



Engineering Measurement MDP 141

Assignment 1

Units and standards

1. What is meant by measurement unit? Mention how the S.I. units are categorized.
2. List the seven fundamental S.I. units with their symbols.
3. What is meant by derived measurement unit? Give examples of a derived unit used in mechanical applications and another one in electrical applications.
4. Why Multiplying factors are important?
5. Compare between unit and standard?
6. Compare among the functions of each of the following standards:
 - International
 - Primary
 - Secondary
 - Working
7. State TRUE or FALSE and correct the false one
 - The main function of working standard is the calibration and verification of secondary standards.

- Secondary standards are the main tools of a measuring laboratory. These standards are used to check and calibrate laboratory instruments for accuracy and performance

8. Complete the following table:

Derived Quantity	Relation with base and derived Quantities	Unit	Special Name
Area	Length x width		
Volume			
Density			
Speed			
Acceleration			
Force			Newton (N)
Pressure			
Work	Force x distance		
power	Work per time		