No. of Printed Pages : 4 **RFN–001**

Ph. D. (FOOD AND NUTRITION)

(PHDFN)

Term-End Examination

December, 2025

RFN-001 : RESEARCH METHODS AND BIOSTATISTICS

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Attempt any **five** questions.*

(ii) All questions carry equal marks.

1. Explain the following terminologies used in research, giving suitable examples : 5×4=20

   (a) Normal scale

   (b) Sample size

   (c) Reliability and validity of a tool

   (d) Parametric test

   (e) Probability

2. Differentiate between the following : 5+5+5+5

   (a) Journal and Document

   (b) Interview and Schedule

   (c) Objectives and Hypothesis

   (d) Numerical Scale and Geographical Scale

3. (a) Illustrate using a flow-chart the different study designs available for research in nutrition epidemiology. 5

   (b) Identify the situation when you would recommend the use of a cohort study for research. List the advantages and limitations of cohort studies. 7

   (c) Discuss the aspects you would keep in mind while designing and conducting an experimental study. 8

4. (a) Discuss the relevance of the following terms in the context of nutrition research : 10

   (i) Confidence interval

   (ii) Level of significance

   (iii) Power of a test

   (iv) Degree of freedom

   (b) Describe the types, characteristics, uses and limitations of questionnaire as a research tool. Give suitable examples. 10

5. (a) For a study on infant mortality and birth weight the data in given herewith :

	Birth Weight	
Infant Mortality	Low	Normal
Present	150	85
Absent	45	55

   (i) Calculate the relative risk of infant death among low birth weight babies. 6

   (ii) Calculate the odds of infant mortality among normal weight infants. 6

(b) Briefly discuss the characteristics of a normal probability distribution. 8

6. (a) Differentiate between mean, median, mode and standard error of the difference between the mean scores with the help of an example. 10

(b) Briefly discuss the sampling techniques/methods you may use for research in the area of nutrition. 10

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