Day : Monday   Time : 10:00 AM-01:00 PM

Date : 10/7/2023   **S-3646-2023**   Max. Marks : 75

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N.B.
1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Answer to both the sections should be written in **SEPARATE** answerbooks.

SECTION – I

Q.1 Write short notes on **ANY FIVE** of the following :   **(20)**
  a) Scope of Nursing Research
  b) Slomon four group design
  c) Reliability of the tool
  d) Institutional Ethics Committee
  e) Pilot study
  f) Review of literature
  g) Plagiarism

Q.2 Attempt **ANY TWO** of the following :
  A) i)   Define the term research.   **(02)**
      ii) Explain the resources of research problems.   **(04)**
      iii) Explain the types of hypothesis.   **(04)**
      iv) Write the difference between Quantitative & Qualitative Research   **(05)**

  B) You want to conduct a research to see the effect of steam inhalation on
      common cold in pediatric ward.
      i)   Formulate a research statement for above nursing problem.   **(03)**
      ii) Formulate the objectives for this study.   **(03)**
      iii) Explain the appropriate research design for this study.   **(03)**
      iv) State the hypothesis/assumption for this study.   **(03)**
      v)   Explain the variables of the study.   **(03)**

  C) Answer the following questions :
      i)   Define the term Validity and list down the types of Validity.   **(03)**
      ii) Discuss the factors influencing sampling process.   **(03)**
      iii) Explain the non-probability sampling technique with example.   **(05)**
      iv) Explain the Observation check list as a data collection tool.   **(04)**

SECTION - II

Q.3 Attempt **ANY FOUR** of the following :   **(12)**
  a) Explain data, data types with examples.
  b) Steps of testing of hypothesis
  c) Characteristics of Normal Curve
  d) Explain non parametric Mann Whitney U test
  e) Diastolic blood pressure of 10 individuals was 90,82,85,78,91,83,82,89,77
     and 73. Calculate measures of central tendency and variability.
  f) The average weight of babies at birth is 2.8 kg with SD 0.4 kg. if the birth
     weights are normally distributed, what is the range in which 95% of birth
     weights will lie?

                                                                              PTO

Q.4 Solve the following :

a) Hypertension prevalence rate was 30% before the specific treatment and adoption of other measures. Calculate the size of the sample required to find the prevalence rate now if allowable error is 10% and with 95% CL. **(03)**

b) In a survey, 1000 males and 1000 females were examined, out of which 234 males and 266 females showed evidence of dental caries. Test the difference observed in the two series is statistically significant. **(05)**

c) A village survey investigated 124 households and recorded their source of water supply. By reviewing the village health center morbidity records for a period of three months prior to the survey it was possible to identify household members with history of diarrheal episodes. **(05)**

Status	No. of households according water supply			
	River	Well	Tap	Total
Diarrhoeal episodes	49	06	04	59
No diarrhoeal episodes	39	14	12	65
Total	**88**	**20**	**16**	**124**

Test the association between the source of water and production of diarrhea.

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MASTER OF SCIENCE (NURSING) (2008 COURSE)
First Year M.Sc. Nursing CHN,CHPN,MHPN,MSN,OGN
CHN,CHPN,MHPN,MSN,OGN :SUMMER- 2022
SUBJECT : NURSING RESEARCH & STATISTICS

Day : Saturday

Date : 4/6/2022

S-3646-2022

Time : 10:00 AM-01:00 PM

Max. Marks : 75

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Answer to both the sections should be written in **SEPARATE** answerbooks.

SECTION – I

Q.1 Write short notes on **ANY FIVE** of the following : (20)
  a) Methods of acquiring knowledge in Nursing
  b) Critical Analysis of research report
  c) Informed Consent
  d) Validity of the tool
  e) Variables
  f) Communication of research result
  g) Quasi experimental research designs

Q.2 Attempt **ANY TWO** of the following :
  A) i) What do you mean by review of literature? (02)
     ii) Discuss the purposes of literature review. (04)
     iii) Explain the steps of Review of Literature. (05)
     iv) Explain the sources of literature review. (04)

  B) You want to conduct a research to see the effect of Magnesium Sulphate dressing on phlebitis in pediatric ward as you observe the problem of extravasation of IV fluid is very common in the ward.
     i) Formulate a research statement for above nursing problem. (03)
     ii) Formulate the objectives for this study. (03)
     iii) Explain the appropriate research design for this study. (03)
     iv) State the hypothesis / assumption for this study. (03)
     v) Explain the variables of the study. (03)

