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Score: 21/25 (84.00%)

Code: 1756

1. Which is elastic material?

- A) **Nylon (Correct)**                      B) Polystyrenes  
C) Celluloid                                D) Polycarbonates

2. Which is thermo plastic material?

- A) Butyl rubber                            B) Nylon  
C) Neoprene                                D) **Vinyl polymers (Correct)**

3. What is the maximum percentage of stretch of its original length is allowable for elastic materials?

- A) 100% (Incorrect)                      B) 200%  
C) **300%**                                        D) 400%

4. What is the ratio between the change in dimension to its original dimension of the substance?

- A) Stress (Incorrect)                      B) **Strain**  
C) Poisson's ratio                            D) Factor of safety

5. What is the unit of strain?

- A) Kg/cm<sup>2</sup>                                      B) Newton/metre<sup>2</sup>  
C) Metre                                        D) **No unit (Correct)**

6. What is the ratio of change in length to original length?

- A) **Linear strain (Correct)**                      B) Lateral strain  
C) Volumetric strain                        D) Poisson's ratio

7. What is the ratio between lateral strain and longitudinal strain?

- A) Hooks law                                B) Young's modulus  
C) Bulk modulus                            D) **Poisson's ratio (Correct)**

8. Which symbol is used to express change in length?

- A) L    B) **delta l (Correct)**  
C) I    D) e

9. Which one is the ratio of stress?

- A) **Load and area (Correct)**                      B) Load and direction  
C) Load and diameter                      D) Load and time

10. Which force acts on rivets?

- A) Tensile force                              B) Compressive force  
C) **Shear force (Correct)**                      D) Bending force

11. What is the formula for bulk modulus?

- A) Tensile stress/Tensile strain                      B) Compressive stress/Compressive strain  
C) **Volumetric stress/Volumetric strain (Correct)**                      D) Shear stress/Shear strain

12. Which law states that within elastic limit stress is directly proportional to strain?

- A) Newtons law                              B) **Hooks law (Correct)**  
C) Joules law                                D) Charles law

13. What is the term used for maximum stress attained by a material before rupture?

- A) Tensile stress                              B) Compressive stress  
C) Working stress                            D) **Ultimate stress (Correct)**

14. What is the ratio between ultimate stress to working stress?

- A) Bulk modulus                              B) Young's modulus  
C) **Factor of safety (Correct)**                      D) Modulus of rigidity

15. What is the ratio of ultimate load to area of original cross section?

- A) Factor of safety                            B) Yield point  
C) **Ultimate stress (Correct)**                      D) Youngs modulus

16. What is the ratio of shear stress to shear strain?

- A) Modulus of elasticity                      B) **Modulus of rigidity (Correct)**  
C) Bulk modulus                              D) Yield point

17. What is the ratio between stress and strain?

- A) Yield point                                B) Factor of safety  
C) **Youngs Modulus (Correct)**                      D) Poisson's ratio

18. Which force acts on crank shaft?

- A) Shear stress                                B) **Torsional stress (Correct)**  
C) Tensile stress                              D) Compressive stress

19. Which is thermosetting plastic?

A) Vinyl polymers

B) Polystyrenes

C) 0.0001867

D) 0.0001968

C) Celluloid

**D) Melamine resins  
(Correct)**

20. What force will be required to punch a hole of 10 mm dia in a 1 mm thick plate, if the allowable shear stress is  $50\text{N/mm}^2$ ? ( $\pi = 22/7$ )

A) 1757 N (Incorrect)

B) 1575 N

**C) 1571.4 N**

D) 1577 N

21. What is the tensile stress if a square rod of 10 mm side is tested for a tensile load of 1000 kg?

A)  $1\text{ kg/mm}^2$

**B) 10 kg  
/mm<sup>2</sup>  
(Correct)**

C)  $100\text{ kg/mm}^2$

D)  $1000\text{ kg/mm}^2$

22. What is the tensile strain if a force of 3.2 KN is applied to a bar of original length 2800 mm extends the bar by 0.5 mm?

**A) 0.0001786 (Correct)**

B) 0.0001687

23. How much strain is developed in an iron rod of 1 metre length gets elongated by 1 cm, if a force of 100 kg is applied at one end?

A) 0.1

**B) 0.01 (Correct)**

C) 0.001

D) 0.0001

24. What is the youngs modulus if a wire of 2m long, 0.8 mm<sup>2</sup> in cross section increases its length by 1.6 mm on suspension of 8 kg weight from it?

A) 1.25

$\text{kg/mm}^2$   
(Incorrect)

C) 125

$\text{kg/mm}^2$

B) 12.5 kg

$\text{/mm}^2$

**D) 12500**

**kg/mm<sup>2</sup>**

25. What is the safe stress if the ultimate stress of a material is  $35\text{ kg/mm}^2$  and factor of safety is 5?

A) 0.143

B) 0.7

C) 1.43

**D) 7 (Correct)**