

ITI Quiz - 01-May-2026

09:19 PM

Q. ID: ITISKILL4979KJ

May 2026

Question Paper

Duration: 30 Mins

Total Marks: 25

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Student Name: _____ Roll No: _____

1. 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

2. What is the formula for bulk modulus?

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

3. Which is elastic material?

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

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

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

5. Which is thermo plastic material?

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

6. What is the youngs 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) 125 kg/mm^2 B) 12.5 kg/mm^2
C) 1.25 kg/mm^2 D) 12500 kg/mm^2

7. What is the ratio between stress and strain?

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

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

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

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

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

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

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

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

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

12. What is the unit of strain?

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

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

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

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

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

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) 0.0001867
C) 0.0001968 D) 0.0001687

16. 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

17. Which force acts on crank shaft?

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

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

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

19. 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) 0.1
- C) 0.0001
- D) 0.01

20. Which force acts on rivets?

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

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

- A) Δl
- B) l
- C) e
- D) L

22. Which one is the ratio of stress?

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

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

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

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

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

25. Which is thermosetting plastic?

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