

M.Sc. (NURSING) DEGREE EXAMINATION

FIRST YEAR

(Regulations for candidates admitted from 2008-2009 Session onwards)

PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time: Three Hours

Maximum: 75 marks

Answer ALL questions in the same order.

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: (1 x 20 = 20)

1. a) Mention the characteristics of a qualitative research design. (5)
- b) Explain qualitative research design with suitable example. (15)

II. Write Short Notes on: (6 x 5 = 30)

1. Ethics in research.
2. Significance of theoretical frame work in research.
3. Steps of literature review.
4. Pilot study.
5. Sampling technique.
6. Writing research report.

SECTION – B

(STATISTICS)

I. Elaborate on: (1 x 20 = 20)

1. a) What are various methods of collecting statistical data?
Which of these is more reliable and why? (4+6=10)
- b) What is a statistical average?
Describe the characteristics of a good statistical average. (4+6=10)

II. Write Short Notes on : (1 x 5 = 5)

1. A certain stimulus administered to each of the 12 patients resulted in the following increase of blood pressure 5, 2, 8, -1, 3, 0, -2, 1, 5, 0, 4 and 6. Can it be concluded that the stimulus will in general be accompanied by an increase in blood pressure?

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Time: Three Hours

Maximum: 75 marks

Answer ALL questions in the same order.

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Detail the methods of data collection approaches. **(10)**
- b) Elaborate the means of ensuring the quality in data collection. **(10)**

II. Write Short Notes on: **(6 x 5 = 30)**

1. Conceptual frame work.
2. Randomization.
3. Pilot study.
4. Time series design.
5. Critiquing the research report.
6. Developing and refining research problem.

SECTION – B

(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. In an epidemic of certain disease, 92 children contracted the disease, of these 41 received no treatment and of these 10 showed after effects. The remainder who did receive treatment, 17 showed after effects. Test the hypothesis that treatment was not effective.

II. Write Short Notes on : **(1 x 5 = 5)**

1. What is meant by analysis of variance?

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Time: Three Hours

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Answer ALL questions in the same order.

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. A nurse researcher is interested to study the efficacy of two different interventions in reducing radiation induced vaginitis in patients with cancer cervix.
 - a) Identify the most appropriate design to study this research problem. **(4)**
 - b) Explain the reasons for selecting the particular design. **(8)**
 - c) Detail the methods to enhance research control. **(8)**

II. Write Short Notes on: **(6 x 5 = 30)**

1. Ethical issues in research.
2. Barriers to utilization of research findings.
3. Hypothesis.
4. Literature review.
5. Meta analysis.
6. Bio-physiological parameters.

SECTION – B

(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Define and explain the uses of Birth rate, post neonatal mortality rate, infant mortality rate, incidence rate and prevalence rate.
 - b) A study revealed that among 30 males 10 were obese and among 20 females 10 were obese. Use chi square test to find whether sex and obesity are associated.

II. Write Short Notes on : **(1 x 5 = 5)**

1. Explain how linear regression equations are useful in prediction.

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Time: Three Hours

Maximum: 75 marks

Answer ALL questions in the same order.

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Mention characteristics of a qualitative research design.
- b) Explain qualitative research design with suitable example.

II. Write Notes on: **(6 x 5 = 30)**

1. Types of Hypothesis.
2. Writing research report.
3. Sampling technique.
4. Pilot study.
5. Validity and reliability.
6. Methods developing conceptual framework for research.

SECTION – B

(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) What are various methods of collecting statistical data?
Which of these is more reliable and why?
- b) What is a statistical average?
Describe the characteristics of a good statistical average.

II. Write Short Notes on : **(1 x 5 = 5)**

1. A certain stimulus administered to each of the 12 patients resulted in the following increase of Blood Pressure 5, 2, 8, -1, 3, 0, -2, 1, 5, 0, 4 and 6. Can it be concluded that the stimulus will in general be accompanied by an increase in Blood Pressure.

M.Sc. (NURSING) DEGREE EXAMINATION**FIRST YEAR****(Regulations for candidates admitted from 2008-2009 Session onwards)****PAPER III – NURSING RESEARCH AND STATISTICS****Q.P. Code: 302323****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****Answer Sections A and B in SEPARATE Answer book.****SECTION – A****(NURSING RESEARCH)****I. Elaborate on:****(1 x 20 = 20)**

1. a) Define Research Design.
- b) Classify the various types of Research Design.
- c) Discuss in detail true experimental designs.

