Solution

# Standards and Calibration

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Accuracy | Precision | Stability | Linearity | Discrimination | Statement | |
|  |  |  |  | X | 1. | A new measurement system is selected that has a measurement scale with finer resolution. |
|  | X |  |  |  | 2. | A Gage R&R Study is conducted to identify the level of common cause error in a measurement system. |
| X |  |  |  |  | 3. | A measurement system is calibrated to remove a bias. |
|  |  |  | X |  | 4. | A measurement system is selected because the measured item’s normal range was well within the measurement system range. |
|  | X |  |  |  | 5. | An analysis was performed to determine the level of repeatability of a measurement system. |
| X |  |  |  |  | 6. | A measurement system is calibrated every six months in accordance with the calibration plan for the measurement system. |
|  |  | X |  |  | 7. | A golden standard is used with a measurement system at the beginning of each shift to ensure the system is operating correctly. |
|  |  |  |  | X | 8. | A manual measurement system is rejected and an electronic system selected because the electronic system has better measurement resolution. |
| X |  |  |  |  | 9. | A measurement system is used ten times to measure a measurement standard. Based upon the average of the measurements, the measurement system is adjusted so that the average matches the standard. |
|  |  | X |  |  | 10. | A measurement system that involves moving mechanical parts is lubricated weekly to reduce wear and tear. |
|  |  |  | X |  | 11. | Two measurement systems are used, one for small items and one for large items so that there is no distortion in the measurements. |
|  |  | X |  |  | 12. | A measurement system that requires unique settings based upon the item being measured requires the operator to record those settings. |