



**BRAINWARE UNIVERSITY**

**Term End Examination 2024-2025**  
**Programme – B.Sc. Nursing-2021**  
**Course Name – Nursing Research & Statistics**  
**Course Code - NRST405(T)**  
**( Semester VII )**

**Full Marks : 75**

**Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable. Write answer of Section – A and Section –B in separate Answer booklet.]

**Section : A**

**Marks : 55**

**Group-A**

**(Multiple Choice Type Question)**

**9 x 1=9**

**1. Choose the correct alternative from the following :**

- (i) Select an example of a secondary source.
  - a) Research article
  - b) Systematic review
  - c) Thesis report
  - d) Clinical trial
- (ii) List the purpose of a pilot study.
  - a) To publish preliminary results
  - b) To finalize the literature review
  - c) To test the feasibility of a full-scale study
  - d) To analyze final data
- (iii) Select a non-probability sampling technique among the following.
  - a) Stratified sampling
  - b) Convenience sampling
  - c) Systematic sampling
  - d) Cluster sampling
- (iv) Choose the main limitation of using questionnaires in research.
  - a) Time-consuming to analyze
  - b) High cost
  - c) May lead to low response rates or biased answers
  - d) Difficult to administer
- (v) Conclude the research design which is descriptive and involves observing subjects without manipulation.
  - a) Experimental
  - b) Correlational
  - c) Observational
  - d) Cross-sectional
- (vi) Simplify the meaning of the term 'external validity' in research.
  - a) The extent to which a study's results can be generalized outside the study setting
  - b) The accuracy of measurement tools
  - c) The ability to measure variables consistently
  - d) The completeness of data collection
- (vii) Choose the type of study in which data is collected at a single point in time.
  - a) Cross-sectional
  - b) Longitudinal
  - c) Experimental
  - d) Cohort

(viii) Select a key feature of a quasi-experimental design.

- |   |                             |
|---|-----------------------------|
| a) Random assignment  | b) Lack of control group    |
| c) Manipulation of independent variable without randomization | d) No variable manipulation |

(ix) Recommend a method to reduce sampling error.

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| a) By increasing the sample size     | b) By decreasing the sample size |
| c) By using non-probability sampling | d) By using convenience sampling |

### Group-B (Long Answer Type Questions)

2. Classify the different sources of data. Summarize different tools and techniques of data collection. Determine the different methods of testing the validity of research tool. 2 x 15=30  
(15)
3. Define research design. Identify the characteristics of a true experimental research design. Explain the common experimental research design with examples. [4+6+5=15]  
(15)
- OR**
4. Explain the characteristics of true experimental research design. Discuss the common experimental design. Summarize the steps to maintain the ethical aspect of a research study. [2+5+8=15]  
(15)

### Group-C (Short Answer Type Questions)

4. Compare between Quantitative and Qualitative Research. 2 x 5=10
5. List the types of hypothesis. (5)  
(5)

### Group-D (Very Short Answer Type Questions)

6. Define operational definition. 3 x 2=6
7. Define sampling in research. (2)
8. List the steps involved in formulating a research question. (2)  
(2)

### Section : B

#### Group-A

Marks : 20

#### (Multiple Choice Type Question)

9. Choose the correct alternative from the following : 4 x 1=4
- (i) Select the diagram in which two variables can be plotted together.
- |                      |                    |
|----------------------|--------------------|
| a) Pie Chart         | b) Histogram       |
| c) Frequency Polygon | d) Scatter Diagram |
- (ii) Interpret the type of statistics in which the values are arranged in ascending and descending order .
- |         |                       |
|---------|-----------------------|
| a) Mean | b) Median             |
| c) Mode | d) Standard Deviation |
- (iii) Identify the most frequently used measures of dispersion.
- |           |                       |
|-----------|-----------------------|
| a) Range  | b) Mean               |
| c) Median | d) Standard Deviation |
- (iv) List the best suited statistical test that is used to study the relationship between smoking and lung disease.
- |                    |                       |
|--------------------|-----------------------|
| a) Mean difference | b) Correlation        |
| c) Chi-square test | d) Standard deviation |

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**Group-B**  
(Short Answer Type Questions)

2 x 5=10

10. Calculate the mean and Standard Deviation from the following data
- | Score     | 4-5 | 6-7 | 8-9 | 10-11 | 12-13 | 14-15 |
|-----------|-----|-----|-----|-------|-------|-------|
| Frequency | 4   | 10  | 20  | 15    | 8     | 3     |
11. Explain pie chart with an example.

(5)

(5)

**Group-C**  
(Very Short Answer Type Questions)

3 x 2=6

12. Name the most commonly used measure of central tendency.  
13. Summarize the meaning of nominal scale.  
14. Explain Type I error.

(2)

(2)

(2)

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