II. Write Notes on:**(5 x 6 = 30)**

1. Ethics in Research.
2. Hypothesis.
3. Conceptual frame work.
4. Reliability.
5. Evidence based practice.

SECTION – B**(STATISTICS)****I. Elaborate on:****(1 x 20 = 20)**

1. a) Explain the procedure of test of significance.
- b) Calculate the co-relation co-efficient from following data and interpret.

Height in Inches	57	59	62	63	64	65	55	58	57
Weight in lbs	113	117	126	126	130	129	111	116	112

II. Write Notes on:**(5 x 6 = 30)**

1. Measures of Dispersion.
2. Probability.
3. Uses of statistics in Nursing Research.
4. Measurement scales.
5. Vital statistics.

M.Sc. (NURSING) DEGREE EXAMINATION**FIRST YEAR****(Regulations for candidates admitted from 2008-2009 Session onwards)****PAPER III – NURSING RESEARCH AND STATISTICS****Q.P. Code: 302323****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****Answer Sections A and B in SEPARATE Answer book.****SECTION – A****(NURSING RESEARCH)****I. Elaborate on :**

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

- | | | | |
|---|----|---------|----|
| 1. a) Describe the methods of data collection for quantitative studies. | 15 | 40 min. | 20 |
| b) How will you establish validity and reliability of the tools? | | | |

II. Write notes on:

- | | | | |
|---|---|---------|---|
| 1. Probability sampling techniques. | 3 | 10 min. | 6 |
| 2. Variables. | 3 | 10 min. | 6 |
| 3. Research utilization. | 3 | 10 min. | 6 |
| 4. Observation method. | 3 | 10 min. | 6 |
| 5. Flow of tasks in review of literature. | 3 | 10 min. | 6 |

SECTION – B**(STATISTICS)****I. Elaborate on:**

- | | | | |
|--|----|---------|----|
| 1. a) Explain the procedure of test of significance. | 15 | 40 min. | 20 |
| b) Calculate the co-relation co-efficient from following data and interpret. | | | |

Height in Inches	57	59	62	63	64	65	55	58	57
Weight in lbs	113	117	126	126	130	129	111	116	112

II. Write notes on:

- | | | | |
|--|---|---------|---|
| 1. Measures of Dispersion. | 3 | 10 min. | 6 |
| 2. Probability. | 3 | 10 min. | 6 |
| 3. Uses of statistics in Nursing Research. | 3 | 10 min. | 6 |
| 4. Measurement scales. | 3 | 10 min. | 6 |
| 5. Vital statistics. | 3 | 10 min. | 6 |

M.Sc. (NURSING) DEGREE EXAMINATION**FIRST YEAR****(Regulations for candidates admitted from 2008-2009 Session onwards)****PAPER III – NURSING RESEARCH AND STATISTICS****Q.P. Code: 302323****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****Answer Sections A and B in SEPARATE Answer book.****SECTION – A****(NURSING RESEARCH)****I. Elaborate on :**

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

1. Present an overview of the research process and describe sampling process in detail.

17	40 min.	20
----	---------	----

II. Write notes on:

1. Scope of Nursing Research.
2. Quasi experimental Design.
3. Hypothesis and Variables.
4. Validity.
5. Literature Review.

4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6

SECTION – B**(STATISTICS)****I. Elaborate on:**

1. a) Discuss testing of hypothesis procedure.
- b) Calculate Mann-Whitney 'U' test value for following Hemoglobin data and give your interpretation.

17	40 min.	20
----	---------	----

Study Group	6	9	10	11	14		
Control Group	9	12	8	10	11	12	14

II. Write notes on:

1. Z Score.
2. Net reproduction rate.
3. P-value.
4. MANOVA.
5. Beta coefficient.

4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6
4	10 min.	6

**M.Sc. (NURSING) DEGREE EXAMINATION
FIRST YEAR**

PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time: Three Hours

Maximum: 100 marks

Answer ALL questions in the same order.

Answer Sections A and B in SEPARATE Answer book.

