

**Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore-641043.**

Master's Degree Examination – November 2017

I Semester

Class : I PG
Major : Food Science and Nutrition
Textiles & Fashion Apparel
Bio textiles

Time: 3 hours
Max. Marks: 60

17MFNC04 / 17MTFC04 / 17MBXC04 – Research Methods and Statistical Applications.

Part A

10 x 1/2 = 5

Choose the correct answer

1. Research means -----
(a) Search for knowledge (b) Invention (c) Making changes (d) none of these.
2. ----- is a set of elements taken from a larger population according to certain rules.
(a) Sample (b) Population (c) Statistic (d) Element.
3. ----- is called first hand data.
(a) Primary data (b) Secondary data (c) information (d) All the above
4. Which of these is not a method of data collection -----.
(a) Questionnaires (b) Interviews (c) Experiments (d) Observations
5. The report should contain -----.
(a) Preliminary section (b) main body (c) end matter (d) all of the above.
6. Pictograms are -----
(a) Very accurate (b) Least accurate (c) Mostly used (d) Scientifically correct.
7. The median of the variant values 11, 7, 6, 9, 12, 15, 19 is -----.
(a) 9. (b) 12. (c) 15. (d) 11.
8. The value of correlation ratio varies from -----.
(a) -1 to 1 (b). -1 to 0 (c) 0 to 1 (d) 0 to ∞ .
9. Diagrams and graphs are tools of -----.
(a) Collection of data. (b) Analysis. (c) Presentation. (d) Classification.
10. Rank correlation method was developed by -----.
(a) Karl Pearson (b) R.A. Fisher. (c) Spearman (d) Croxten and cowden.

Part B

5 x 4 = 20

Answer ALL questions

Each answer should not exceed 200 words or one page

11.a. Define Research. Explain its objectives. (Or)

11.b. Write a brief note on 'Convenient Sampling'.

12.a. What are the sources of secondary data? (Or)

12.b. What do you understand by editing and coding of Data?

13.a. Explain about two dimensional diagrams. (Or)

13.b. Mention the components of a thesis.

14.a. Find the standard deviation of the following distribution:

Age	: 20-25	25-30	30-35	35-40	40-45	45-50
No. of persons	: 170	110	80	45	40	35

(Or)

14.b. What is correlation? Explain its features.

15.a. Define binomial distribution. State its properties. (Or)

15.b. What is Chi-Square test? Explain its assumptions.

Part C

5 x 7 = 35

Answer ALL questions

Each answer should not exceed 600 words or three pages

16.a. Explain the various types of research.

(Or)

16.b. What are the different methods of sampling?

17.a. Define questionnaire and explain its guidelines.

(Or)

17.b. Discuss on the interviews and the types of interview?

18.a. What is Tabulation? What are the different parts of a table?

(Or)

18.b. Discuss about various types of graphs.

19.a. Find the coefficient of the correlation for the following:

Cost:	39	65	62	90	82	75	25	98	36	78
Sales:	47	53	58	86	62	68	60	91	51	84

(Or)

19.b. The following data are given for marks in Company Law and Statistics in a certain year :

Mean Marks in Statistics	39.5
Mean Marks in Company Law	47.6
Standard Deviation of Marks in Statistics	10.8
Standard Deviation of Marks in Company Law	16.9
'r' between marks in Statistics and Company Law	0.42

Determine the two equations of Regression. Also calculate expected marks in Company Law of a candidate who obtained 50 marks in Statistics.

20.a. Describe about the rules of probability and its applications.

(Or)

20.b. A survey amongst women was conducted to study the family life. The observation are as follows:

		Family Life		
		Happy	Not	Total
Educated	Happy	70	30	100
	Not	60	40	100
Total		130	70	200

Test whether there is any association between family life and education.

[For V=1, the Chi-square at 5% level is 3.84]