  C) Answer the following questions :
     i) Define the term Sample. (02)
     ii) Explain the sampling process. (04)
     iii) Explain the interview method of data collection. (04)
     iv) Explain the types of qualitative research (05)

SECTION - II

Q.3 Attempt **ANY FOUR** of the following : (12)
  a) Explain Mann-Whitney U Test.
  b) Steps of testing of hypothesis.
  c) Explain sampling and its types.
  d) Calculate measures of central tendency and variability of hemoglobin values (gm%) of 10 individuals given as 11,12,10,11,13,11,9,8,10,7.
  e) Explain bar diagram and its types.
  f) Normal Curve and its characteristics.

PTO

.. 2 ..

Q.4 Solve the following :

a) Systolic blood pressure of 225 males was taken. Mean BP was found to be **(03)** 128 mm and S.D. 13.05 mm. find 95% confidence limits of BP within which the population mean would lie.

b) In a survey, 1000 males and 1000 females were examined, out of which 234 **(05)** males and 266 females showed evidence of dental caries. Test the difference observed in the two series is statistically significant.

c) The systolic blood pressure (mm of Hg) of 10 patients with a specified illness **(05)** is compared with the values observed in 12 comparable normal persons. Test whether the systolic blood pressure of patients and normal persons differ significantly at 5% level of significance.

Patients :	123	132	160	125	128	135	153	147	112	125		
Normal persons:	110	125	124	104	130	115	136	106	138	122	120	110

*****

I- Year M.Sc. Nursing : SUMMER- 2021
SUBJECT : NURSING RESEARCH & STATISTICS

Day : Wednesday   Time : 10:00AM-TO 1:00
Date : 09-06-2021 S-2021-3646   Max. Marks : 75   P.M.

N.B.

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagrams **WHEREVER** necessary.
4) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION – I

Q.1 Write short notes on any **FIVE** of the following :   (20)
  a) Validity
  b) Characteristics and purposes of research
  c) Sources of literature review
  d) Characteristics of experimental design
  e) Purposes of theoretical/conceptual frame work in research
  f) Phenomenology

Q.2 a) Define research and Nursing Research   (02)
  b) Discuss the importance of Research in Nursing.   (04)
  c) Discuss in detail ethical principles to be followed while carrying out research. (04)
  d) The essence of numerous codes of ethics is protection of human subjects (05)
     through informed consent. Discuss in detail.

Q.3 a) Discuss the different research designs.   (05)
  b) Discuss the key dimensions of data collection methods.   (05)
  c) Discuss in detail self report methods as a data collection technique. (05)

SECTION – II

Q.4 Attempt any **FOUR** of the following: (12)
  a) Discuss normal distribution with its uses.
  b) Explain the unpaired t-test.
  c) Need of sampling and enumerate the sampling methods.
  d) Bar diagram with all its types.
  e) Explain Type I error, Type II error and Null hypothesis in test of significance.
  f) In a group of 100 students, the mean height is 160 cm with Sd of 20 cm
     whereas the mean weight is 50 kg with Sd of 10 kg. Compare the variation
     between the two variables.

Q.5 a) In a survey of 600 under five children the following observations are found. (05)

Place	Normal Children	Mal Nourished Children	Total
Urban	270	30	300
Rural	220	80	300
Total	490	110	600

  Is there any association between the nutritional status and place of residence.
  b) Calculate the measures of central tendency with range and standard deviation (05)
     for the following data. The hb values in gm % of 12 children are given:
     13, 13.2, 10, 10.5, 9.6, 14, 10, 11.2, 9.0, 10, 9.4, 9.0
  c) Uses of Biostatistics.   (03)

*   *   *

F. Y. M. Sc. (Nursing) (2008 COURSE) : SUMMER – 2020
SUBJECT: NURSING RESEARCH & STATISTICS

Day : Monday

Time : 1:00 P.M. TO 4: P.M

Date : 07-12-2020

Max. Marks : 75

S-2020-3646

N.B.:
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Write short notes on **ANY FIVE** of the following: [20]

a) Advantages and disadvantages of non-probability sampling

b) Ethics in nursing research

c) Research variable

d) Components of problem statement

e) Characteristic of Good Questionnaire

f) Retrospective Research

g) Sampling Error

h) Importance of Review of Literature

Q.2 Attempt **ANY TWO** of the following:

