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MFN-009

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE MANAGMENT)**

[(M. SC.) (DFSM)]

Term-End Examination

December, 2024

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

Time : 3 Hours

Maximum Marks : 100

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

1. (a) List any *three* uses of Epidemiology. 3
- (b) Write any *four* health related outcomes of the individuals in the community. 4
- (c) Define Research. 1
- (d) Describe the weakness of analytic studies. 4
- (e) Explain non-probability sampling. 4
- (f) Name *two* techniques of interview. 2
- (g) Name the *two* measures of variability. 2

2. You have to conduct a research study to examine the iron deficiency in 10-15 year old girls. Develop a research proposal under the following heads :
- (i) Title of the study 2
 - (ii) Research questions 2
 - (iii) Research objectives 3
 - (iv) Sample and sample size 2
 - (v) Research design 3
 - (vi) Research instruments for study 3
 - (vii) Method of data collection 2
 - (viii) Statistical tools used for the study 3
3. (a) Describe the characteristics of a good sample. 8
- (b) Describe what is experimental research. 4
- (c) Researcher is interested to find out if the weight gain during pregnancy affects the pregnancy outcome (No. of still births *vs.* live births).

Based the bivariate data given below, calculate the odds of still births to pregnant women weight gain : 8

Infant outcome	Weight gain during pregnancy		
	< 8 kg	≥ 8 kg	Total
Still birth	181	50	231
Live birth	2200	651	2851

4. (a) Describe the various methods of non-probability sampling. 10
- (b) What is product moment correlation measurement ? What does it indicate and how is it measured ? 10
5. Explain the following briefly :
 - (a) Explain the characteristics of a good questionnaire. 5
 - (b) Describe the uses of interview. 5
 - (c) Describe how to organize data. 5
 - (d) Differentiate between standard scales and graphic scales. 5
6. (a) Explain what is random error. 5
- (b) Describe the different components in a research article. 5
- (c) Explain the level of accuracy in research. 5
- (d) Write the various observational study designs you would use in nutrition research. 5
7. (a) Describe any *two* types of documents. 5
- (b) Write a short note on cumulative frequency distribution. 5
- (c) Explain how data can be collected by observing behaviour. 10

8. Write short notes on any *four* of the following :

$$5 \times 4 = 20$$

- (a) Explain the **six** research processes.
- (b) Describe the weakness of descriptive studies.
- (c) Case control study.
- (d) Steps involved in experimental research.
- (e) Differentiate between systematic sampling and cluster sampling.

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