

ITI Quiz - 01-May-2026

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Q. ID: ITISKILL4979KJ

May 2026

Answer Key

Duration: 30 Mins

Total Marks: 25

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

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

Answer: A) Linear strain

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

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

Answer: A) Hooks law

3. 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

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

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

Answer: B) 300%

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

- A) 10 kg/mm^2 B) 1 kg/mm^2
C) 1000 kg/mm^2 D) 100 kg/mm^2

Answer: A) 10 kg/mm^2

6. What is the ratio between stress and strain?

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

Answer: B) Youngs Modulus

7. Which is thermo plastic material?

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

Answer: C) Vinyl polymers

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

- A) Young's modulus B) Hooks law

- C) Bulk modulus D) Poisson's ratio

Answer: D) Poisson's ratio

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

- A) e B) Δl
C) L D) I

Answer: B) Δl

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

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

Answer: D) Ultimate stress

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

- A) 7 B) 1.43
C) 0.7 D) 0.143

Answer: A) 7

12. What is the formula for bulk modulus?

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

Answer: B) Volumetric stress/Volumetric strain

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

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

Answer: B) Modulus of rigidity

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

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

Answer: A) Ultimate stress

15. 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 B) 0.0001687
C) 0.0001867 D) 0.0001968

Answer: A) 0.0001786

16. 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

17. 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/mm^2 ? ($\pi = 22/7$)

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

Answer: A) 1571.4 N

18. Which force acts on rivets?

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

Answer: A) Shear force

19. Which is thermosetting plastic?

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

Answer: A) Melamine resins

20. What is the young's modulus if a wire of 2m long, 0.8mm^2 in cross section increases its length by 1.6 mm on suspension of 8 kg weight from it?

- A) 12.5 kg/mm^2 B) 1.25 kg/mm^2
C) 12500 kg/mm^2 D) 125 kg/mm^2

Answer: C) 12500 kg/mm^2

21. What is the unit of strain?

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

Answer: B) No unit

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

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

Answer: C) Strain

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

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

Answer: A) Factor of safety

24. Which force acts on crank shaft?

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

Answer: D) Torsional stress

25. Which is elastic material?

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

Answer: D) Nylon