A) i) Brief about pilot study. [05]

ii) Importance of dissemination of research finding. [05]

iii) Explain the types of Hypothesis. [05]

B) i) Define Research Design. [02]

ii) Discuss the characteristics of ethnographic research design. [04]

iii) Describe in brief about quasi experimental design. [04]

iv) Formulate a complete problem statement of your interested area with objectives. [05]

C) i) Define Reliability and Validity. [04]

ii) Explain the types of validity in brief. [04]

iii) Discuss the process of doing content validity. [04]

iv) Write about Content Validity Index (CVI). [03]

P.T.O.

SECTION – II

Q.3   Write a short note on **ANY FOUR** of the following: [12]

a)   Experimental Design

b)   Characteristics of Normal Curve

c)   Mann Whitney Test

d)   Method of Scaling

e)   Randomized block design

f)   Measures of variability

Q.4   a)   A village survey investigated 124 household and record their source of water   [05]
supply. By reviewing the village health center morbidity records for a period
of three months prior to the survey, it was possible to identify household
members with history of diarrheal episodes. Test the association between the
source of water and diarrhea.

Status	No. of household according water supply		
	River	Well	Tap
Diarrheal episodes	49	6	4
No Diarrheal episodes	39	14	12

b)   The weights (kg) of 10 Tuberculosis patients on admission at the end of 12   [05]
months of treatment with PAS plus ionized daily, are given below. Examine
whether the gain weight is statistically significant?

Patient No.	1	2	3	4	5	6	7	8	9
Weight on admission	49	41	37	41	42	37	39	38	41
Weight at 12 months	52	4	3	46	52	46	38	42	41

c)   The average weight of babies at birth is 2.8 kg with SD 0.4 kg. If the birth   [03]
weight are normally distributed. What is the range in which 95% of birth
weights will lie?

*   *   *   *

Day	:	**Wednesday**		Time :	**10.00 AM TO 01.00 PM**
Date	:	**02/05/2018**	**S-2018-3882**	Max. Marks : 75	

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Write short notes on **ANY FIVE** of the following: [20]
   a) Scope of Nursing Research
   b) Sources of Literature review
   c) Characteristics of true experimental design
   d) Limitations and delimitation
   e) Sampling errors
   f) Pilot study
   g) Barriers in utilization of research findings

Q.2 Attempt **ANY THREE** of the following: [30]
   A) **i)** Define research. [02]
      ii) Enumerate research process. [03]
      iii) Discuss the uses of evidence based practice in nursing. [05]

   B) **i)** Define informed consent. [02]
      ii) Elaborate on the content needs to written on research participant's informed consent. [03]
      iii) Explain the process or steps of data collection. [05]

   C) **i)** Define Hypotheses. [02]
      ii) Explain the types of research hypotheses. [03]
      iii) Discuss the steps of formulation of research hypotheses. [05]

   D) **i)** Define reliability. [02]
      ii) Describe three aspects of reliability. [03]
      iii) Explain any one reliability test in detail. [05]

SECTION – II

Q.3 Write short notes on **ANY FOUR** of the following: [12]
   a) Stratified Random Sampling
   b) Normal curve and its characteristics
   c) Student 't' – test
   d) Enumerate the measures of central values
   e) Presentation of quantitative data
   f) Prospective study
   g) Non-parametric tests

Q.4 **a)** What is "tests of significance"? [03]
   b) In a household survey on under five children, out of 200 female children 40 were malnourished and out of 300 male children 80 were malnourished.
      i) Test whether there is any association between Gender and malnutrition [05]
      ii) State the types of data, Null hypothesis and alternate hypothesis. [05]

*   *   *   *

Day : Saturday
Date : 17-10-2015

Time 09.00 A.M. TO 12.00 NOON
Max. Marks : 75

N.B.
1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagrams **WHEREVER** necessary.
4) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION – I

Q.1 Write short notes on any **FIVE** of the following :   (20)
a) Reliability of measuring instruments
b) Scope of Nursing Research
c) Importance of literature review in research
d) Hypothesis
e) Importance of communication of research results
f) Variables

Q.2 Researchers derive knowledge and draw conclusions from samples.
a) Discuss the uses of sampling.   (05)
b) Techniques of sampling.   (05)
c) Discuss advantages and disadvantages of sampling.   (05)

