

SWAMI VIVEKÄNANDA YOGA ANUSANDHÄNA SAMSTHÄNA
Swami Vivekananda Yoga Anusudhana
A University, established under Section 3 of the UGC Act, 1956
(Eknath Bhavan, # 19, Gavipuram Circle, Kempegowda Nagar, Bangalore 560 019, India)

MDY T 204 Research Methodology- 2

DATE: 29 .05.2012

Time: 3 Hours

Max. Marks: 100

SECTION A: Multiple Choice Questions (15 mins)

(Circle any letter a, b,.. you think is correct – write only on this sheet, please) (15 points)

1. Clarity in scientific writing is:
 - a. Fundamental
 - b. A Good Idea
 - c. Unnecessary
 - d. Challenging to achieve
2. Name any correct statement among the following is correct:
 - a. A false positive for the Null Hypothesis must occur less than a fraction alpha
 - b. The power of a scientific study is named as $(1-\alpha)$
 - c. In Yoga studies, the Skeptic position is identical to the Null hypothesis
 - d. False negatives for the Null Hypothesis should occur less than a fraction beta
3. Different authors construct scientific papers:
 - a. Differently
 - b. Always according to logical principles
 - c. With the sequence of section types in a fixed order.
 - d. According to the nature of their report, theory, experiment or review.
4. In carrying out an experimental study, first things to do are:
 - a. Outline the paper
 - b. Review the literature
 - c. Obtain pilot data
 - d. Design the experiment
5. A Pre-Synopsis differs from a Paper in that it is:
 - a. For private circulation
 - b. Without substantive data
 - c. More for the benefit of the writer than the reader
 - d. A feasibility study for the project
6. The Laws of Chance and Probability are:
 - a. Virtually identical like Fractions compared to Decimals
 - b. Intuitive and logical respectively
 - c. Best left to Drona and Yudishthera
 - d. A gentle way to approach statistics

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7. Statistics are inexact because:

- a. Samples only tell a limited amount about distributions
- b. Different experiments on the same subject seldom if ever give the same values
- c. Different experiments use different subjects
- d. They give answers in p values.

SECTION B. Chance and Probability (10 mins - 10 points)

Using an example *of your own choosing* where **more than 10 outcomes are equally possible**,

1. Give the connection between the chance (fractional) value and the probability value
2. State the two rules of combining probabilities.
 - a. Where several alternative possibilities might occur for the same event.
 - b. In the case of events that all occur one after the other.
3. Explain why all the possibilities together must equal one. Which rule does this illustrate?

SECTION C. Scientific Papers and Synopses (30 mins – 25 points)

1. Write down the normal sequence of section headings for the main synopsis for a thesis, post data collection.
2. Summarize the kind of material to go in each
3. Which Sections will be longer than for a scientific paper? Why?
4. Do any sections come after the conclusions?
5. Why is writing scientific papers before a thesis / thesis synopsis helpful.

SECTION D. The Null Hypothesis (15 mins – 10 points)

Choose and briefly describe any kind of study of the effects of IAYT Yoga practice:

1. State the Null hypothesis for the study
2. Explain why the Null Hypothesis is identical to skepticism
3. Why does this often suggest a p value 0.5 ($\frac{1}{2}$) to evaluate the Null Hypothesis?
4. Write down the contingency Table for the Null Hypothesis
5. Place the words false positive and false negative in the correct boxes
6. Place the variables alpha (α) and beta (β) and their normal values in their correct places.

SECTION E. Creative Writing (1½ hours – 40 points)

Choose a *non-academic* subject which inspires you, and use the approach given below to write a magazine article about it.

1. Name the topic – it should not be academic or research connected and should inspire you.
2. *In a similar sequence as for a scientific paper*, name a sequence of sections in which you would conceptualize and construct your article, and
3. Compare and contrast these to those for a scientific paper.
4. In a new section, take the section headings you have named, and, using bullet points, fill in main points of each section.
5. Finally write as much of your article as you can in the time available