

01155

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

Term-End Examination

June, 2011

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

Time : 3 hours

Maximum Marks : 100

*Note : Question No. 1 is compulsory. Answer five questions
in all.*

1. (a) Define the following : **10**
- (i) Cohort
 - (ii) Research
 - (iii) Variable
 - (iv) Sample
 - (v) Quantitative Data
- (b) Give one example for each of the following : **5**
- (i) Null hypothesis
 - (ii) Nominal Scale
 - (iii) Open Ended Question
 - (iv) Numeric Scale
 - (v) Structured Interview

- (c) Fill in the Blanks : 5
- (i) _____ is the hypothesis that states that there is no difference between observed and expected data.
 - (ii) Post test is to measure the individuals level of understanding of a concept after some _____.
 - (iii) Measures which describe a population are called _____.
 - (iv) Tool which is consistent in measuring whatever it may measure is a _____ tool.
 - (v) Records which provide ready made content of remote times are called _____.

2. (a) Malnutrition is a major problem among children in India. As a researcher, you have to study the state of malnutrition in your district. Design a research proposal with the following points :
- (i) Define the research problem 2
 - (ii) Research objectives of the study 5
 - (iii) Population, Sample and Method of Sampling 3
 - (iv) Research Method 5
 - (v) Hypothesis 2
 - (vi) Method of Data Collection. 3

3. Explain the following briefly giving suitable examples :
- (a) True Experimental Design 5
 - (b) Characteristics of a Good Sample 5
 - (c) Types of Scale for Data Measurement 5
 - (d) Objectives of the Research Problem 5
4. (a) Differentiate between the following research tools giving appropriate examples :
- (i) Interview and observation as a research tool 6
 - (ii) Attitude Scale and Ratify Scale 6
- (b) Differentiate between the following sampling methods with appropriate examples.
- (i) Systematic Sampling and Stratified Sampling 4
 - (ii) Incidental Sample and Quota sample 4
5. The age and weight of seven girls is as follows : 20
- Age : 10, 11, 9, 12, 13, 15, 14
- Weight : 21, 22, 21, 25, 24, 27, 23
- Find out the product moment correlation for the above two variables.

6. (a) Explain the two main types of Analytic studies. 6
- (b) Describe the main issues in the design of cohort studies. 6
- (c) Explain the various methods of probability samples. 8
7. (a) Compute Mean, Median, Mode, Variance and Standard Deviation for the following frequency distribution. 20
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|---------|----|
| 71 - 75 | 3 |
| 66 - 70 | 4 |
| 61 - 65 | 7 |
| 56 - 60 | 10 |
| 51 - 55 | 2 |
| 46 - 50 | 5 |
| 41 - 45 | 1 |
8. Write short notes on *any four* of the following :
- (a) Stages of Research Process 5+5+5+5=20
- (b) Three Forms of Hypothesis
- (c) Case Study Method
- (d) Main steps for Destructive Research
- (e) Adequacy of Sample
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