STATISTICS APTITUDE TEST-30

1. If the variance of 5 values is 5.6. What is the standard deviation of those values

a) 4.35 b) 3.95
c) 2.85 d) 25.65

2. Find the range of the following data
143, 148, 135, 150, 128, 139, 149, 146, 151, 132

a) 23 b) 24
c) 25 d) 22

3. Calculate the mean of the following

Class interval	90 - 100	80 - 90	70 - 80	60 - 70	50 - 60
Frequency	10	15	14	12	9

a) 73.2 b) 75.8
c) 74.6 d) 71.5

4. In a moderately asymmetrical series, the values of arithmetic mean and mode are 26.1 respectively. The value of the median is

a) 35.3 b) 28.0
c) 22.4 d) 25.1

5. In the following table find, the average score of the students

Marks (X)	20	30	40	50	60	70
No. of students (f)	8	12	20	10	6	4

a) 39 b) 40
c) 42 d) 41

6. The standard deviation of 10 values is 4. If each value is increased by 3, then find the variance of the new set of values

a) 49 b) 16
c) 19 d) 7

7. In the following table find, the average score of the students

Marks (X)	20	30	40	50	60	70
No. of students (f)	8	12	20	10	6	4

a) 39 b) 40
c) 42 d) 41

8. The mean of the runs scored by three batsman A,B and C in the same series of innings are 58, 48 and 147 respectively. The S.P. of their runs are 15, 12 and 2 respectively. Who is the most consistent batsman?

a) C b) B
c) A d) Cannot be determined

9. Sangeetha is seven years older than Divya. Fifteen years ago, Divya's age was three quarters of Sangeetha's age. Find the age of Sangeetha now.

a) 44 b) 43
c) 42 d) 41

10. The median of the following data: 31, 35, 27, 29, 43, 37, 41, 35, 30

a) 31 b) 30

c) 37 d) 35

11. The annual production (in tones) of two farms during a period of 5 years is given below:

A = 32, 48, 50, 36, 34
B = 25, 40, 35, 75, 25

a) Both are equal b) A is more consistent than B
c) B is more consistent than A d) Cannot be determined

12. Marks obtained by an student in 5 subjects are given below 25, 26, 27, 28, 29 in these obtained marks 27 is

a) mode b) median and mode
c) mean and median d) both (a) and (c)

13. The median for the data 2, 4, 6, 8, 10, 12, 14 is

a) 6 b) 8
c) 9.5 d) 10

14. A study was done to compare the lung capacity of coal miners to the lung capacity of farm workers. The researcher studied 200 workers of each type. Other factors that might affect lung capacity are smoking habits and exercise habits. The smoking habits of the two worker types are similar, but the coal miners generally exercise less than the farm workers. 1. Which of the following is the explanatory variable in this study?

a) Exercise b) Lung capacity
c) Smoking or not d) Occupation

15. Which of the following is a confounding variable in this study?

a) Exercise b) Lung capacity
c) Smoking or not d) Occupation

A randomized experiment was done by randomly assigning each participant either to walk for half an hour three times a week or to sit quietly reading a book for half an hour three times a week. At the end of a year the change in participants' blood pressure over the year was measured, and the change was compared for the two groups.

16. This is a randomized experiment rather than an observational study because:

a) Blood pressure was measured at the beginning and end of the study.
b) The two groups were compared at the end of the study.
c) The participants were randomly assigned to either walk or read, rather than choosing their own activity.
d) A random sample of participants was used.

17. If a statistically significant difference in blood pressure change at the end of a year for the two activities was found, then:

a) It cannot be concluded that the difference in activity caused a difference in the change in blood pressure because in the
b) Whether or not the difference was caused by the difference in activity depends on what else the participants did during the year

course of a year there are lots of possible confounding variables.

c) It cannot be concluded that the difference in activity caused a difference in the change in blood pressure because it might be the opposite, that people with high blood pressure were more likely to read a book than to walk.

d) It can be concluded that the difference in activity caused a difference in the change in blood pressure because of the way the study was done.

18. What is one of the distinctions between a population parameter and a sample statistic?

a) A population parameter is only based on conceptual measurements, but a sample statistic is based on a combination of real and conceptual measurements.

b) A sample statistic changes each time you try to measure it, but a population parameter remains fixed

c) A population parameter changes each time you try to measure it, but a sample statistic remains fixed across samples.

d) The true value of a sample statistic can never be known but the true value of a population parameter can be known.

19. A magazine printed a survey in its monthly issue and asked readers to fill it out and send it in. Over 1000 readers did so. This type of sample is called

a) a cluster sample.

b) a self-selected sample.

c) a stratified sample

d) a simple random sample

20. Which of the following would be most likely to produce selection bias in a survey?

a) Using questions with biased wording.

b) Only receiving responses from half of the people in the sample.

c) Conducting interviews by telephone instead of in person.

d) Using a random sample of students at a university to estimate the proportion of people who think the legal drinking age should be lowered.

21. A polling agency conducted a survey of 100 doctors on the question “Are you willing to treat women patients with the recently approved pill RU-486”? The conservative margin of error associated with the 95% confidence interval for the percent who say 'yes' is

a) 50%

b) 10%

c) 5%

d) 2%

22. Which one of these statistics is unaffected by outliers?

a) Mean

b) Interquartile range

c) Standard deviation
d) Range

23. A list of 5 pulse rates is: 70, 64, 80, 74, 92. What is the median for this list?

a) 74
b) 76
c) 77
d) 80

24. Which of the following would indicate that a dataset is not bell-shaped?

a) The range is equal to 5 standard deviations.
b) The range is larger than the interquartile range.
c) The mean is much smaller than the median.
d) There are no outliers.

25. What is the effect of an outlier on the value of a correlation coefficient?

a) An outlier will always decrease a correlation coefficient.
b) An outlier will always increase a correlation coefficient.
c) An outlier might either decrease or increase a correlation coefficient, depending on where it is in relation to the other points.
d) An outlier will have no effect on a correlation coefficient.