

# ITI Quiz - 21-Oct-2026

## 12:37 AM

Q. ID: ITISKILL7480Y7

October 2026

Answer Key

Duration: 30 Mins

Total Marks: 25

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1. Which state of equilibrium's example is A cone resting on its tip?

- A) Unstable
- B) Horizontal
- C) Neutral
- D) Stable

**Answer: A) Unstable**

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

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

**Answer: C) Poisson's ratio**

3. What is the unit of strain?

- A) Metre
- B) No unit
- C)  $\text{Kg/cm}^2$
- D)  $\text{Newton/metre}^2$

**Answer: B) No unit**

4. 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) 0.0001867
- B) 0.0001968
- C) 0.0001687
- D) 0.0001786

**Answer: D) 0.0001786**

5. What is the centre of gravity of a sphere?

- A) On the circumference
- B) At the centre
- C) At the diameter
- D) At the radius

**Answer: B) At the centre**

6. Where the centre of gravity of a circle lies?

- A) At its centre
- B) Any where on its radius
- C) Any where on its diameter
- D) Any where on its circumference

**Answer: A) At its centre**

7. What is the centre of gravity of a semi circle of diameter 12 cm?

- A) 2.75 cm
- B) 3.25 cm
- C) 2.54 cm
- D) 2.24 cm

**Answer: C) 2.54 cm**

8. Which force acts on rivets?

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

**Answer: C) Shear force**

9. What is the centre of gravity of a solid hemisphere from its base?

- A)  $4r/5$
- B)  $r/2$
- C)  $3r/8$
- D)  $3r/4$

**Answer: C)  $3r/8$**

10. What is the name of the point at which all the weight of the body concentrated?

- A) Centre of gravity
- B) Centroid
- C) Central point
- D) Initial point

**Answer: A) Centre of gravity**

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

- A)  $\Delta l$
- B)  $e$
- C)  $L$
- D)  $I$

**Answer: A)  $\Delta l$**

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

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

**Answer: D) Factor of safety**

13. Which affects the centre of gravity of the object

- A) Shape
- B) Weight
- C) Mass
- D) Density

**Answer: C) Mass**

14. What is the ratio between stress and strain?

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

**Answer: D) Young's Modulus**

15. What is the formula for bulk modulus?

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

**Answer: B) Volumetric stress/Volumetric strain**

16. What is the centre of gravity of a rectangular body?

- A) Longer side of rectangle  
C) At the corners
- B) At the point of intersection of its diagonals  
D) Shorter side of rectangle

**Answer: B) At the point of intersection of its diagonals**

**17.** Which state of equilibrium's example is, A cone resting on its base?

- A) Stable  
C) Both A and B
- B) Un-stable  
D) Neutral

**Answer: A) Stable**

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

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

**Answer: C) Linear strain**

**19.** Which one of the following geometrical shape's centre of gravity lies from its base is  $\frac{1}{3}$  of its height?

- A) Cone  
C) Square
- B) Rhombus  
D) Triangle

**Answer: D) Triangle**

**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  $50 \text{ N/mm}^2$ ? ( $\pi = \frac{22}{7}$ )

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

**Answer: C) 1571.4 N**

**21.** What is the ratio of shear stress to shear strain?

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

**Answer: B) Modulus of rigidity**

**22.** 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) 1.43  
C) 7
- B) 0.143  
D) 0.7

**Answer: C) 7**

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

- A)  $1.25 \text{ kg/mm}^2$   
C)  $125 \text{ kg/mm}^2$
- B)  $12.5 \text{ kg/mm}^2$   
D)  $12500 \text{ kg/mm}^2$

**Answer: D)  $12500 \text{ kg/mm}^2$**

**24.** Which is elastic material?

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

**Answer: C) Nylon**

**25.** What is the centre of gravity of a right circular cone from its base?

- A)  $\frac{h}{5}$   
C)  $\frac{h}{2}$
- B)  $\frac{h}{4}$   
D)  $\frac{h}{3}$

**Answer: B)  $\frac{h}{4}$**