Rajiv Gandhi University of Health Sciences, Karnataka

First Year M. Sc. (Nursing) Degree Examination - 28-Feb-2023

[Time: 3 Hours] **[Max. Marks: 80]**

STATISTICS (RS3/RS4)
Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

Answer All The Questions **04 X 10 = 40 Marks**

1. Explain measures of central tendency.
2. Find coefficient of correlation (raw score method) between two kinds of assessment scores.

First assessment	30	35	45	44	42	48	47	46
Final assessment	10	12	18	16	15	19	18	17

3. Test the difference in weight between the sexes is statistically significant Table Value=2.179 at 0.05 level. Calculate 95% confidence interval for both sexes.

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

4. Define and explain the uses of birth rate, post neonatal mortality rate, infant mortality rate, incidence rate and prevalence rate.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Year M.Sc. (Nursing) Degree Examination - 23-May-2022

Time: 3 Hours **Max. Marks: 80**

STATISTICS (RS3/RS4)
Q.P. CODE: 9634

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary
(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)
Use separate answer books for 9633 and 9634

Answer All The Questions **4 X 10 = 40 Marks**

1. Discuss various types of measures of dispersion /variability and their significance

2. In an experiment on immunization of cattle against tuberculosis (TB) the following results were obtained.

	Contracted TB	No TB
Inoculated	12	28
Un-inoculated	13	07

Examine whether inoculation and contract TB are independent (Chi-square test table value at df5% level of significance is 3.84)

3. Explain the fertility, mortality and morbidity indicators with examples

4. What is correlation? Calculate Karl Pearson's coefficient of correlation between weight of mothers and their babies

Mother weight in Kg	54	60	49	57	68	55	62	60	58
Baby weight in Kg	3.4	3.2	3.6	4.0	2.4	3.6	4.1	2.5	3.5

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Rajiv Gandhi University of Health Sciences, Karnataka

First Year M.Sc. (Nursing) Degree Examination - 07-Feb-2022

Time: 3 Hours **Max. Marks: 80**

STATISTICS (RS3/RS4)
Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)
Use separate answer books for 9633 and 9634

Answer All The Questions **04 X 10 = 40 Marks**

1. Mention different scales of measurement. Explain them briefly with an illustration.
2. Find the Spearman's rank correlation between the knowledge and attitude in the following data. Interpret the result obtained.

Knowledge	8	11	24	16	1	17	19	38	15	4
Attitude	40	56	89	76	27	69	72	91	65	21

3. A nursing researcher wishes to study the association between the level of knowledge and duration of experience (in years)

Duration of experience (Years)	Levels of knowledge scores	
	Below Median	Above Median
1 - 5	28	27
6 - 10	3	2

Is it possible to apply Chi-square test for this data? If not, which alternative statistical test do you suggest? Justify your answer

4. What are different measures of vital statistics? Which among these are considered to be most sensitive indicators for health administration? Why?

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Rajiv Gandhi University of Health Sciences, Karnataka

First Year M. Sc. (Nursing) Degree Examination - 30-Jul-2021

Time: 3 Hours **Max. Marks: 80**

STATISTICS (RS3/RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

Answer All The Questions **04 X 10 = 40 Marks**

1. Explain measures of dispersion and their uses.
2. The following table gives the knowledge scores of 10 parents of children on immunization. Table value= 2.26 at 0.05 level.

Before intervention	After intervention
12	13
14	17
8	12
11	14
13	19
7	15
9	12
10	13
11	16
14	15

Test whether there is significance increase on the average in knowledge scores.

3. A study revealed that among 50 males 20 were smokers and among 20 females 5 were smokers. Use chi square test to find whether gender and smoking are associated. Table Value = 3.84 at 0.05 level.
4. Use of computers in statistics.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Year M. Sc. (Nursing) Degree Examination - 27-Nov-2020

[Time: 3 Hours] **[Max. Marks: 80]**

STATISTICS (RS3/RS4)
Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

Answer All The Questions **04 X 10 = 40 Marks**

1. Calculate mean, median and standard deviation of the following and its interpretation.

Age group	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of people	6	5	8	15	7	6	3

2. Explain the types of t-tests with examples.

3. Calculate the correlation coefficient of following data.

Knowledge	20	10	15	18	7	13
Attitude	85	70	65	70	50	60

4. Describe vital statistics.

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - OCT-2019

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. Explain various sources and methods of collection and recording of vital and health statistics.

2. a) Mention the advantages and disadvantages of non-parametric tests. (5+10 = 15 Marks)
b) In a study conducted at regional cancer center, to find out the association between the marital status and incidence of breast cancer, the following results were obtained. Test statistically to see whether the association between the marital status and incidence of breast cancer is significant (table value is 3.84)

Marital status	Breast cancer		Total
	Present	Absent	
Married	20	20	40
Unmarried	40	20	60
Total	60	40	100

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Enumerate the properties of a normal probability curve.

4. Explain scatter diagram method.

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - APRIL-2019

[Time: 3 Hours] **[Max. Marks: 40]**

Statistics

(RS-3 & RS-4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. a. Assumptions for the applicability of Chi-square test. (5+10=15)

   b. In a study on a particular drug against the urinary stones, there was some association noted between the type of urinary stone identified and cure rate. Test statistically using Chi-square test to see whether the association observed is significant. (df 2= 5.99 at 5% level)

Type of Urinary stone	No. cured	No. not cured
Oxylate	10	10
Phosphate	10	20
Other types	20	30

2. a. Explain the measures of variability in detail with examples.
   b. Describe normal probability curve. (10+5=15)

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Descriptive and inferential statistics.
4. Test-retest method of reliability.

