

**MASTER OF SCIENCE (DIETETICS AND  
FOOD SERVICE MANAGEMENT) (M.Sc. DFSM)**

**Term-End Examination**

**June, 2017**

**MFN-009 : 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.*

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1. (a) Explain the following in 2-3 sentences each. 10
- (i) Research
  - (ii) Declarative Hypothesis
  - (iii) Sample
  - (iv) Structured Interview
  - (v) Logical Error
- (b) Give one example of each of the following : 5
- (i) Correlational Study
  - (ii) Power Test
  - (iii) Numerical Scale
  - (iv) Null Hypothesis
  - (v) Cohort Study

- (c) Fill in the blanks : 5
- (i) Case study is a form of \_\_\_\_\_ research.
  - (ii) Experimental study establish \_\_\_\_\_ relationship.
  - (iii) Population contain \_\_\_\_\_ number of units.
  - (iv) Structured questionnaires pose \_\_\_\_\_ questions.
  - (v) Chi-square test is used for \_\_\_\_\_ data.

2. A researcher wants to study Vitamin D deficiency in adolescents girls of their city. Design a research proposal with following components : 5+4+3+3+5

- (a) Research Objectives
- (b) Research Hypothesis
- (c) Research Design
- (d) Sample size determination
- (e) Data collection method

3. Differentiate between the following by giving examples : 5+5+5+5

- (a) Observational and Experimental Intervention
- (b) Total Population and Sample Population
- (c) Simple and Stratified Sampling
- (d) Content Validity and Construct Validity

4. Explain the following briefly by giving suitable example. 5+5+5+5

- (a) Qualitative Data
- (b) Histogram
- (c) Sensitivity
- (d) Range

5. (a) Compute variance and standard deviation for the following frequency distribution. 5+5

Class Interval	Frequency
120 - 124	4
125 - 129	3
130 - 134	9
135 - 139	8
140 - 144	7
145 - 149	1

- (b) Calculate Mean, Median and Mode from the following grouped data when frequency is given : 10

Class Interval	Frequency
35 - 39	2
40 - 44	1
45 - 49	6
50 - 54	0
55 - 59	5
60 - 64	9

6. (a) Explain any three strengths and three limitations of the following research tools : 6+6

- (i) Interview  
(ii) Journals

- (b) Describe how the researcher can ensure the quality of data. 8

7. (a) Compute the rank difference correlation for the following data. 12

X	10	12	9	20	16	11	22	13
Y	9	11	14	21	15	7	12	8

- (b) Describe the techniques of Interviewing. 8

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

- (a) Asking question to collect data
  - (b) Stages in process of observation
  - (c) Uses of Attitude Scale
  - (d) Incidental Sample
  - (e) Pre-experimental Design
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