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RFN-001

Ph. D. IN FOOD AND NUTRITION

(PHDFN)

Term-End Examination

December, 2021

**RFN-001 : RESEARCH METHODS AND
BIostatistics**

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Question No. 1 is compulsory.*

(ii) *Answer **five** questions in all.*

(iii) *All questions carry equal marks.*

1. A researcher wants to study the impact of an intervention programme of providing food supplement to undernourish children in a community. Design a research proposal with the following components :

- (a) Title of research proposal 2
- (b) Research objectives/hypotheses/questions 5

(c) Methodology (including research design, sample, sample size, sampling techniques, locale of study). 5

(d) Tools and techniques/research instruments 5

(e) Research data analysis 3

2. Differentiate between the following sets of terms, giving examples : 5+5+5+5

(a) Null hypothesis and Alternative hypothesis

(b) Alpha error and Beta error

(c) Quantitative data and Qualitative data

(d) Validity and Reliability

3. (a) Briefly describe the various probability sampling methods used in epidemiological research. 10

(b) Mention the uses and limitations of the following research tools : 5+5

(i) Questionnaire

(ii) Interview

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4. (a) Compute product moment correlation of the following data : 10

x	y
45	56
55	50
56	48
58	60
60	62
68	64
70	65
75	70
80	74
85	82

- (b) What are the indicators of mortality and morbidity ? Explain briefly giving examples. 10
5. (a) What do you understand by the following ? 10+5
- (i) Measures of central tendency
- (ii) Measures of variability
- Explain briefly giving examples and their uses.
- (b) What is degree of freedom ? Explain its use in statistical analysis. 5

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6. (a) Define and discuss the basic descriptive studies in epidemiological research, highlighting their characteristics and use. 12
- (b) What are the various graphs we can use to depict our data while writing report ? Explain briefly. 8
7. Write short notes on any **four** of the following : 5+5+5+5
- (a) Representation of frequency distribution
- (b) Descriptive variables studied in research
- (c) Observation as a tool for data collection
- (d) Measures for validity of diagnostic tests
- (e) Application of Chi-square test

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P. T. O.