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on :

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

- | | | | |
|--|----|---------|----|
| 1. Write in detail about the factors influencing sampling and the various sampling techniques. | 17 | 40 min. | 20 |
|--|----|---------|----|

II. Write notes on:

- | | | | |
|--|---|---------|---|
| 1. Observation method. | 4 | 10 min. | 6 |
| 2. Flow of tasks in review of literature. | 4 | 10 min. | 6 |
| 3. Grounded theory. | 4 | 10 min. | 6 |
| 4. Ethical issues in Nursing Research. | 4 | 10 min. | 6 |
| 5. Bio-physiological methods of data collection. | 4 | 10 min. | 6 |

**SECTION – B
(STATISTICS)**

I. Elaborate on:

- | | | | |
|---|----|---------|----|
| 1. a) Discuss assumptions of Karl Pearson correlation, coefficient methods. | 17 | 40 min. | 20 |
| b) Estimate SBP value when DBP = 90 using regression coefficient. | | | |

DBP	78	95	76	92	98	95
SBP	127	135	120	130	144	136

II. Write notes on:

- | | | | |
|---------------------------|---|---------|---|
| 1. Fisher exact test. | 4 | 10 min. | 6 |
| 2. Latin square design. | 4 | 10 min. | 6 |
| 3. Mid year population. | 4 | 10 min. | 6 |
| 4. Level of measurements. | 4 | 10 min. | 6 |
| 5. Sampling error. | 4 | 10 min. | 6 |

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Q.P. Code: 302323

Time: Three Hours

Maximum: 100 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on:

(1 x 20 = 20)

1. a) List the steps used in the Research process.
- b) Discuss the use of Surveys in nursing.

II. Write Notes on:

(5 x 6 = 30)

1. Evidence Based Practice.
2. Steps in Literature Review.
3. Probability sampling techniques.
4. Rating Scales.
5. Barriers in Research Utilization.

**SECTION – B
(STATISTICS)**

I. Elaborate on:

(1 x 20 = 20)

1. a) Explain Regression analysis
- b) In a study find out the association between the distance from the health centre and the number of antenatal visits, the following data are obtained. Find the correlation coefficient

Distance (Km) :	2	2	4	6	7	8	9	10
No of Visits :	6	7	5	4	4	3	2	1

II. Write Notes on:

(5 x 6 = 30)

1. Mann-Whitney U-test.
2. Incidence and prevalence rate.
3. Sector diagram.
4. Type I and Type II errors.
5. MANOVA.

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Q.P. Code: 302323

Time: Three Hours

Maximum: 100 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. A researcher wished to determine the effectiveness of walking on blood pressure among bank employees. Using one group, four observations were made before and after the intervention. Answer the following:
 - a) Identify the design and its limitations.
 - b) Describe the steps in evidence based practice.

II. Write Notes on: **(5 x 6 = 30)**

1. Characteristics of a good hypothesis with example.
2. Probability sampling techniques.
3. Data collection in qualitative approach.
4. Critiquing a research report.
5. Ethics in Nursing research.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain Measures of variation
 - b) Fifteen patient records from each of two hospitals were reviewed and assigned a score to measure the level of care. The scores were
Hospital A: 99, 85, 73, 98, 83, 88, 99, 80, 74, 91, 80, 94, 94, 98, 80
Hospital B: 78, 74, 69, 79, 57, 78, 79, 68, 59, 91, 89, 55, 60, 55, 79
Test at 0.05 level of significance, that the two population medians are different.

II. Write Notes on: **(5 x 6 = 30)**

1. Normal Distribution.
2. Uses of vital statistics.
3. Chi-Square test.
4. Measures of Correlation.
5. ANOVA.

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Q.P. Code: 302323

Time: Three Hours

Maximum: 75 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. Define sample and explain the types of sampling methods in detail with suitable Examples.

II. Write Notes on: **(5 x 6 = 30)**

1. Descriptive statistics.
2. Steps in research process.
3. Ethnography.
4. Barriers of nursing research utilization.
5. Mixed methods in research.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. Two independent samples of Albino rats chosen among both the sexes had the following increase in weight when fed on a diet **Table value = 2.179**
(a) Can you say that the mean increase in weight differs significantly with sex?
(b) Calculate 95% Confidence Interval for both sexes

Male:	96	88	97	89	92	95	90
Female:	112	80	98	100	84	82	89

II. Write Notes on: **(1 x 5 = 5)**

1. Explain the different types of diagrammatic presentation and mention the advantages.

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Q.P. Code: 302323

Time: Three Hours

Maximum: 75 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. A researcher wished to study the effect of counseling on obesity among school students.
 - a) Draft a proposal with the design, objectives, hypothesis, sampling technique, tools and informed consent.
 - b) Explain the measures to be taken to ensure credibility of the results.