Q.3 There is an increasing number of problems faced by first year nursing students.
a) State an appropriate problem and list down the objectives.   (05)
b) Out line an appropriate research design for the study and describe it.   (05)
c) How will you go about data collection and analysis of this study.   (05)

SECTION – II

Q.4 Attempt any **FOUR** of the following: (12)
a) Define quantitative and qualitative data. Enumerate three graphical representation for each type of data.
b) Define measure of dispersion. Compare Sd and CV.
c) Chisquare test with its uses.
d) Explain the tests of significance for comparison of two large samples.
e) Define correlation between two variables and uses of scatter diagram.
f) Explain mean with its merits and demerits.

Q.5 a) In an interventional study, the study group was given a special food and a   (05)
comparable control group was given only usual diet for three months. From the following data test the effect of the special food.

	Mean Weight Gain in Kg	Sd in Kg	Sample size
Study group	2.2	0.4	150
Control group	1.8	0.4	200

b) Explain simple regression, equation of regression, coefficient of regression.   (03)

c) Define 95% C.L for population mean.   (05)
Find the 95% CL for the population proportion of DM if a sample of 1400 individuals were randomly selected and found 280 are suffering from DM.

*   *   *

Day: Saturday
Date: 20 -10 - 2012

Time: 9:00 A.M. TO 12:00 Noon.
Max Marks. 75

N.B.

1) All questions are **COMPULSORY**.
2) Answers to the **TWO** sections should be written in **SEPARATE** answer books.
3) Figures to the right indicate **FULL** marks.

SECTION - I

Q.1
a) What is data? (02)
b) List down the various methods of data collection (03)
c) Explain the steps involved in processing of data. (05)
d) Explain phenomenology as a method of research. (05)

Q.2
You have been working as a sister in charge of critical care unit since five years.
a) List down any two researchable problems you may think for your unit. (02)
b) Explain the need for research in critical care area. (03)
c) Explain the research design you will use for any one problem. (05)
d) Explain ethical principles you will follow for conducting the research. (05)

Q.3 Write short answers (any **Five**) (20)
a) Review of literature
b) Differentiate between quantitative and qualitative research
c) Historical research
d) Validity
e) Steps of analyses
f) Interview technique

SECTION - II

Q.4 Explain dispersion and one measure in detail. (08)

Q.5 Find coefficient of variation (05)

C.1	No. of students
10-20	14
20-30	20
30-40	29
40-50	16
50-60	12

Q.6 Write a short notes on any three of the following (12)
a) Paired t – test
b) Hypothesis and types of hypothesis
c) Mean with merits and demerits
d) Regression coefficient

* * *

Day : Thursday
Date : 02-05-2013

Time : 9:00 A.M. To 12:00 Noon.
Max. Marks : 75

N.B.:
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Write short answers **ANY FIVE** of the following: [20]
   a) Reliability
   b) Observation method
   c) Experimental design
   d) Hypothesis
   e) Stratified random sampling
   f) Characteristics of research
   g) Plan for data analysis
   h) Sources of literature review

Q.2 a) Explain the need for research in nursing. [05]
   b) Differentiate between qualitative and quantitative design. [05]
   c) Guidelines for critiquing problem statement [05]

Q.3 There is a regular absenteeism by the students in clinical area of your institution.
   a) Formulate the research problem and objectives [03]
   b) Identity the variables and formulate the hypothesis statement. [04]
   c) Discuss about the sampling technique which can be used for the study. [04]
   d) Explain what type of data collection method you will use. [04]

SECTION – II

Q.4 Attempt **ANY FOUR** of the following: [12]
   a) Explain advantages of sampling over population.
   b) Explain merits and demerits of median.
   c) Define dispersion and list different measures of dispersion.
   d) Find the coefficient of correlation between X and Y, with number of pairs of observations is 8.

   $$\sum x_i = 545, \ \sum yi = 542, \ \sum xiyi = 36955, \ \sum Xi^2 = 37169, \ \sum yi^2 = 36812$$

   e) Explain simple random sampling method.
   f) Define Binomial distribution. Give interpretation of parameters of binomial distribution.
   g) Explain Paired t-test.

