**Statistics Questions From Previous Exams**

1. A student who obtained a percentile rank of 75 on an achievement test is best characterized as having

(A) ranged 75th from the top in a group of 100 test takers

(B) answered 75% of the test questions correctly

(C) scored higher than 75% of the test takers

(D) scored 75% higher than the average test taker

(E) scored 75% of the highest score

2. In a normal distribution of test scores, the percentage of scores that fall at or below the mean score is:

(A) 17.5

(B) 25

(C) 50

(D) 66.6

(E) 95

3. The mean will be higher in any distribution that

(A) is positively skewed

(B) is not normal

(C) is symmetrical

(D) represents measures for a random sample

(E) represents measures for a biased sample

4. For a language test with normally distributed scores, the mean was 70 and the standard deviation was 10. Approximately what percentage of test takers scored 60 and above?

(A) 16

(B) 34

(C) 68

(D) 84

(E) 95

5. Emily scored at the 65th percentile on a standardized achievement test. This indicates which of the following? Her score was:

(A) above average

(B) average

(C) below average

(D) just passing

(E) unreliable

6. 

Which of the following is true of the frequency distributions shown in the graphs above?

(A) Distribution A has more variation than distributions B or C.

(B) Distribution B has more variation than distributions A or C.

(C) Distribution B and distribution C have the same variation.

(D) The standard deviation of distribution A is infinite.

(E) The standard deviation of distribution B is zero.

7. If the variance of a set of scores is 100, the standard deviation will be

(A) 5

(B) 10

(C) 25

(D) 50

(E) 125

8. Which of the following sets of scores has the greatest standard deviation?

(A) 5, 7, 9, 12

(B) 2, 7, 9, 22

(C) 25, 27, 29, 32

(D) 50, 51, 52, 53

(E) 100, 101, 101, 103

9. On a test, the mean score for a class of 100 students is 80 and the standard deviation is 10. The professor who gave the test then realizes that she made a scoring error, which she corrects by adding 5 points to each student’s score. The standard deviation of the students’ new score is

(A) 5

(B) 10

(C) 10.5

(D) 15

(E) 85

10. Ms. Costas owns a business with nine other employees. Ms. Costas’ annual salary is $90,000. Her manager’s salary is 60,000. Of her other employees, three earn $25,000 each and five earn $15,000 each.

The range of this distribution is:

(A) $75,000

(B) $50,000

(C) $25,000

(D) $20,000

(E) $15,000

11. For the above distribution of salaries, the mean is

(A) lower than both the median and mode

(B) lower than the median but higher than the mode

(C) lower than the mode, but higher than the median

(D) the same as the median

(E) higher than both the median and the mode

12. Standard deviation is a measure of how much

(A) a normal person’s behavior changes in a given time

(B) two sets of scores vary together

(C) difference there is between the highest and the lowest score in a sample

(D) scores in a group differ from the mean of that group

(E) scores from a sample differ from that of the population

13. In a normal distribution, which of the following statements is true about the area that falls between one standard deviation above and one standard deviation below the mean?

(A) It contains the bottom 50% of the distribution.

(B) It contains the middle 50% of the distribution.

(C) It contains the bottom 68% of the distribution.

(D) It contains the middle 68% of the distribution.

(E) It is the same as the square of the average standard deviation.

14. David collected data on 15 research participants. Their scores were: 42, 38, 14, 13, 12, 12, 11, 11, 11, 10, 10, 10, 9, 9, 9. Which of the following best reflects the central tendency of this data set?

(A) Standard deviation

(B) Correlation coefficient

(C) Mode

(D) Median

(E) mean

15. Which coefficient represents the strongest correlation?

(A) -1.00

(B) -.33

(C) 0.00

(D) +.5

(E) +.89

**KEY:**

**1- C**

**2- C**

**3- A**

**4- D**

**5- A**

**6- B**

**7- B**

**8- B**

**9- B**

**10-A**

**11- E**

**12- D**

**13- D**

**14- D**

**15- A**