ITI Quiz W/C- 04-Apr-2026 1 PM

Q. ID: ITISKILL0142CC

April 2026 | **Trinity, College udhyavara udupi** | Answer Key

Duration: 155 Mins | **Total Marks: 50** | **Q.ID: ITISKILL0142CC**

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

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

Answer: B) Ultimate stress

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

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

Answer: D) 2.54 cm

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

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

Answer: B) Centre of gravity

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

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

Answer: D) Centre of gravity

5. Which is thermosetting plastic?

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

Answer: B) Melamine resins

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

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

Answer: D) Linear strain

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

A) h/5
B) h/2
C) h/4
D) h/3

Answer: C) h/4

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. What is the weight of a rectangular block of a cost iron of 250cm X 20cm X 8cm (density of cast iron is 7.8 gm/cm³)?

A) 312 kg
B) 410 kg
C) 372 kg
D) 525 kg

Answer: A) 312 kg

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

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

Answer: B) 2.54 cm

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

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

Answer: D) Unstable

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

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

Answer: B) Stable

13. Which is elastic material?

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

Answer: D) Nylon

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

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

Answer: A) Modulus of rigidity

15. What is the safe stress if the ultimate stress of a material is 35 kg/mm² and factor of safety is 5?

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

Answer: D) 7

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

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

Answer: D) At the centre

17. Which one of the following geometrical shapes centre of gravity lies from its base is 1/3 of its height?

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

Answer: C) Triangle

18. 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) 1577 N
B) 1757 N
C) 1575 N
D) 1571.4 N

Answer: D) 1571.4 N

19. What is the unit of strain?

A) Kg/cm²
B) Metre
C) No unit
D) Newton/metre²

Answer: C) No unit

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

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

Answer: C) At its centre

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

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

Answer: D) delta l

22. 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) 10 kg /mm²
D) 100 kg/mm²

Answer: C) 10 kg /mm²

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

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

Answer: A) 3r/8

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

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

Answer: D) At the point of intersection of its diagonals

25. 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

26. Which force acts on crank shaft?

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

Answer: C) Torsional stress

27. 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) 12.5 kg /mm²
B) 12500 kg/mm²
C) 1.25 kg/mm²
D) 125 kg/mm²

Answer: B) 12500 kg/mm²

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

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

Answer: B) At its centre

29. What is a under estimate?

A) An estimate is fell short of the actual estimate
B) No work started as per estimate
C) An estimate is exceeded the actual estimate
D) An estimate perfectly matches with actual

Answer: A) An estimate is fell short of the actual estimate

30. 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) 0.0001687
C) 0.0001867
D) 0.0001786

Answer: D) 0.0001786

31. What is the ratio between stress and strain?

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

Answer: D) Youngs Modulus

32. What is the formula for bulk modulus?

A) Compressive stress/Compressive strain
B) Shear stress/Shear strain

C) Volumetric stress/Volumetric strain
D) Tensile stress/Tensile strain

Answer: C) Volumetric stress/Volumetric strain

33. Which affects the centre of gravity of the object?

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

Answer: D) Mass

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

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

Answer: D) Factor of safety

35. Which one is the ratio of stress?

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

Answer: C) Load and area

36. Which force acts on rivets?

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

Answer: C) Shear force

37. What is the total cost of Air-conditioners installed in a college, 40 class room-each 1 Air-conditioner, Computer lab 5 Air- conditioners and conference hall 5 Air-conditioners (Cost of one air conditioner Rs.30000/- including installation)?

A) Rs. 15 lakhs
B) Rs. 12 lakhs
C) Rs. 20 lakhs
D) Rs.10 lakhs

Answer: A) Rs. 15 lakhs

38. Which is thermo plastic material?

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

Answer: A) Vinyl polymers

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

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

Answer: D) 300%

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

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

Answer: C) At the centre

41. Which affects the centre of gravity of the object

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

Answer: C) Mass

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

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

Answer: A) Stable

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

A) h/3
B) h/2
C) h/5
D) h/4

Answer: D) h/4

44. Which one is included in machining estimation sheet?

A) Advertisement cost
B) Tax
C) Transport cost
D) Raw material cost

Answer: D) Raw material cost

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

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

Answer: A) Hooks law

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

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

Answer: B) Unstable

47. What is the minimum permissible area of conductor (U/G cable) for three and half cores cable?

A) 25 sq.mm
B) 100 sq.mm
C) 50 sq.mm
D) 5 sq.mm

Answer: C) 50 sq.mm

48. 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

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

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

Answer: B) 3r/8

50. 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) 0.01

B) 0.001

C) 0.1

D) 0.0001

Answer: A) 0.01