II. Write Notes on: **(5 x 6 = 30)**

1. Guidelines for doing a literature review.
2. Reliability and validity.
3. Communication of research results.
4. Application of theory in research.
5. Characteristics of qualitative research design.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. Five children aged 2, 3, 5, 7 and 8 years old and their weight's were 14, 20, 32, 42 and 44 kilograms respectively.
 - a) Find the equation of the regression lines.
 - b) Based on this data, what is the approximate weight of a six year old child?

II. Write Notes on: **(1 x 5 = 5)**

1. Steps involved in Testing of hypothesis.

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Time: Three Hours

Maximum: 75 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Discuss the various methods of data collection in a quantitative research design.
- b) Prepare an observation checklist to assess the steps followed by a student nurse to perform head to foot assessment of an adult woman patient.

II. Write Notes on: **(5 x 6 = 30)**

1. Pilot study.
2. Importance of research in nursing.
3. Inductive and Deductive reasoning.
4. Critiquing Nursing Research.
5. Non probability sampling techniques.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Non parametric tests.
- b) Systolic Blood Pressure of 10 normal individuals were observed as 122, 121, 120, 115, 126, 130, 120, 125, 128, 130. A stimulus was administered and the Systolic Blood Pressure observed as 120, 118, 115, 110, 122, 130, 116, 124, 125, 128. Test whether the stimulus has effect. (**Table value = 2.262**)

II. Write Notes on: **(1 x 5 = 5)**

1. Coefficient of variation.

[LH 416]

OCTOBER 2015

Sub. Code: 2323

M.Sc., (NURSING) DEGREE EXAMINATION

FIRST YEAR

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PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time: Three Hours

Maximum: 75 marks

Answer All questions

Answer Sections A and B in SEPARATE Answer book.

SECTION – A

(NURSING RESEARCH)

I. Elaborate on:

(1 x 20 = 20)

1. A study to assess the effectiveness of life style modifications on knowledge and knowledge of practice among hypertensive clients in a rural area.
 - a) Describe the best suited study design.
 - b) List the objectives, variables, hypothesis and tools for the study.

II. Write notes on:

(5 x 6 = 30)

1. Ethical aspects of qualitative research.
2. Define hypothesis & discuss its types.
3. Reliability and validity.
4. Literature review in nursing Research.
5. Research utilization.

SECTION – B

(STATISTICS)

I. Elaborate on:

(1 x 20 = 20)

1. a) Role of statistics in Nursing Research.
 - b) In an ophthalmic OPD 175 persons above 40 years were examined, 40 had both trachoma and corneal degeneration, 101 had corneal degeneration and 34 had none. Determine if there is any association between trachoma and corneal degeneration.

II. Write notes on:

(1 x 5 = 5)

1. Correlation coefficient.

[LI 416]

APRIL 2016

Sub. Code: 2323

M.Sc., (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)
FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. Define Nursing research and discuss the Qualitative Research design in detail.

II. Write notes on: **(5 x 6 = 30)**

1. Evidence based practice.
2. Developing theoretical frame work.
3. Informed consent.
4. Methods of Data collection.
5. Probability sampling techniques.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain the procedure of test of significance.
b) In a drug experiment before and after the experiment the response obtained from 100 patients were classified gave the following information.

Before	After	
	Worst	Improved
Improved	20	30
Worst	40	10

Test at 5% level of significance by using Mc.Nemar test whether there has been a significant change before and after treatment.

II. Write notes on: **(1 x 5 = 5)**

1. Linear Regression Analysis.

[LJ 416]

OCTOBER 2016

Sub. Code: 2323

**M.Sc. (Nursing) DEGREE EXAMINATION
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FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS**

Q.P. Code: 302323

Time : Three hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: **(1 x 20 = 20)**

1. A study to assess the effectiveness of lifestyle modifications to reduce stress among working women.
 - a) Describe the best suitable study design for this study.
 - b) List the objectives, variables, hypothesis and tool for this study.
 - c) Draw a schematic presentation of methodology for this study.

