Assignment submitted on 2020-03-04, 18:22 IST

1. Transformation of a matrix A into a diagonal matrix D is possible if:
   - Small values of 
   - Large values of 
   - No transformation is possible.
   - No transformation is possible.

2. The determinant of a 3x3 matrix is:
   - No transformation is possible.
   - The determinant is 0.

3. If the parallel of a matrix remains the same, then the change in processing conditions may lead to change in:
   - No transformation is possible.
   - Quality

4. The elastic modulus of most metals lies in the range of ________ MPa.
   - 100 MPa
   - 1000 MPa
   - 10000 MPa

5. What will be the approximate value of the elastic modulus of a material if the shear modulus is 0.3 GPa and the Poisson's ratio is 0.2?
   - 100 MPa
   - 1000 MPa
   - 10000 MPa

6. For nonferrous metals, the value of Bulk elastic modulus is ________
   - Zinc
   - Aluminum
   - Copper

7. These tests 1, 2, and 3 will be used:
   - Flexural test
   - Creep test
   - Fatigue test

8. In an experiment, the bulk modulus of elasticity of a material is measured. The Poisson's ratio of the material is 0.30. What will the value of shear modulus be?
   - 0.30
   - 1.0

9. What will be the value of the Poisson's ratio if the Young modulus is equal to the bulk modulus (DY)?
   - 0.5
   - 1.0
   - 0.25

10. What are the limiting values of Poisson's ratio?
    - 0 to 1.0
    - 0 to 0.5
    - 0 to 1.2

11. A strip of metal 100 mm wide and 40 cm long is subjected to an axial load of 300 kN. It elongates by 0.03 m. Calculate the Poisson's ratio of the material.
    - 0.03
    - 0.01
    - 0.02

12. What is the yield stress of a material?
    - No transformation is possible.
    - No transformation is possible.

13. What will be the shear modulus if the flexural modulus of elasticity is 250 kN/mm² and Poisson's ratio is 0.3?
    - 0.3
    - 0.6
    - 0.2

14. What are the characteristics of a material?
    - No transformation is possible.
    - No transformation is possible.

15. Which of the following is not true about the Young's modulus of elasticity?
    - The material is rigid.
    - The material can be drawn into thin sheets.
    - There is no longitudinal stress in the material.

16. What is the effect of temperature on the dimensions of a material?
    - No transformation is possible.
    - No transformation is possible.

17. What will be the change in the shear modulus if the flexural modulus of elasticity is 250 kN/mm² and Poisson's ratio is 0.3?
    - 0.3
    - 0.6
    - 0.2

18. What are the properties of a material?
    - No transformation is possible.
    - No transformation is possible.

19. What is the relationship among the Poisson's ratio of a material?
    - 1.0
    - 0.5
    - 0.2

20. What is the relationship among the Young's modulus of elasticity?
    - No transformation is possible.
    - No transformation is possible.