BIOSTATISTICS

MED EXAM
WATEEN BATCH

إعداد :

1) A distribution of 6 scores has a median of 21. If the highest score increases 3 points, the median will become?

Select one:

a. 24

b. Cannot be determined without additional information.

c. 18

d. 21.5

e. 21

Answer: E

2) If the Sample size equal to 100 teacher, and the mean systolic blood pressure equal to 140 mmHg, and the standard deviation equal to 10. So, the percentile ranks of a teacher whose blood pressure equal to 140 mmHg is?

Select one:

a. 25th

b. 40th

c. 95th

d. 50th

e. 70th

Answer: D

3) All the following about discrete quantitative values are true EXCEPT?

a. Mathematical operations can be applied to it

b. Its value not necessarily to be an integer

c. Possessing an interval data

d. Heart rate is an example of this data

e. Obtained by counting

Answer : B

4) Reject the null hypothesis while it is true?

a. Type I error (Alpha Error)

b. A correct decision

c. Type II Error (Beta Error)

d. information is not enough to decide

e. Power of the study

Answer: A

5) The characteristic of Normal Distribution curve include the following EXCEPT?

Select one:

a. it can be used for normal and abnormal values in medicine

b. Mean, median and mode are identical

c. All the variable distributed in area under the curve in a homogenous form

d. It is bell shaped

e. It is bimodal

Answer: E

6) The standard error is affected?

a. Indirectly by the variance of the data

b. Directly by the Variance of the data

c. Directly by the sample size

d. Not affected by sample size

e. Directly by the sample mean

Answer: B

7) Characteristics of a population are called _, while those of a sample are termed _?

a. Statistics; Measures

b. Descriptive; inferential

c. Statistics; Parameters

d. Parameters; Statistics

e. Statistics; Variables

Answer: D

8) In normal distribution curve. the area more than i 2 SD is?

Select one:

a. 68%

b. 5%

c. 99%

d. 34%

e. 95%

Answer: B

9) The area under the standard normal curve between mean and minus 3 standard deviations is?

Select one:

a. 49.7 %

b. 81.9 %

c. 2.1 %

d. 34.1%

e. 27.2 %

Answer: A

10) You would like to see whether your colleague weight was differ from general population. The colleague weights are normally distributed; the average population weight is 70kg. The sample size=100, the sample mean=75, and the 50:20. (2-sided, Set alpha=0.05). So the calculated value of t test is?

a. 1.40

b. 0.15

c. 3.05

d. 2.75

e. 2.50

11) For a symmetrical distribution, the mean and median are?

a. Always different

b. Possibly the same, possibly different

c. Insufficient information to decide

d. Preset at equal distances on opposite sides of the mode

e. Equals

Answer: E

12) The proportion of area under normal curve between 2 equal to -O.3 and the mean is?

Select one:

a. 50 %

b. 39.21 %

c. 11.79 %

d. 61.79 %

e. Can't be calculated

Answer: C

13) Accept the null hypothesis while it is true?

a. Type I error (Alpha Error)

b. A correct decision

c. Power of the study

d. Information is not enough to decide

e. Type II Error (Beta Error)

Answer: B

14) Increasing the frequencies in the tails of a distribution will?

a. Not affect the standard deviation as long as the increases are balanced on each side of the mean

b. Not affect the standard deviation

c. Reduce the standard error

d. Increase the standard deviation

e. Reduce the standard deviation

Answer: D

15) If alpha level (a) set to be 0.01 then the test considered to be statistically not significant when?

a. p = 0.009

b. p = 0.004

c. p = 0.001

d. p = 0.005

e. p = 0.020

Answer: E

16) What is the median for the following data: 2, 7, 50, 14, 2, 50, 34, 50, 12, 39, 40?

Select one:

a. 7

b. 50

c. 34

d. 2

e. 14

Answer: C

17) A distribution with a tail that goes to the right is called?

a. Positively Skewed

b. Little Kurtosis

c. Unimodal

d. Large kurtosis

e. Negatively Skewed

Answer: A

18) Confidence interval is calculated by using?

a. The mean and its standard error

b. The mean and its standard deviation

c. The median and its stander deviation

d. The median and the range

e. The mean and the range

Answer: A

19) The following data are the weights of under-five children in Kgs: 3, 7, 4, 6, 2, 8, 19. Half (50%) of the values in a distribution are?

a. Between the mode and the lowest value

b. Between Q (1) and Q (3)

c. Included in the range

cl. Between the mode and the highest value

e. Between the mean and mode

Answer: B

20) Which of the following is among the advantages of arithmetic mean?