II. Write notes on: **(5 x 6 = 30)**

1. Ethnography.
2. Observation method of data collection.
3. Ethics in research.
4. Meta analysis.
5. Pilot study.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain the uses of statistical package and brief about the SPSS.
b) Determine whether there is any association between whooping cough and tonsillectomy when a random of 100 children of a school, 25 had history of tonsillectomy, 40 had whooping cough, 10 had both while 25 had none. (Table value: 3.84).

II. Write notes on: **(1 x 5 = 5)**

1. Mann – Whitney ‘U’ test.

[LK 416]

MAY 2017

Sub. Code: 2323

M.Sc. (Nursing) DEGREE EXAMINATION
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Time : Three hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Describe the steps of research process.
- b) Explain the various methods of sampling.

II. Write notes on: **(5 x 6 = 30)**

1. Survey method.
2. Factorial design.
3. Variables.
4. Reliability and validity.
5. Halo effect and Hawthorne effect in research.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain the procedure of test of significance.
- b) Pain score before and after the intervention on joint pain has been given. Test whether the intervention has significant effect to reduce the joint pain. (LOS: 0.05%, table value: 2.26).

Before	9	8	6	7	8	7	9	6	10	7
After	4	3	3	4	2	2	3	1	5	3

II. Write notes on: **(1 x 5 = 5)**

1. Normal distribution.

[LL 416]

OCTOBER 2017

Sub. Code: 2323

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Time : Three hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Sources of literature review.
- b) Importance and steps in reviewing literature.
- c) Utilization of nursing theories in research.

II. Write notes on: **(5 x 6 = 30)**

1. Advantages and disadvantages of experimental research design.
2. Factors influencing sample.
3. Interview method of data collection.
4. Limitation and delimitation.
5. Steps in writing research proposal.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Diagrammatic representation of data and its uses.
- b) Two types of drugs were used on 5 and 7 patients for reducing their weight. The decrease in weight in kgs after using the drugs for six months was as follows:

Drug A :	10	12	13	11	14		
Drug B :	8	9	12	14	15	10	9

Compare the efficiencies of the two drugs.

II. Write notes on: **(1 x 5 = 5)**

1. Correlation coefficient.

[LM 416]

MAY 2018

Sub. Code: 2323

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FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. A researcher is interested to measure the level of care in two different hospitals by reviewing patient records of 15 patients from each hospital.
 - a) Identify the suitable research design and draw schematic presentation of the selected design.
 - b) Discuss the assumption and delimitation of this study.
 - c) Briefly explain the tool which can be used in this study for better analysis.

II. Write notes on: **(5 x 6 = 30)**

1. Explain the types of true experimental design.
2. Non-probability sampling technique.
3. Rating scale.
4. Hypothesis.
5. Types and sources of literature review.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain the types of correlation.
b) Calculate coefficients of correlation for the following data.

Age	43	21	25	42	57	59
Glucose level	99	65	79	75	87	81

II. Write notes on: **(1 x 5 = 5)**

1. Analysis of variance.

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Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: (1 x 20 = 20)

1. a) What are questionnaires? Explain various types of questions in detail.
- b) Define research problem. Discuss the sources to identify the research problem.

II. Write notes on: (5 x 6 = 30)

1. Communication of research results.
2. Time Series Design.
3. Randomization.
4. Bio-physiological parameters.
5. Observation method.

SECTION – B
(STATISTICS)

I. Elaborate on: (1 x 20 = 20)

1. a) Measures of dispersion.
- b) The weight and Hb values for the students of a school are recorded and given below. Calculate Pearson's correlation coefficient for the data and interpret.

Height:	10	12	14	15	16	18	13	14	13	15
Hb value :	8	9	10	8	9	7	10	9	8	9

II. Write notes on: (1 x 5 = 5)

1. Student's t-test.

[LO 416]

MAY 2019

Sub. Code: 2323

M.Sc. (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)

FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: (1 x 20 = 20)

1. Explain in detail about qualitative research design with relevant examples.

II. Write notes on: (5 x 6 = 30)

1. Conceptual framework.
2. Limitation and delimitation.
3. Sampling error.
4. Evidence based practice.
5. Mixed methods in research.