Q.5 a) In a locality 100 persons were randomly selected and asked for their educational achievements. The results are given as under. [05]

Sex	Education		
	Primary School	High School	College
Male	10	15	25
Female	25	10	15

Test whether education depends on sex at 1% level of significance.

b) The regression equation between X and Y are as follows: [05]

$$Y - 1.2 X = 6.52$$
$$X - 0.32 Y = 4.62$$

Find correlation between X and Y. Also find $\overline{X}$ and $\overline{Y}$.

c) Explain method of drawing Histogram. [03]

* * * *

Day : Monday
Date : 05-05-2014

Time : 9:00AM TO 12:00 NOON.
Max. Marks : 75

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Write short answers ANY FIVE of the following: [20]
  a) Likert scale
  b) Elements of research design
  c) Retrospective research
  d) Inductive reasoning
  e) Variables
  f) Characteristics of good sampling
  g) Sampling error
  h) Qualitative research design definition and characteristics

Q.2 a) Explain the ethical principles involved in nursing research. [05]
  b) Ethnography- Explain in detail. [05]
  c) Steps of research process. [05]

Q.3 A study to assess distress experienced by people with Type II diabetes in selected areas of Pune City.
  a) Formulate the objectives for this study [03]
  b) Explain the research design you feel is appropriate for the study [04]
  c) State the assumptions and hypothesis for the study. [04]
  d) Elaborate the criteria for selection of resources and steps in reviewing the [04] literature for the study.

SECTION – II

Q.4 Attempt ANY FOUR of the following: [12]
  a) Define correlation and types of correlation.
  b) Suppose X has normal distribution with mean 30 and standard deviation 4.
    Find: i) $P[x>40]$ ii) $P[x<20]$ iii) $P[30<x<35]$.
  c) Explain advantages of graphical presentation of data.
  d) Define inclusive and exclusive method of classification.
  e) Explain merits and demerits of arithmetic mean.
  f) Explain the terms test statistics, hypothesis and critical region in testing of hypothesis.
  g) Write a note on test of proportion.

Q.5 a) A random sample of 10 boys had the following IQs [05]
    70, 120, 110, 101, 88, 83, 95, 88, 107, 100.
    Does these data support the assumption that population I.Q. is 100?
  b) Calculate mean, median and mode of following data: [05]

C.I	Frequency	C.I	Frequency
300 – 375	69	600 – 675	58
375 – 450	167	675 – 750	24
450 – 525	207	750 – 825	10
525 – 600	65		

  c) Explain stratified random sampling. [03]

* * * *

| Day | : | Thursday | | Time : | 10.00 A.M. TO 01.00 P.M. |
| Date | : | 02/05/2019 | **S-2019-4349** | Max. Marks : 75 | |

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION – I

Q.1 Write short notes on **ANY FIVE** of the following: **(4x5=20)**
  a) Informed written consent
  b) Uses of review of literature
  c) Validity of research tool
  d) Scope of Nursing Research
  e) Annotated Bibliography
  f) Ethics in nursing research
  g) Sampling error

Q.2 Attempt any **THREE** of the following: **(10x3=30)**
  A) i) Define data collection. **(02)**
   ii) Enlist the steps of data collection. **(03)**
   iii) Explain observation technique in detail. **(05)**

  B) i) Define research. **(02)**
   ii) Enlist the types of research design. **(03)**
   iii) Discuss the experimental design in detail. **(05)**

  C) i) Define reliability. **(02)**
   ii) Describe three aspects of reliability. **(03)**
   iii) Explain any one reliability test in detail. **(05)**

  D) i) Define hypothesis. **(02)**
   ii) Explain the types of hypothesis. **(03)**
   iii) Discuss the steps of formulation of research hypothesis with example. **(05)**

SECTION – II

Q.3 Write short notes on **ANY FOUR** of the following: **(4x3=12)**
  a) ANOVA
  b) Mann Whitney test
  c) Scatter diagram and its use
  d) Retrospective design
  e) Systematic random sampling
  f) Characteristics of normal curve
  g) Comparison of SD and CV

Q.4 In an intervention study, the weight gain in the control group of 80 children with mean and SD was 2 kg $\pm$ 0.7 kg where as in the experimental group of 100 it was 3.7 kg $\pm$ 0.6 kg.
  a) Why do you need a control group to study the effect? **(05)**
  b) Name the statistical tests to compare the groups in the above problem. **(05)**
  c) If P is 0.017, what is your conclusion? **(03)**

*   *   *