Name: _____ **Class:** _____ **Date:** _____ **ID: A**

Practice Test - Intro to Measurement

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Large-scale manufacturing based on the principles of standardization of sizes and _____ became common practice early in the twentieth century.
a. Mass production
b. Interchangeable parts
c. Planned obsolescence
d. Computed Tomography

____ 2. Although musket parts made in Eli Whitney's shop were interchangeable, they were not interchangeable with parts made by another contemporary gunmaker from the same drawings because the two gunsmiths had _____.
a. Different foot rulers
b. Different ways to interpret the drawings
c. Different sized standard stock
d. Different types of machine tools

____ 3. Because all the commonly used metals are affected dimensionally by temperature, a standard measuring temperature of ____ has been adopted for precision measuring work.
a. 100° C
b. Absolute Zero
c. 0° C
d. 20° C

____ 4. _____ or sensitivity, refers to the smallest unit of scale or dimensional input that the device can detect or distinguish.
a. Resolution
b. Linearity
c. Stability
d. Repeatability

____ 5. Precision measurements in three-dimensional Cartesian coordinate space can be made with _____.
a. Dial calipers
b. Micrometers
c. Coordinate measuring machines (CMM)
d. Surface plates

____ 6. If you want your measuring equipment to be as accurate as it can be, you must calibrate it against a standard. What government agency (institute) is the source for measurement standards in the United States?
a. The metric system (SI)
b. ASME
c. NIST
d. SAE

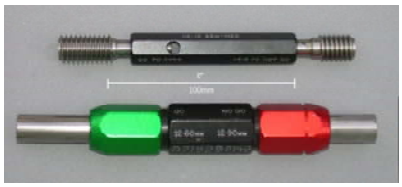
____ 7. An example of an internal primary standard often used is a:
a. Tolerance
b. Digital Readout
c. Gauge (Gage) block
d. Dial Indicator

____ 8. Optical projection most often depicts the part's _____.
a. Profile
b. Z axis
c. Interior details
d. Perspective view

____ 9. Two components of different materials fit together perfectly when manufactured at 70°F. When they are put into service inside a cryogenic storage tank at -243°F, they do not fit. Which of the following material property did the designer not take into account?
a. Melting point
b. Boiling Point
c. Coefficient of thermal expansion
d. Solidus

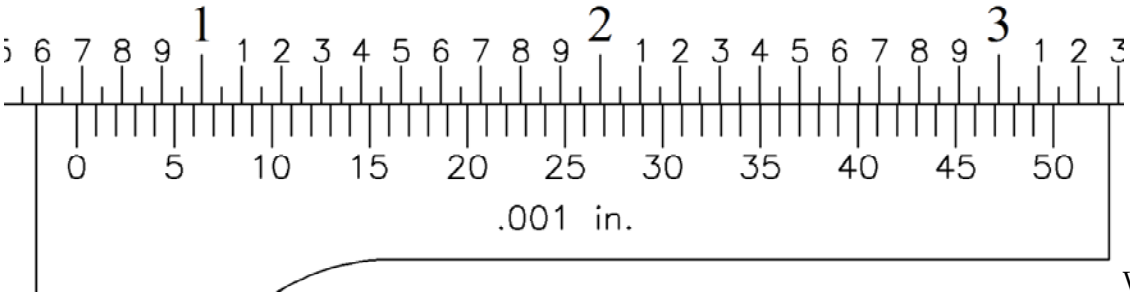
____ 10. _____ is the degree of consistency achieved when a measuring device is used by different readers to inspect the same part or part dimension

a. Precision
b. Accuracy
c. Repeatability
d. Reproducibility



____ 11. The image above shows an inspection tool that is commonly used to see if a particular feature (such as a hole) is within certain tolerance limits. What is it called?

a. Go-No-Go gauge
b. Radius gauge
c. Feeler gage
d. Screw pitch gage



____ 12. What is the reading shown on the vernier caliper above?

a. 1.636
b. .636
c. .686
d. .6865