SECTION – B
(STATISTICS)

I. Elaborate on: (1 x 20 = 20)

1. a) Explain the different measures of central tendencies.
b) A sample of 12 fathers and their eldest sons gave the following data about their height in inches:

Father	65	63	67	64	68	62	70	66	68	67	69	71
Son	68	66	68	65	69	66	68	65	71	67	68	70

Calculate the coefficient of rank correlation.

II. Write notes on: (1 x 5 = 5)

1. Diagrammatic representation of data.

M.Sc. (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)

FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. Define Research and Nursing research. Write in detail the overview of research process.

II. Write notes on: **(5 x 6 = 30)**

1. Formulation of research objectives.
2. Data collection tools.
3. Write steps in sampling process.
4. Validity and reliability of an instrument.
5. Phenomenology.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. a) The incubation periods of a random sample of 7 HIV infected individuals is given below (in years): 12.0, 10.5, 9.5, 6.3, 13.5, 12.5 and 7.2.
 - a) Calculate the Measures of Central tendency.
 - b) Calculate the sample standard deviation.
 - c) If the number 6.3 above were changed to 1.5, what would happen to the sample mean, median and standard deviation?
- b) A VLCD treatment was administered to each of the 12 patients and their results are given below for Pre and Post test

Pre test	180	170	176	139	182	146	175	163	160	155	146	169
Post test	106	140	126	139	172	150	120	140	132	120	148	137

Can it be concluded that the treatment will in general be accompanied by a weight loss
 Table value 2.262.

II. Write notes on: **(1 x 5 = 5)**

1. Primary and Secondary Data. Explain different methods of collecting primary data.

**M.Sc. (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)****FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS****Q.P. Code: 302323****Time : Three Hours****Maximum : 75 Marks****Answer Sections A and B in SEPARATE Answer book.****SECTION – A
(NURSING RESEARCH)****I. Elaborate on:** (1 x 20 = 20)

1. Discuss the methods of Quantitative Research Design in detail.

II. Write notes on: (5 x 6 = 30)

1. Methods of Data Collection.
2. Characteristics of a Good Research.
3. Review of Literature.
4. Critiquing Published Research.
5. Hypothesis.

**SECTION – B
(STATISTICS)****I. Elaborate on:** (1 x 20 = 20)

1. a) Explain Regression Analysis.
b) In an experiment on Immunization of cattle from Tuberculosis, the following results were obtained:

	Affected	Unaffected
Inoculated	12	28
Not Inoculated	13	07

Examine the effect of vaccine in controlling the incidence of the disease. (Level of significance : 5%, Table value:3.841)

II. Write notes on: (1 x 5 = 5)

1. Measures of Dispersion.

[MSCN 0321]

MARCH 2021
(OCTOBER 2020 SESSION)

Sub. Code: 2323

M.Sc. (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)

FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: (1 x 20 = 20)

1. a) What is Research Design? Write the Classification of Research Design.
- b) Explain the Non-Experimental Research Design with suitable examples.

II. Write notes on: (5 x 6 = 30)

1. Ethics in Research.
2. Assumptions and Delimitations.
3. Write the Steps in Presenting a Research Proposal.
4. Briefly Explain the Check List.
5. Dissemination of Research Findings.

SECTION – B
(STATISTICS)

I. Elaborate on: (1 x 20 = 20)

1. a) Various types of Measures of central tendencies.
- b) Calculate Karl Pearson's correlation between hours of daily study and the marks obtained by 7 students.

Hours of study	:	1	2	3	4	5	6	7
Marks secured	:	40	48	50	57	66	72	87

II. Write notes on: (1 x 5 = 5)

1. Type I and type II errors.

[MSCN 0821]

**AUGUST 2021
(MAY 2021 SESSION)**

Sub. Code: 2323

**M.Sc. (Nursing) DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)**

**FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS**

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer books.

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: (1 x 20 = 20)

1. a) Define research design.
- b) Classify the various types of research design.
- c) Explain the quantitative research design with example.

II. Write notes on: (5 x 6 = 30)

1. Explain methods of data collection.
2. Inductive and deductive reasoning.
3. Sample size.
4. Hypothesis
5. Styles of writing research report.

