

Controls and Control Charting Quiz-Answer Key

Passing score = 80% **[Answers in RED]**

Select the correct answer.

1. T F The ISO/IEC 17025 Standard requires that the laboratory have procedures for monitoring the quality of test results. **(Answer: T)**
 2. T F A laboratory may not use the same QC over and over again to create a control chart. **(Answer: F)**
 3. T F An optimal QC sample is one that is the same, or similar, matrix as the test materials and has a value of the analyte close in range to the expected results. **(Answer: T)**
 4. T F The mean value is used to calculate the upper and lower control limits. **(Answer: T)**
 5. T F The x-axis on a control chart is used to delineate time. **(Answer: T)**
 6. T F When creating a control chart mean using a spiked sample, only one analysts should be used. **(Answer: F)**
 7. T F The upper control limit is calculated by multiplying the standard deviation by three and adding this result to the mean. **(Answer: T)**
 8. T F The lower warning limit is calculated by multiplying the standard deviation by three and subtracting this result from the mean. **(Answer: F)**
 9. T F Control charts can never be used by the laboratory for trend analysis. **(Answer: F)**
10. The following may be used to monitor a laboratory's test results for validity: **(Answer: D)**
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|---------------------------------|------------------------|--------------|---------------------|
| A. Certified reference material | B. Proficiency testing | C. Retesting | D. All the choices. |
|---------------------------------|------------------------|--------------|---------------------|
11. When quality control data is found to be outside of the laboratory's predefined criteria: **(Answer: B)**
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|---|--|---|--|
| A. Quality control is repeated until acceptable results are achieved. | B. Planned action is taken to correct the problem and prevent incorrect results from being reported. | C. Instruments used in the analyses are to have preventive maintenance performed. | D. All results from that batch of samples are to be destroyed. |
|---|--|---|--|
12. QC samples used for control charting can be: **(Answer: D)**
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| A. Reference material or certified reference material. | B. Old PT samples (with associated statistics). | C. A sample characterized by the laboratory. | D. All of the choices. |
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13. A control chart contains all of the following except: **(Answer: A)**
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| A. Exponential value of the standard deviation | B. Mean. | C. Upper control level. | D. Plotted data. |
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14. Control chart statistics are reviewed: (Answer: C)

- A. Only by the laboratory's QA manager. B. Annually. C. At intervals set by the laboratory's QMS. D. Daily

15. A laboratory's process is considered (statistical) out of control when: (Answer: B)

- A. When one quality control point falls outside of the upper or lower control limits B. Indicated by the laboratory's QMS C. One quality control point falls outside of the upper or lower warning limits. D. A series of quality control points fall above or below the mean.

16. Qualitative analysis (presence/absence): (Answer: C)

- A. Never need to be evaluated for trends. B. Never have values that can be control charted. C. May have control charts associated with them per the laboratory's QMS. D. Always have skewed control charts.



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