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MFN–009

MASTER OF SCIENCE IN DIETETICS AND FOOD SERVICE MANAGEMENT

[M. SC. (DFSM)]

Term-End Examination

June, 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. (a) Describe unstructured interview. 2

   (b) What do you understand by control in experimental research ? 2

   (c) Explain the meaning of the word 'Cohort'. 2

(d) Explain social variable with example. 2

(e) What is Discrete Variable ? Give an example. 2

(f) Differentiate between qualitative and quantitative variables giving examples. 2

(g) Explain the meaning of scientific research. 2

(h) What do you understand by code of ethics in research ? 2

(i) What is Chi-square test ? When is it used ? 2

(j) What do you understand by nutrition epidemiology ? 2

2. A researcher wants to study recovery from Covid among adults who are suffering from diabetics in the age group 35-45. Design a research proposal with the following components :

(a) Title of the research study 2

(b) Research objectives 3

(c) Research design 3

(d) Sample and sampling technique 3

(e) Tools of data collection 4

(f) Data collection 2

(g) Research analysis/Statistical tools for data analysis. 3

3. Explain the following briefly giving suitable examples : 5+5+5+5

(a) Mortality measures

(b) Parametric test

(c) Non-probability sampling

(d) Characteristics of a good sample

4. Differentiate between the following giving examples : 5+5+5+5

(a) Nominal scale and ordinal scale

(b) Structured observation and Unstructured observation

(c) Content validity and criterion related validity

(d) Numerical scale and Graphic scale

5. (a) Describe the different forms of hypothesis. 10

(b) Describe the main steps involved in conducting descriptive research. 5

(c) Write the steps involved in Experimental Research. 5

6. Calculate mean, median, mode, standard deviation and range for the following data. Test scores of 10 students enrolled in MFN-009 : 20

Score : 45, 34, 52, 36, 41, 26, 60, 54, 37, 49

7. (a) Calculate the product moment correlation for the following data for two variables : 12

X (Theory Marks)	Y (Practical Marks)
45	21
54	32
52	41
58	40
61	36
41	23
32	45
36	21
50	36
40	27

(b) Describe the characteristics of normal probability distribution. 8

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

   (a) Types of test

   (b) Techniques of interview

   (c) Cluster sampling

   (d) Relative risk and odds ratio

   (e) Representation of frequency distribution

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