**SECTION – B
(STATISTICS)**

I. Elaborate on: (1 x 20 = 20)

1. a) Explain positive, negative, linear and non-linear correlations.
- b) Calculate the two regression equations X on Y and Y on X from the following data. Also estimate the BP level of a patient whose age is 55 years.

AGE:	65	40	56	45	72	36	68	57	51	60
B.P:	150	126	144	135	160	117	128	140	149	154

II. Write notes on: (1 x 5 = 5)

1. What are the requirements for applying Z- test?

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

[MSCN 0522]

**MAY 2022
(OCTOBER 2021 SESSION)**

Sub. Code: 2323

**M.Sc. NURSING DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)**

**FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS**

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: (1 x 20 = 20)

1. Write the classification of Research Design. Explain in detail the True Experimental Designs.

II. Write notes on: (5 x 6 = 30)

1. Scope of Nursing Research.
2. Write the purposes and sources of Review of Literature.
3. Types of Variables.
4. Pilot Study.
5. Write the methods of data presentation.

**SECTION – B
(STATISTICS)**

I. Elaborate on: (1 x 20 = 20)

1. a) Define standard deviation. How it is useful in research data?
b) Two different types of drugs were given to two groups 10 patients to reduce their weight. After administering the drugs for certain period the reduction in their weight in kilo grams were measured which are given below. Calculate coefficient of variation and find out which drug is more consistent A or B.

DRUG A :	10	12	13	11	14	9	11	8	12	10
DRUG B :	12	16	14	15	10	12	13	9	8	11

II. Write notes on: (1 x 5 = 5)

1. What are the requirements for applying paired 't'- test and independent 't' – test?

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

[MSCN 1022]

**OCTOBER 2022
(MAY 2022 EXAM SESSION)**

Sub. Code: 2323

**M.Sc. NURSING DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)**

**FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS**

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book.

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: **(1 x 20 = 20)**

1. Explain in detail the Non-Probability Sampling Techniques.

II. Write notes on: **(5 x 6 = 30)**

1. Definition and Types of Hypothesis.
2. Write in detail on critiquing the research report.
3. Grounded theory.
4. Write the steps of Scientific method.
5. Methods of analysis of Quantitative data.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. a) Explain purposive sampling.
b) The following data are the details of a weight reduction exercise both before and after the Programme among ten members. Find out whether the weight reduction exercise is effective or not.

Weight in kgs before : 68 82 90 77 83 86 94 75 105 110

Weight in kgs after : 63 80 90 76 80 82 90 72 102 105

II. Write notes on: **(1 x 5 = 5)**

1. Uses of graphic presentation of data.

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

[MSCN 0523]

MAY 2023

Sub. Code: 2323

(OCTOBER 2022 EXAM SESSION)

M.Sc. NURSING DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 onwards)

FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book

SECTION – A
(NURSING RESEARCH)

I. Elaborate on:

(1 x 20 = 20)

1. a) Define Nursing Research.
- b) Describe the scope of Nursing Research.
- c) Explain the steps in Nursing Research.

II. Write notes on:

(5 x 6 = 30)

1. Sources and Process of Literature review.
2. Hypothesis.
3. Communication of Research findings.
4. Probability sampling techniques.
5. Reliability of tools.

SECTION – B
(STATISTICS)

I. Elaborate on:

(1 x 20 = 20)

1. Explain Various Sampling Procedures.

II. Write notes on:

(1 x 5 = 5)

1. Application of t-test.

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

[MSCN 0923]

**SEPTEMBER 2023
(MAY 2023 EXAM SESSION)**

Sub. Code: 2323

**M.Sc. NURSING DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)**

**FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS
Q.P. Code: 302323**

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: **(1 x 20 = 20)**

1. Discuss the guidelines for preparation and presentation of a research proposal and list the various forms for communicating research findings.

II. Write notes on: **(5 x 6 = 30)**

1. Evidence based practice.
2. Experimental research designs with examples.
3. Steps in Review of Literature.
4. Sampling error.
5. Presentation of data.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. Find Correlation Coefficient for the following data. Hence draw a scatter diagram and interpret the Correlation Value.