a. It is not necessarily to be a unique

b. It is not affected by extreme values

c. It is the most commonly used measure of central tendency in statistical analysis

d. It can be used with all types of variables

e. It is not affected by skewed data

Answer: C

21) In a group of 12 scores, the largest score is increased by 36 points. What effect will this have on the mean of the scores?

a. It will remain unchanged

b. There is no way of knowing exactly how many points the mean will be increased.

c. It will increase by 36 points

d. It will be increased by 12 points

e. It will be increased by 3 points

Answer: E

22) A standardized biostatistics test was carried on two classes (A and B). The marks showed; Class A had a standard deviation of 2.4, while class 8 had a standard deviation of 1.2 on the same test. What can be said about these two classes?

a. Class B marks are less heterogeneous than Class A

b. Class B did less well on the test than class A.

c. Class A marks are more homogeneous than class B

d. It is not possible to give an idea

e. Class A performed twice as well on the test as Class B

Answer: A

23) The median is?

a. The values that occurs most frequently in a set of data

b. a measure of variation

c. It is the sum of all observation divided by number of observations

d. It is the middle value in ordered array data

e. The difference between the largest and the smallest value of observations

Answer: D

24) You would like to see whether your colleague weight was differ from general population. The colleague weights are normally distributed; the average population weight is 70kg. The sample size=100, the sample mean=75, and the SD=20. (2-sided, Set alpha=0.05). So, the decision to be taken according to your calculated value (t) is to?

a. Accept the null hypothesis

b. Reject the alternative hypothesis

c. Fail to reject the null hypothesis

d. Can't be determined and need more information

e. Accept the alternative hypothesis

25) If the Sample size equal to 100 teacher, and the mean systolic blood pressure equal to 140 mmHg, and the standard deviation equal to 10. So, what is the approximate systolic blood pressure for Q3 in this sample?

Select one:

a. 117.8

b. 146.7

c.1725

d. 133.3

e. 183.2

Answer: B

26) The mean Systolic blood pressure, of 100 teachers is 110 :10 mmHg. The standard error equal?

a. 1

b. 10

c. 11

d. 100

e. 110

Answer: A

27) Obtaining sound generalized information about population depending on the evidence of the sample is termed ?

a. Presentation of data

b. Descriptive biostatistics

c. Confidence interval

d. lnferential biostatistics

e. Collection of data

Answer: D

28) Standard deviation of the sampling distribution of averages (means) called?

a. Mean

b. Sampling error

c. Variance

d. Standard Error

e. Standard deviation

Answer: D

29) A 95% confidence interval for a population mean will be _ a 99% confidence interval for the same population means. (Both calculations are based on the same set of data?

a. Longer than

b. No decision can be given

c. Shorter than

d. It depends on the particular set of data

e. The same length as

Answer: C

30) Standard deviation is the measure of?

a. Deviation from mean value

b. Value with a highest frequency

c. Chance

d. Central tendency

e. Difference between highest and lowest values

Answer: A

31) Covering 95% of the population mean under the normal distribution curve we have to?

a. Move 1.96 SD above and 1.96 SD below the mean

b. Move 2 5.0 above and 2 SD below the mean

c. Move one S.D above and one S.D below the mean

d. Move 1.96 SD above and one S.D below the mean

e. Move 2.58 SD above and 2.58 SD below the mean

Answer: A

32) The critical value for two tailed t-test at, alpha = 0.05, and total subjects in the study = 31, is?

a. 2.75

b. 3.82

c. 1.72

d. 2.04

e. 2.83

33) Ifthe Sample size equal to 81 teacher, and the mean systolic blood pressure equal to 140 mmHg. and the standard deviation equal to 20. So, the percentile ranks of a teacher whose blood pressure equal to 145 mmHg is?

a. 60th

b. 25th

c. 40th

d. Can't be calculated

e. 3rd

Answer: A

34) Number of patients is a?

a. Nominal data

b. Interval data

c. Ordinal data

d. Continuous data

e. Discrete data

Answer: E

35) The probability of area of standard normal curve between 2 = 0.63 and the mean is?

a. 98.7%

b. 73.5%

c. 23.5%

d. 42.3%

e. 35.5%

Answer: C

36) One minus type II error?

a. Type II Error (Beta Error)

b. Type I error (Alpha Error)

c. External validity

d. A correct decision

e. Power of the study

Answer: E

37) If alpha level (or) set to be 0.001 then the test considered to be statistically significant if?

