AVALIAÇÃO		
Curso: RESEARCH PROGRAM IN DENTISTRY FOR INVESTIGATORS		
Módulo: Descriptive statistics	**Ano/semestre:**	**Carga horária:**
Professor(es): Belen Retamal-Valdes		

QUESTIONÁRIO

Question 01:

In descriptive statistics, the identification of the object of study is essential for the description process. In this context, a subset of a population, where all its elements will be examined for the purpose of carrying out the desired statistical study, corresponds to the definition of:

Answers	feedbacks
a) Sample	Correct – Subset of a population, where all its elements will be examined for the purpose of carrying out the desired statistical study.
b) Population	Incorrect – Population is the set or group of all the units on which the findings of the research are to be applied.
c) Variable	Incorrect – Variable is the characteristic of the sample elements that we are interested in knowing statistically
d) Qualitative variables	Incorrect – Qualitative variables represent a quality (or attribute) of a researched individual, they are defined by several categories. These are characteristics that do not have quantitative values.

Question 02:

Body Mass Index (BMI) is a person's weight in kilograms (or pounds) divided by the square of height in meters (or feet). These variables are commonly evaluated in clinical studies. What kind of variable is weight?

Answers	feedbacks
a) Qualitative - nominal	Incorrect – When there is no ordering in the possible representations. Examples: gender, eye color, hair color, smoker/non-smoker.
b) Qualitative - ordinals	Incorrect – When they present an order in their results. Examples: schooling (1st, 2nd, 3rd grade), month of observation (January, February, …, December.)
c) Quantitative - discrete	Incorrect – The values represent a finite or enumerable set of numbers, which result from a count, for example: Number of children (0,1,2,…), number of bacteria per sample, number of glasses of beer consumed per day.
d) Quantitative - continuous	Correct – The values belong to a range of real numbers and represent a measurement such as a person's height or weight.

Question 03:

Measures of central tendency serve to locate the distribution of raw data (or frequencies) on the variation axis of the variable in question. "The sum of all measurements divided by the number of observations in the dataset" is the definition of:

Answers	feedbacks
a) Mean	Correct – Mean is the sum of all measurements divided by the number of observations in the dataset.
b) Median	Incorrect – After ordering the sample elements, the median is the value (belonging or not to the sample) that divides it in half, that is, 50% of the sample elements are less than or equal to the median and the other 50% are greater than or equal to the median.

c) Mode	Incorrect – Mode is the value that appears most frequently in the dataset.
d) Range	Incorrect – Range is the difference between the largest and the smallest observation in the data. Range is not a measure of central tendency.

Question 04:
Measures of dispersion allow to know the extent of variability of the data. In this context, the is the square root of sum of squared deviation from the mean divided by the number of observations. What word is missing to complete the definition?

Answers	feedbacks
a) Variable	Incorrect – Variable is a characteristic of the sample elements that we are interested in knowing statistically. Variable is not a measures of dispersion.
b) Standard deviation	Correct – The standard deviation is the square root of sum of squared deviation from the mean divided by the number of observations.
c) Range	Incorrect – Range is the difference between the largest and the smallest observation in the data.
d) Interquartile range	Incorrect – Interquartile range is the difference between the 25th and 75th percentile (also called the first and third quartile).

Question 05:
The representation of the data is a didactic process and necessary for understanding the information in statistics. Then, the tables have the following correct characteristics:

Answers	feedbacks
a) The table must be complex and subjective.	Incorrect – The table must be simple, clear and objective
b) The tables always require an explanatory text.	Incorrect – The tables should be self-explanatory
c) In the upper and lower parts, the tables must be closed by horizontal lines.	Correct – In fact, in the upper and lower parts, the tables must be closed by horizontal lines.
d) Vertical lines for separating columns in the body of the table is mandatory.	Incorrect – Vertical lines for separating columns in the body of the table is optional.

Question 06:
The graphics are the representation in the form of geometric figures of information obtained in investigations, to provide the reader with a faster and more objective interpretation of the content. Then, the graphics have the following correct characteristics:

Answers	feedbacks
a) Graphics should never have a title and legends.	Incorrect – Graphics should always have a title and legends.
b) Graphics should always show complexity.	Incorrect – Graphics should always show simplicity
c) Pizza graphics help to represent proportions of the data.	Correct – In fact, the pizza graphics help to represent proportions of the data.
d) Bar graphics help to represent proportions of the data.	Incorrect – Bar graphics are the most common and they are used to compare groups at one time point or one dose.