INDIAN SCHOOL AL WADI AL KABIR

Class: XI	**Department: Commerce**
Worksheet: 1	**Topic: Measures of Dispersion**

1. Dispersion measures -----
   a. The scatterness of a set of observations
   b. The concentration of a set of observations
   c. Both (a) and (b)
   d. Neither (a) nor (b)
   A: a

2. ----- is calculated on the basis of the mean only.
   a. Range
   b. Quartile deviation
   c, Mean deviation
   d. Standard deviation
   A: d

3. Which one is an absolute measure of dispersion?
   a. Range
   b. Mean deviation
   c. Standard deviation
   d. All these measures
   A: d

4. ---- is the most commonly used relative measure of dispersion.
   a. Coefficient of Range
   b. Coefficient of Quartile deviation
   c. Coefficient of Mean deviation
   d. Coefficient of Variation
   A: d

5. The mean and standard deviation of normal distribution are 60 and 5 respectively. What is the value of coefficient of variation?
   a. 12%
   b. 8.33%
   c. 55%

d. 65%
A: b

6. Which measure of dispersion is considered for finding a pooled measure of dispersion after combining several groups?
   a. Mean deviation
   b. Standard deviation
   c. Quartile deviation
   d. All these measures
   A: b

7. Which measure of dispersion has some desirable mathematical properties?
   a. Standard deviation
   b. Mean deviation
   c. Quartile deviation
   d. All these measures
   A: a

8. Measures of dispersion reflect the quantum of ---------- (variation)

9. Dispersion is the extent to which values in a distribution differ from the -------- of the distribution. (average)

10. ------- is calculated on the basis of the mean only:
    a. Range
    b. Quartile deviation
    c. Mean deviation
    d. Standard deviation
    A: D

11. Positive square root of the ---------- is the standard deviation. (variance)

12. Standard deviation is independent of origin. True/False. Give reason.

(True), Standard deviation is not affected by the value of the constant from which deviations are calculated. The value of the constant does not figure in the s.d formula. Thus, s.d is independent of origin.

13. Standard deviations can also be calculated from the values directly, i.e., without taking deviations. This amounts to taking deviations from -------. (zero)

14. Standard deviation is independent of scale. True/False. Give reason.
(False), standard deviation is not independent of scale. Thus, if the values or deviations are divided by a common factor, the value of the common factor is used in the formula to get the value of standard deviation.

15. Average daily wage of 50 workers of a factory was Rs 200 with standard deviation of Rs 40. Each worker is given a raise of Rs 20. What will be its effect?

a. The standard deviation will remain the same.
b. The average daily wage will increase.
c. The wages will become more uniform.
d. All of the above.
A: D

16. ---------- is the most widely used measure of dispersion.
a. Range
b. Quartile deviation
c. Mean deviation
d. Standard deviation
A: D

17. Calculate standard deviation from the following data:

Weight:	0- 10	10-20	20-30	30-40	40-50
Frequency:	10	15	10	10	5

(Ans: 12.7)

18. Find the standard deviation from the given data.

Sr. No:	1	2	3	4	5
X :	10	20	30	40	50

(Ans: 14.14)

19. Calculate the standard deviation from the following data:

Weight (in kg):	0-20	20-40	40-60	60-80	80-100
Frequency :	81	40	66	49	14

(Ans: 25.45)

20. Find out the standard deviation from the following data after finding mean:

Class interval:	0-10	10-20	20-30	30-40	40-50
Frequency:	8	13	16	8	5

(Ans: 11.9)