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - APRIL 2018

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. a) Enumerate measures of variability. (7+8 = 15 Marks))
   b) Compute SD for following data of Haemoglobin values.
   11.8, 11.4, 10.4, 11.6, 10.8, 12.2, 12.9, 12.3, 10.8, 12.0, 10.5, 11.2, 12.4, 11.7, 12.4, 11.7, 12.7, 12.2, 11.6, 12.6, 13.3, 12.9
2. a) What is normal probability curve and list out its properties?
   b) Write the difference between frequency distribution and normal distribution with example. (8+7 = 15 Marks)

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. ANOVA
4. Non-parametric test

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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (Nursing) Degree Examination - OCT-2017

[Time: 3 Hours] [Max. Marks: 40]

Note – Three hours given to complete Q P 9633 & 9634

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. a) Following is the data on heart rate of ten patients
84, 90, 78, 88, 76, 96, 74, 88, 100 and 72.
Calculate Mean, Median, Mode and Standard Deviation

b) Compute coefficient of variation for the following data on height (cms) and weight (kgs) of 100 persons

	Mean	SD
Height (Cms)	168.73	21.46
Weight (Kgs)	87.06	17.32

Comment on your result (7+8 = 15 marks)

2. a) State the underlying assumptions of one-way ANOVA

b) The following is the data obtained by a researcher to compare the effectiveness of three different teaching methods namely - Video assisted teaching (VAT), Structured teaching programme (STP) and Self instructional manual (SIM) in assessing the knowledge of primi antenatal mothers on breast feeding practices. The knowledge score obtained are as follows :

VAT : 12, 15, 13, 17, 10, 11
STP : 9, 8, 10, 11, 12, 14
SIM : 7, 8, 5, 6, 5, 6, 8, 7

By stating suitable hypothesis, test whether there is any significant difference between the three group means using one-way ANOVA (critical value is 3.59) (5+10 = 15 marks)

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. List the applications of computer in nursing reserach

4. Distinguish between
a) Probability and Non-Probability sampling techniques
b) Parametric and Non-parametric tests
c) Correlation and regression

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - OCTOBER 2016

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. a) Define mean and standard deviation. Explain their properties. (5+10=15 marks)
   b) For the following distribution of protein intake of 400 families, calculate mean, standard deviation and co-efficient of variation.

Protein intake/ consumption (unit/day)	Number of families
15-25	30
25-35	40
35-45	100
45-55	110
55-65	80
65-75	30
75-85	10

2. Explain the following concepts: (3X5 = 15 Marks)
   a. Population and sample
   b. Sampling error
   c. Level of significance
   d. Type I and Type II error
   e. Estimation of Parameters

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Mention the advantages and disadvantages of graphical and tabular presentation.

4. Explain the importance of statistics in health sciences.

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - APRIL/MAY 2016

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. Define statistics. Briefly explain the concepts and scope of statistics.

2. On studying the hemoglobin levels of 50 mothers and their new borns, the following results were obtained. Test whether presence of anemia in the mother is associated with anemia in the newborn using Chi-square test. (Table value at 1 d.f = 3.84)

		New born		
		Anemic	Non-anemic	Total
Mother	Anemic	22	15	37
	Non-anemic	5	8	13
Total		27	23	50

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Define mean, median and mode. Mention their merits and demerits.

4. Define standard deviation. Calculate standard deviation and coefficient of variation for the following data regards age (yrs) of the patients.
Age (yrs): 35, 46, 76, 45, 54, 53

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - MAY 2015

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. a) Define correlation. What are the different types of correlation?
   b) The following is the knowledge and attitude scores of 10 persons recorded by a nursing researcher for the pilot study.

Knowledge score	24	36	29	27	33	30	22	20	21	25
Attitude score	41	56	48	45	76	64	42	50	56	80

   Calculate Spearman's rank correlation and interpret the result. Also, find out the reliability coefficient. (5+1 = 15 marks)

2. a) Explain the need for testing of hypothesis.
   b) The following data was obtained by a researcher to assess the association between level of knowledge and type of family.

Type of family	Level of Knowledge			Total
	Inadequate	Moderately Adequate	Adequate	
Nuclear	36	27	2	65
Joint	17	5	13	35
Total	53	32	15	100

   Test at 5% level of significance. (Critical value = 5.99). (5+10 = 15 marks)

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Define different measures of vital statistics. Which of these measures are considered to be sensitive Indicators?
4. Define normal distribution. What are its properties?

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Rajiv Gandhi University of Health Sciences

First Year M. Sc. (Nursing) Degree Examination - May 2014

[Time: 3 Hours] [Max. Marks: 40]

Statistics (RS3 & RS4)

Q.P. CODE: 9634

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

(Note: Both QP codes 9633 and 9634 should be, completed within the total duration of three hours)

Use separate answer books for 9633 and 9634

ANSWER THE FOLLOWING **2 X 15 = 30 Marks**

1. What do you mean by correlation? Explain scatter diagram method of ascertaining correlation between the variables. (5+10 = 15 Marks)
2. a) Define measures of central tendency. (6+9 = 15 Marks)
   b) Calculate mean, median and mode for the following data regarding BMI of 10 patients.
   BMI: 23, 27, 30, 32, 20, 30, 27, 30, 25, 30

SHORT NOTES (Answer any ONE) **1 X 10 = 10 Marks**

3. Various steps in testing of hypothesis
4. Methods of collection of vital statistics

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