

FINAL EXAM

(The first 14 of a 90-question final exam written in 1993; X indicates the correct answer)

Select the one correct answer for each question

1. The reliability of a product
 - a. is determined by the use of control materials and calibrators
 - b. is indicated by accuracy and precision
 - c. is expressed by the correlation coefficient
 - d. all of the above X
 - e. a. and b. above

2. Regression analysis yields an equation that allows us to
 - a. determine the accuracy of a system
 - b. determine the precision of a system
 - c. predict one variable when we know the other variable X
 - d. all of the above

3. The variation between sample means in repeated sampling is estimated by which of the following?
 - a. standard deviation
 - b. standard error of the mean X
 - c. confidence interval
 - d. coefficient of variation

4. The range in which a percentage of test values will fall is the
 - a. confidence interval X
 - b. standard error of the mean
 - c. coefficient of variation (CV)
 - d. %CV

5. Which of the statements about bias is correct?
 - a. appears on a graph as data points falling consistently above or below the line of perfect correlation
 - b. is seen as an intermittent difference between a true value and another measure

c. both of the above

6. The standard deviation

a. is a measurement of the spread of scores around the mean

b. is an expression of variation

c. both of the above X

7. For which type of laboratory work would it be necessary to prevent clotting?

a. serum studies

b. plasma studies X

c. both of the above

8. Fingerstick specimens consist of blood from which of the following?

a. capillaries only

b. arterioles, venules, and capillaries X

9. Which characteristic pertains to dry chemistry technology?

a. measures monochromatic light transmitted through a liquid

b. uses reagents layered in sequence on the test material X

c. both of the above

d. none of the above

10. A test with high sensitivity for a given disease

a. yields a positive test result in a high percentage of patients who have the disease X

b. yields a negative test result in a high percentage of patients who do not have the disease

11. Which of the following are used in an instrument to correct for bias?

a. control materials with normal values

b. control materials with abnormal values

c. calibrators (standards) X

d. a. and b. above

12. Select the answer that best describes proficiency testing.

a. an internal check of test results

b. a quality assurance procedure

c. a procedure in which an outside agency compares test results from an identical sample sent to several laboratories

d. a. and b. above

e. b. and c. above X

13. The body uses glucose by

- a. immediately "burning" it for energy
- b. storing it as glycogen for later use as energy
- c. converting it into fat, which is stored in fat cells
- d. all of the above X
- e. a. and b. above

14. Which statement **does not** apply to Type I diabetes?

- a. accounts for only about 15% of all cases of diabetes
- b. usually develops during childhood or young adulthood
- c. is the most difficult type for controlling blood sugar levels
- d. tends to run in families X
- e. is often accompanied by hypertension and hyperlipidemia