

**MASTER OF SCIENCE (DFSM)**

**Term-End Examination**

**June, 2014**

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

*Time : 3 hours*

*Maximum Marks : 100*

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

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1. (a) Define the following. 10
- (i) Research
  - (ii) Nutrigenomics
  - (iii) Alternate Hypothesis
  - (iv) Cohort
  - (v) Population
- (b) Give one example of each of the following. 5
- (i) Numerical Scale
  - (ii) Structured Questionnaire
  - (iii) Individual Test
  - (iv) Participant Observation
  - (v) Histogram

- (c) Fill in blanks: 5
- (i) ..... relates to the relevance of a content of a research tool.
- (ii) Complete, accurate list of all the units in a population is called .....
- (iii) In ..... sampling the units of the population are not selected at the discretion of the researcher.
- (iv) ..... is a test to measure the individuals concepts after intervention.
- (v) Hypothesis should provide ..... to research.

2. A researcher wants to study the causes of night blindness in children in the age group 1 to 5 in his/her state. Design a research proposal with following components:

- (a) Statement of research problem. 2
- (b) Research objectives. 5
- (c) Research Design (methodology, population and sample). 6
- (d) Research Instruments. 5
- (e) Research Analysis. 2

3. Differentiate between the following giving suitable examples :
- (a) Independent and dependent variable. 5
- (b) Stratified and systematic sampling. 5
- (c) Purposive sample and Incidental sample. 5
- (d) Interval Scale and Ratio Scale. 5
4. Explain the following briefly giving examples:
- (a) Data Processing 5
- (b) Halo-effect 5
- (c) Biased Sample 5
- (d) Case Study 5
5. (a) Compute mean, median and mode for the following frequency distribution 12

CI	F.
150-144	5
145-139	3
140-134	9
135-129	2
130-124	6
125-119	2

- (b) The fasting Glucose level in the blood of 8 children in std x I is given below. Calculate standard deviation of the fasting blood glucose level. 8

Fasting Blood Glucose Level (mg/dl)

90

120

115

80

113

140

125

150

6. (a) Enlist any two strengths and two limitations of the following research tools 10
- (i) Interview
- (ii) Observation tools
- (b) List the various designs of experimental study. Differentiate between any two types. 10

7. (a) Compute the product moment 'r' from the two variables i.e. marks obtained by students in physics (x) and marks in math (y)

x 40 45 30 62 70 26 35 43 60

y 32 26 46 63 52 41 50 39 45

- (b) Describe the two graphs which are made to represent the relation between two variables. 4+4

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

- (i) Purpose of Epidemiology. 5x4=20
- (ii) Discrete variables.
- (iii) Migrant studies in nutrition.
- (iv) Stages of Research Process.
- (v) Validity of Research.

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