Quizlet NAME _____

17 Multiple choice questions

A+
100%

1. the ability of a material to withstand permanent deformation without failure
   a. timber
   b. tension
   c. **CORRECT:** plasticity
   d. strain

2. a naturally occurring composite material made up of cellulose and lignin
   a. **CORRECT:** timber
   b. tension
   c. truss
   d. shear

3. the first point (load) at which a specimen yields and where an increase in strain occurs without an increase in strength
   a. vitreous
   b. yield stress
   c. **CORRECT:** yield point
   d. tension

4. a calculation based on cross-sectional areas used to predict the resistance of a beam to bending and deflection
   a. superstructure
   b. yield point
   c. **CORRECT:** second moment of area
   d. tension

5. the amount of deformation an object experiences compared to its original length
   a. stress
   b. **CORRECT:** strain
   c. shear
   d. truss

6. a value calculated to substitute for yield strength when no obvious yield point exists for a material
   a. **CORRECT:** proof stress
   b. stress
   c. yield stress
   d. truss

7. items related to bridges including the roadway, footpaths, railings and supporting structural members
   a. **CORRECT:** superstructure
   b. plasticity
   c. shear
   d. proof stress

8. a measure of rigidity; may also refer to a resistance to flexing
   a. stress
   b. timber
   c. truss
   d. **CORRECT:** stiffness

9. a supportive structure consisting of beams or girders with members arranged in a triangulated configuration
   a. **CORRECT:** truss
   b. timber
   c. strain
   d. stress

10. a term which describes a material that is glass-like in structure
    a. truss
    b. timber
    c. stress
    d. **CORRECT:** vitreous

11. the ratio of stress to strain within the elastic region of the stress-strain curve (prior to the yield point)
    a. truss
    b. vitreous
    c. **CORRECT:** Young's modulus
    d. yield point

12. a material consisting of a soft, ductile matrix of iron with large inclusions of slag, elongated by the forming process
    a. **CORRECT:** wrought iron
    b. truss
    c. proof stress
    d. tension

13. the relationship between force and the cross-sectional area of a material
    a. shear
    b. **CORRECT:** stress
    c. truss
    d. strain

14. the maximum stress a material can withstand before failing
    a. yield point
    b. tension
    c. yield stress
    d. **CORRECT:** ultimate tensile strength

15. forces applied to a body that attempt to stretch or make the body longer
    a. strain
    b. stress
    c. **CORRECT:** tension
    d. truss

16. movement of a material in which parallel internal surfaces slide past one another
    a. strain
    b. truss
    c. **CORRECT:** shear
    d. stress

17. the maximum engineering stress, in Mpa, at which permanent, non-elastic deformation begins
    a. stress
    b. **CORRECT:** yield stress
    c. proof stress
    d. yield point