Height	158	160	170	166	178	168
Weight	48	48	54	50	60	50

II. Write notes on: **(1 x 5 = 5)**

1. Describe Pie chart and its use.

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

[MSCN 1223]

**DECEMBER 2023
(OCTOBER 2023 EXAM SESSION)**

Sub. Code: 2323

**M.Sc. NURSING DEGREE EXAMINATION
(Regulations for candidates admitted from 2011-2012 Sessions onwards)**

**FIRST YEAR
PAPER III – NURSING RESEARCH AND STATISTICS
Q.P. Code: 302323**

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: **(1 x 20 = 20)**

1. a) Describe the characteristics of good research.
- b) Explain the concept of evidence based research.
- c) Explain the Qualitative research designs.

II. Write notes on: **(5 x 6 = 30)**

1. Steps in reviewing literature.
2. Pilot study.
3. Assumption.
4. Tool validity.
5. Extraneous variables.

**SECTION – B
(STATISTICS)**

I. Elaborate on: **(1 x 20 = 20)**

1. Explain various uses of computers in data analysis.

II. Write notes on: **(1 x 5 = 5)**

1. Non Parametric test.

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

[MSCN 0724]

**JULY 2024
(MAY 2024 EXAM SESSION)**

Sub. Code: 2323

**M.Sc. NURSING DEGREE EXAMINATION
(Regulations for the candidates admitted from the A.Y. 2011-2012 onwards)**

FIRST YEAR

PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time: Three Hours

Answer ALL Questions

Maximum: 75 Marks

Answer Sections A and B in SEPARATE Answer book

**SECTION – A
(NURSING RESEARCH)**

I. Elaborate on: (1 x 20 = 20)

1. Discuss in detail about Qualitative research.

II. Write notes on: (5 x 6 = 30)

1. Ethics in research.
2. Variables.
3. Non-experimental Research designs.
4. Sampling techniques.
5. Research utilization.

**SECTION – B
(STATISTICS)**

I. Elaborate on: (1 x 20 = 20)

1. Two independent samples of Albino rats chosen among both the sexes had the following increase in weight when fed on a diet.

Male	96	88	97	89	92	95	90
Female	112	80	98	100	84	82	89

Explain if the mean increase in weight differs significantly with sex at 5% level.
(critical t-value at 5% = 2.179)

II. Write notes on: (1 x 5 = 5)

1. p-value and statistical significance.

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

[MSCN 0525]

MAY 2025

Sub. Code: 2323

M.Sc. (NURSING) DEGREE EXAMINATION
(Regulations for candidates admitted from A.Y. 2011-2012 onwards)

FIRST YEAR

PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time: Three Hours

Answer ALL Questions

Maximum: 75 Marks

Answer Sections A and B in SEPARATE Answer book

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. Explain the tools and methods of Data collection.

II. Write notes on: **(5 x 6 = 30)**

1. Literature review in Nursing.
2. Ethnography.
3. Randomization.
4. Validity and Reliability.
5. Factors influencing Sampling.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. Find the association between alcohol use and lung cancer at 5% level. (χ^2 at 1 df = 3.84).

Alcohol Use	Lung Cancer		Total
	Yes	No	
Yes	210	120	330
No	90	180	270
Total	300	300	600

II. Write notes on: **(1 x 5 = 5)**

1. Mann-Whitney U Test.

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

[MSCN 1125]

NOVEMBER 2025

Sub. Code: 2323

(OCTOBER 2025 EXAM SESSION)

M.Sc. (NURSING) DEGREE EXAMINATION
(Regulations for candidates admitted from A.Y. 2011-2012 onwards)

FIRST YEAR

PAPER III – NURSING RESEARCH AND STATISTICS

Q.P. Code: 302323

Time : Three Hours

Maximum : 75 Marks

Answer Sections A and B in SEPARATE Answer book

SECTION – A
(NURSING RESEARCH)

I. Elaborate on: **(1 x 20 = 20)**

1. Define Nursing research and discuss the Research process in detail.

II. Write notes on: **(5 x 6 = 30)**

1. Phenomenological research.
2. Rating scale.
3. Research utilization.
4. Characteristics of a good research.
5. Pre experimental research design.

SECTION – B
(STATISTICS)

I. Elaborate on: **(1 x 20 = 20)**

1. What is Correlation coefficient? Calculate the correlation for the following data:

Height of Father (in inches)	Height of Son (in inches)
70	60
68	70
65	67
71	74
75	75

II. Write notes on: **(1 x 5 = 5)**

1. Types of diagrams and graphs.