Select one:

a. p = 0.0100

b. p = 0.0002

c. p = 0.1000

d. p = 0.0500

e. p = 0.0040

Answer: B

38) A normal distribution curve is determined by the?

a. The range and sample size

b. The mean and sample size

c. The mean and stander deviation

d. The mean and range

e. The mean and median of the above

Answer: C

39) The area under the standard normal curve between 1 and 2 standard deviations (both sides) in the population is?

a. 13.6 %

b. 27.2 %

c. 95 %

d. 47.7 %

e. 34.1 %

Answer: B

40) 1000 students in Jordanian university took a standardized test that is normally distributed and has a mean of 350 and a variance of 225: Sara scored 342. What is the percentile rank of Sara?

a. Cannot be determined

b. 70th

c. 10th

d. 50th

e. 30th

Answer: E

41) In a test of physics the following set of scores was obtained: 4, 6, 8, 9,11, 13, 16, 24, 24, 24, 26. The teacher computed all of the descriptive indices of central tendency and variability on these data, and then discovered that an error was made, and one of the 24's is actually an 18. Which of the following indices will be changed from the original computation?

a. Median

b. Mode

c. Frequency

d. Standard deviation

e. Range

Answer: D

42) Accept the null hypothesis while it is false?

a. Type II Error (Beta Error)

b. Type I error (Alpha Error)

c. A correct decision

d. Power of the study

e. Information is not enough to decide

Answer: A

43) The area under the normal curve between mean and minus 2 standard deviations is?

a. 81.9 %   b. 2.1 %   c. 47.7 %

d. 34.1%   e. 27.2 %

Answer: C

44) In a group of 100 women, their mean weight of is 60 kg. The standard deviation is :25 kg. Which one of the following is true?

a. 99% of all women weight between 55 and 65 kg

b. 68% of all women weight between 55 and 65 kg

c. 95% of all women weight between 55 and 65 kg

d. 95% of all women weight between 57.5- and 62.5kg

e. 99% of all women eight between 57.5- and 62.5kg

Answer: C

45) Which is INCORRECT statement about the symmetrical distribution?

a. The tail of a distribution indicates the type of skewness

b. If a distribution is asymmetrical it is considered to be skewed

c. The symmetry of variation is indicated by skewness

d. A symmetrical distribution has no skewness

e. If the tail goes to the left, the distribution is skewed to the right and is positively skewed

Answer: E

46) In assessment of Intelligence Quotient of 180 primary school children, one child had a score greater than 135 of the total children. What is the percentile rank of this child?

a. 25th

b. 44th

c. 75th

d. 90th

e. Can't be calculated

Answer: C

47) If you are told the students' mark has a mean of 65 and a variance of 0, what must you conclude?

a. All the students have a mark of 65.

b. There are no marks for the students.

c. There are 65 students

d. There is only one mark for the students.

e. Someone has made a mistake.

Answer: A

48) Reject the null hypothesis while it is false?

a. Information is not enough to decide

b. Power of the study

c. A correct decision

d. Type II Error (Beta Error)

e. Type I error (Alpha Error)

Answer: C

49) The following is the weights in Kg for 6 children: 5, 9, 9, 8, 7, 5 .The median weight for these children is?

a.8Kg and 9Kg

b. 7.5 Kg

c. 5 Kg

d. 9 Kg

e. 5.5 Kg

Answer: B

50) The critical value for two tailed t-test at alpha = 0.001, and total subjects in the study = 93, is?

a. 3.46   b. 1.83   c. 3.37

d. 1.72   e. 2.75

51) In frequency polygon, the point corresponding to the reading on the X-axis is?

a. The width of the corresponding interval

b. Lower limit of the corresponding interval

c. The upper limit of the corresponding interval

d. The midpoint of the corresponding interval

e. The frequency of each interval

Answer: D

52) Which of the following is not true about the mode?

a. It not practically be used in the continuous data

b. It can be used for all types of data

c. It is the observation that has the highest frequency

d. It is possible to have two or more modes for the same data

e. It Is not affected by extreme values

Answer: B

53) Which one of the following statements is INCORRECT regarding frequency distributions?

a. Always there is a termination or end for quantitative continuous data

b. Measurements are like fingerprints, no two are exactly alike

c. Continuous distributions are formed because everything in the world that can be measured varies to some degree

d. The more precise the instrument, the more variation will be detected

e. The degree of variation will depend on the precision of the measuring instrument used

Answer: A

54) Variation in the results of sampling in the same population is called?

a. Sampling error

b. Coefficient of variance

c. None of the above

d. Standard error

e. Range

Answer: A

55) In a sample of 520 pregnant women who gained weight during pregnancy, the mean was 2.5 Kgs, the median was 3.75 K95 and mode was 2.1 Kgs. The curve for this data will be?

Select one:

a. There is no enough information to describe the curve

b. A Uniform curve

c. Symmetrical

d. Skewed to the right

e. Skewed to the left

Answer: D