

SSR Degree and PG College(A)
Biostatistics
II sem Internal - I
M.SC. BIOTECHNOLOGY
QUESTION BANK

1. The term "Biostatistics" is the application of statistics to which field ()
A) Economics B) Biology & Health Sciences C) Physics D) Sociology
2. Which of the following is a _qualitative_ variable ()
A) Weight in kg B) Blood group C) Height in cm D) Number of children
3. Data collected by the investigator directly from the source is called: ()
A) Secondary data B) Primary data C) Grouped data D) Raw data
4. The entire group of individuals about which we want information is called: ()
A) Sample B) Variable C) Population D) Parameter
5. A characteristic that takes different values for different individuals is: ()
A) Constant B) Variable C) Sample D) Data
6. Which of these is a _discrete_ variable. ()
A) Temperature B) Age C) Number of hospital beds D) Blood pressure
7. A subset of the population selected for study is: ()
A) Census B) Sample C) parameter D) Statistic
8. Blood pressure, weight, and height are examples of: ()
A) Nominal data B) Ordinal data C) Continuous data D) Discrete data
9. Tally marks are used to prepare: ()
A) Pie chart B) Frequency distribution C) Histogram D) Ogive
10. The difference between the upper and lower limits of a class is called: ()
A) Class interval B) Class mark C) Frequency D) Range
11. Which graph is used to represent _continuous_ frequency distribution ()
A) Bar diagram B) Pie chart C) Histogram D) Pictogram
12. In a pie chart, the total angle at the center is: ()

- A) 90° B) 180° C) 360° D) 100°
13. Cumulative frequency curve is also known as: ()
A) Histogram B) Frequency polygon C) Ogive D) Line diagram
14. Which diagram is most suitable for showing proportions of a whole. ()
A) Bar diagram B) Histogram C) Pie chart D) Scatter plot
15. For _discrete_ data, which graphical representation is most appropriate?
A) Histogram B) Frequency polygon C) Bar diagram D) Ogive
16. The mid-point of a class interval is called: ()
A) Class limit B) Class mark C) Class frequency D) Class width
17. Which measure of central tendency is affected most by extreme values ()
A) Median B) Mode C) Arithmetic Mean D) Geometric Mean
18. For an open-end class distribution, which average is most suitable ()
A) Arithmetic Mean B) Median C) Geometric Mean D) Harmonic Mean
19. The value which divides the data into two equal halves when arranged in order is: ()
A) Mean B) Mode C) Median D) Range
20. The most frequently occurring value in a data set is: ()
A) Mean B) Median C) Mode D) Harmonic Mean

II. Filling the blanks

21. _____ average is most appropriate for averaging rates and ratios
A) Arithmetic Mean B) Geometric Mean C) Harmonic Mean D) Mode
22. The relationship between AM, GM, HM for positive values is _____
A) $AM = GM = HM$ B) $AM \geq GM \geq HM$ C) $HM \geq GM \geq AM$ D) $GM \geq AM \geq HM$
23. If all observations are multiplied by 5, the arithmetic mean will be _____
A) Increased by 5 B) Decreased by 5 C) Multiplied by 5 D) Divided by 5
24. Which of the following is NOT a mathematical average. _____

- A) Arithmetic Mean B) Geometric Mean C) Median D) Harmonic Mean
25. For the data 2, 4, 8, 16, the geometric mean is _____
- A) 7.5 B) 8 C) 6.32 D) 4
26. Harmonic mean is used to calculate average _____
- A) Price B) Speed C) Height D) Weight
27. _____ measure of dispersion is the simplest to calculate
- A) Standard deviation B) Range C) Variance D) Mean deviation
28. The positive square root of variance is called. _____
- A) Range B) Mean deviation C) Standard deviation D) Coefficient of variation
29. _____ measure of dispersion is least affected by extreme values
- A) Range B) Standard deviation C) Mean deviation D) Variance
30. If each observation is increased by 10, then standard deviation is _____
- A) Increases by 10 B) Decreases by 10 C) Remains unchanged D) Becomes zero
31. Variance is expressed as _____
- A) Same units as data B) Square of units of data C) No units D) Percentage
32. A distribution with a long tail to the right is _____
- A) Negatively skewed B) Positivelyskewed C) Symmetrical D) Normal
33. For a symmetrical distribution _____
- A) Mean > Median > Mode B) Mean < Median < Mode C) Mean = Median = Mode D) Mean ≠ Median
34. The sum of squares of deviations from mean divided by n or n-1 is _____
- A) Range B) Mean deviation C) Variance D) Standard error
35. The hypothesis of "no difference" is called _____
- A) Alternative hypothesis B) Null hypothesis C) Statistical hypothesis D) Research hypothesis
36. Alternative hypothesis is denoted by _____

A) H_0 B) H_1 or H_a C) H_2 D) H

37. If we reject H_0 when it is actually true, the error is. _____

A) Type I error B) Type II error C) Standard error D) Sampling error

38. Accepting null hypothesis when it is false is _____

A) Type I error B) Type II error C) Level of significance D) Power of test

39. The probability of Type I error is denoted by. _____

A) β B) α C) $1-\alpha$ D) $1-\beta$

40. In hypothesis testing, the statement we want to test is. _____

A) Alternative hypothesis B) Null hypothesis C) Both D) None

III. Descriptive Questions

1. Write about Null Hypothesis
2. Write about alternative Hypothesis
3. Explain about Graphical representation of data
4. Explain about arithmetic mean, median, mode
5. Explain about Harmonic mean
