nutritional status of children</i> | | |
|-----------------------------|---------------------------------------|---------------|--------------|
| | <i>Malnourished</i> | <i>Normal</i> | <i>Total</i> |
| <i>High</i> | 12 | 38 | 50 |
| <i>Middle</i> | 10 | 50 | 60 |
| <i>Low</i> | 30 | 60 | 90 |
| Total | 52 | 148 | 200 |

3. Elaborate on appropriate selection of tools for a research. Emphasis on criteria for selection of tools and different types of tools.

II. Write notes on:

(8 x 5 = 40)

1. Short note on Qualitative and quantitative data.
2. Present this data with an appropriate graph

| | | | | | | | |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cholesterol level | 60 – 100 | 100 – 140 | 140 – 180 | 180 – 220 | 220 – 260 | 260 – 300 | 300 – 340 |
| Frequency | 32 | 96 | 172 | 121 | 73 | 36 | 171 |

3. Type 1 and Type 2 Errors.
4. Uses and Limitations of Statistics.
5. Ethical Issues in Research
6. What are the different types of experimental setting?
7. Stratified Vs Cluster Sampling.
8. Statistical Package for Social Science.

III. Short answers on:

(10 x 3 = 30)

1. Types of Frequency Distribution.
2. Confounding.
3. Point estimation.
4. Sampling error.
5. Properties of good estimator.
6. Research Hypothesis.
7. Snow-ball sampling.
8. Plagiarism
9. Structure of a Table.
10. Clinical Interview.

**B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR
PAPER IV – SOCIAL RESEARCH**

Q.P. Code: 802254

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Explain the role of statistics in preventive medicine.
2. Discuss the purpose and steps in Social Research.
3. Explain the types of observations in Medicine.

II. Write notes on:

(8 x 5 = 40)

1. Estimation.
2. Presentation of Data.
3. Bias in Research.
4. Power of the Test.
5. Characteristics of Frequency Distribution.
6. Write on scientific report.
7. Write on Point Estimation and Confidence Interval.
8. In a study, 12 arthritis patients were subjected to ESR Estimation. The data were as follows. Calculate Standard deviation and interpret your result?
35, 33, 32, 30, 36, 31, 63, 37, 30, 30, 72, 35

III. Short answers on:

(10 x 3 = 30)

1. Line Diagram.
2. Scatter Diagram.
3. Cohort study.
4. Social survey.
5. Cronbach's alpha.
6. Range and its coefficient.
7. Application of statistics.
8. Need for research design.
9. Measures of variation.
10. P Value.

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

[AHS 0321]

MARCH 2021

Sub. Code: 2254

(AUGUST 2020 EXAM SESSION)

B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR (Regulations 2014-2015)

PAPER IV – SOCIAL RESEARCH

Q.P. Code : 802254

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define research? Explain the steps involved in research process?
2. Nutritional status of children based on their socio economic classes is given below. Check whether there is any association by using a suitable statistical test. (Reference table value = 5.99)

| Socio economic class | Nutritional status of children | | |
|----------------------|--------------------------------|--------|-------|
| | Malnourished | Normal | Total |
| High | 12 | 38 | 50 |
| Middle | 10 | 50 | 60 |
| Low | 30 | 60 | 90 |
| Total | 52 | 148 | 200 |

3. Write in detail about types of report writing.

II. Write notes on:

(8 x 5 = 40)

1. Give brief description of any two graphical methods of data presentation.
2. Vital statistics and health statistics
3. What are the different types of experimental setting?
4. Level of significance.
5. Check list for data error correction.
6. Characteristics of Frequency Distribution
7. Limitations of Statistics.
8. In a clinical trial to see the effect of improvement in hemoglobin among anemic children, the following data were obtained. Calculate the Median and interpret your result?

| HB level | 4-6 | 6-8 | 8-10 | 10-12 | 12-14 |
|----------------|-----|-----|------|-------|-------|
| No of patients | 2 | 3 | 15 | 20 | 10 |

III. Short answers on:

(10 x 3 = 30)

1. Confounding.
2. Plagiarism.
3. Types of hospital statistics.
4. Standard deviance.
5. Replicated or interpenetrating sampling.
6. Content Validity.
7. Type 1 error.
8. Unequal class intervals.
9. Properties of good estimator.
10. Snow-ball sampling.

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

[AHS 0222]

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

Sub. Code: 2254

**B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR (Regulations 2014-2015)
PAPER IV – SOCIAL RESEARCH
*Q.P. Code : 802254***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about types of report writing.
2. Discuss the purpose and steps in Social Research.
3. Explain tools of data collection.

II. Write notes on:

(8 x 5 = 40)

1. Sampling techniques.
2. Need for research design.
3. Criteria for selection of tools.
4. Sample size and its determination.
5. Experimental and Exploratory Studies.
6. Communication of research findings.
7. Content Validity.
8. Stratified Vs Cluster Sampling.

III. Short answers on:

(10 x 3 = 30)

1. Snow-ball sampling.
2. Clinical interview.
3. Define Biostatistics.
4. Primary and secondary data.
5. Scatter diagram.
6. Confounding.
7. Power of a test.
8. Uses of chi square test.
9. Tabulation of data.
10. Qualitative and quantitative variables.

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

[AHS 0423]

APRIL 2023

Sub. Code: 2254

B.Sc. MEDICAL SOCIOLOGY
SECOND YEAR (Regulations 2014-2015 & 2018-2019 onwards)
PAPER IV – SOCIAL RESEARCH
Q.P. Code: 802254

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define Research. Explain the steps involved in Research Process.
2. Write in detail about types of Report Writing and its Significance.
3. A sample of 100 children had mean Hemoglobin of 9.2 gm with a Standard Deviation of 2.0. Test the Hypothesis that they were drawn from a Population with mean Hemoglobin of 11.5 gm.

II. Write notes on:

(8 x 5 = 40)

1. Data Coding and Preparation of master sheet.
2. Features of SPSS.
3. Confidence Interval Vs P Value.
4. Randomization.
5. How will you test the Association between two Categorical Variable?
6. Measures of Variation.
7. Sampling Techniques.
8. In a study, 12 Arthritis patients were subjected to ESR Estimation. The data were as follows. Calculate Standard Deviation and Interpret your result?
35, 33, 32, 30, 36, 31, 63, 37, 30, 30, 72, 35

III. Short answers on:

(10 x 3 = 30)

1. Replication.
2. Clinical Interview.
3. Snow ball sampling.
4. Confounding.
5. Uses of Chi Square test
6. Statistics and Preventive Medicine.
7. Point Estimation.
8. Types of Hospital Statistics.
9. Bibliography.
10. Standard Error.
