

**MASTER OF SCIENCE IN
DIETETICS AND FOOD SERVICE
MANAGEMENT
[M. SC. (DFSM)]**

**Term-End Examination
December, 2025**

**MFN-009 : RESEARCH METHODS AND
BIostatISTICS**

Time : 3 Hours

Maximum Marks : 100

***Note :** Question No. 1 is compulsory. Answer
five questions in all. All questions carry
equal marks.*

1. Answer the following questions : $10 \times 2 = 20$
- (a) What do you understand by representations of sample ?
 - (b) Describe structured interview.
 - (c) Define Epidemiology.

- (d) Explain Demographic variables with example.
 - (e) What is continuous variable ?
 - (f) Differentiate between Stochastic and Deterministic variables.
 - (g) What is the scope of research in nutrition ?
 - (h) What do you understand by plagiarism in the research studies ?
 - (i) Elaborate on the *three* types of research.
 - (j) Enlist the characteristics of a good hypothesis.
2. A researcher wants to study the causes of Eye Flu among adults in the age group 30-50 in Delhi. Design a research proposal with the following components :
- (a) Title of research study 2
 - (b) Research objectives 3
 - (c) Research design 3

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|--|---|
| (d) Sample, sample size and sampling technique | 5 |
| (e) Tools of data collection | 4 |
| (f) Statistical analysis tools | 3 |
3. Explain briefly the following giving suitable examples : 5×4=20
- (a) Random error
 - (b) Non-parametric test
 - (c) Incidental sample
 - (d) Sampling error
 - (e) Multistage sampling
4. Differentiate between the following giving examples : 4×5=20
- (a) Interval scale and Ratio scale
 - (b) Participant observation and Non-participant observation

- (c) Content validity and Construct validity
- (d) Numerical scale and Graphic scale
5. (a) Explain the issues in the design and conduct of clinical trials with example. 10
- (b) Describe the characteristics of case study method. 5
- (c) Write the characteristics of experimental research. 5
6. Given are the test scores of 10 students enrolled in MFM-009 : 5×4=20
- Scores : 46, 31, 28, 49, 52, 49, 38, 37, 22, 24
- Calculate Mean, Median, Mode, Standard Deviation and Range of the above data.
7. (a) Calculate the product moment correlation for the following data for two variables : 12

X (Theory Marks)	Y (Practical Marks)
34	24
28	34
42	33
50	49
39	52
26	32
37	41
24	49
50	12
46	52

- (b) Differentiate between a cohort study and a cross-sectional study, highlighting their uses and application in research. Substantiate your answer with suitable examples. 8

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8. Write short notes on any *four* of the following : 4×5=20

- (a) Types of attitude scale
- (b) Uses of interview
- (c) Stages in the process of observation
- (d) Quality of data
- (e) Frequency polygon—construct and uses

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