

Duration: 120 Mins

Total Marks: 25

Q.ID: ITISKILL0998FW

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

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

Answer: A) Strain

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

- A) 1 kg/mm² B) 1000 kg/mm²
C) 100 kg/mm² D) 10 kg/mm²

Answer: D) 10 kg /mm²

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

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

Answer: D) Poisson's ratio

4. What is the ratio between stress and strain?

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

Answer: A) Youngs Modulus

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

- A) delta l B) L
C) l D) e

Answer: A) delta l

6. 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) 0.001 B) 0.0001
C) 0.1 D) 0.01

Answer: D) 0.01

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

- A) 100% B) 200%
C) 300% D) 400%

Answer: C) 300%

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

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

Answer: B) Factor of safety

9. What is the youngs modulus if a wire of 2m long, 0.8 mm² in cross section increases its length by 1.6 mm on suspension of 8 kg weight from it?

- A) 12500 kg/mm² B) 125 kg/mm²
C) 1.25 kg/mm² D) 12.5 kg/mm²

Answer: A) 12500 kg/mm²

10. Which one is the ratio of stress?

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

Answer: D) Load and area

11. 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) 0.0001968 B) 0.0001867
C) 0.0001786 D) 0.0001687

Answer: C) 0.0001786

12. Which is thermosetting plastic?

- A) Vinyl polymers B) Melamine resins
C) Celluloid D) Polystyrenes

Answer: B) Melamine resins

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

- A) Joules law B) Newtons law
C) Charles law D) Hooks law

Answer: D) Hooks law

14. 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 50N/mm²? (Pi = 22/7)

- A) 1575 N B) 1757 N
C) 1571.4 N D) 1577 N

Answer: C) 1571.4 N

15. Which is elastic material?

- A) Polycarbonates B) Polystyrenes
C) Nylon D) Celluloid

Answer: C) Nylon

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

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

Answer: B) Modulus of rigidity

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

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

Answer: C) Ultimate stress

18. Which force acts on rivets?

- A) Shear force B) Bending force
C) Compressive force D) Tensile force

Answer: A) Shear force

19. Which force acts on crank shaft?

- A) Torsional stress B) Compressive stress
C) Tensile stress D) Shear stress

Answer: A) Torsional stress

20. What is the safe stress if the ultimate stress of a material is 35 kg/mm^2 and factor of safety is 5?

- A) 1.43 B) 0.7

C) 0.143

D) 7

Answer: D) 7

21. What is the formula for bulk modulus?

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

Answer: C) Volumetric stress/Volumetric strain

22. What is the unit of strain?

- A) Newton/metre^2 B) Kg/cm^2
C) No unit D) Metre

Answer: C) No unit

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

- A) Ultimate stress B) Tensile stress
C) Working stress D) Compressive stress

Answer: A) Ultimate stress

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

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

Answer: A) Linear strain

25. Which is thermo plastic material?

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

Answer: B) Vinyl polymers