

ITI QuizW/C 2 - 04- Apr-2026 09:28 AM

Q. ID: ITISKILL8714IW

April 2026

Trinity, College udhyavara udupi

Question Paper

Duration: 155 Mins

Total Marks: 50

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Student Name: _____ Roll No: _____

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

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

2. 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) 0.0001
- B) 0.001
- C) 0.1
- D) 0.01

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

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

4. What is the total wattage in a room if 2 tube lights of 50W rating, 2 fans of 80W rating, 2 numbers of light points of 60W rating, one fan point of 60W rating and one 3 pin socket of 100W rating?

- A) 440 W
- B) 640 W
- C) 540 W
- D) 340 W

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

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

6. What is the estimation of milling cost of a rectangular block size 100 X 80 X60 mm, if cost of the milling is Rs.2/sq.cm?

- A) Rs.960/-
- B) Rs.652/-
- C) Rs.752/-
- D) Rs.572/-

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

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

8. What is the unit of strain?

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

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

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

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

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

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

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

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

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

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

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

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

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

15. Which is thermosetting plastic?

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

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

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

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

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

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

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

19. Which is thermo plastic material?

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

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

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

21. Which force acts on rivets?

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

22. Which is elastic material?

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

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

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

24. 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) 125 kg/mm²
- B) 1.25 kg/mm²
- C) 12500 kg/mm²
- D) 12.5 kg /mm²

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

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

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

- A) l
- B) Δl
- C) e
- D) L

27. What is the maximum percentage of stretch of its original

length is allowable for elastic materials?

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

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

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

29. Which authority publishes schedule of rates?

- A) Partnership firm
- B) Government department
- C) Individual
- D) Corporate

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

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

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

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

32. 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

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

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

34. Which force acts on crank shaft?

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

35. What is the relative permittivity of rubber?

- A) Between 8 and 10
- B) Between 5 and 6
- C) Between 12 and 14
- D) Between 2 and 3

36. What is the formula for bulk modulus?

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

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

- A) 2.75 cm
- B) 2.24 cm

C) 2.54 cm

D) 3.25 cm

38. What is the ratio between stress and strain?

A) Yield point

B) Poisson's ratio

C) Young's Modulus

D) Factor of safety

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

A) 1571.4 N

B) 1575 N

C) 1757 N

D) 1577 N

40. Which affects the centre of gravity of the object

A) Density

B) Mass

C) Weight

D) Shape

41. 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) 0.7

C) 0.143

D) 1.43

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

A) At its centre

B) Any where on its circumference

C) Any where on its radius

D) Any where on its diameter

43. Which one is the ratio of stress?

A) Load and time

B) Load and area

C) Load and direction

D) Load and diameter

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

A) Central point

B) Centroid

C) Centre of gravity

D) Initial point

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

A) Any where on its radius

B) Any where on its circumference

C) At its centre

D) Any where on its diameter

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

A) Un-stable

B) Stable

C) Neutral

D) Both A and B

47. What is the term used for the method of calculating various quantities and expenditure on a particular job or process?

A) Drawing

B) Estimation

C) Specification

D) Plan

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

A) At the diameter

B) At the centre

C) At the radius

D) On the circumference

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

A) Strain

B) Factor of safety

C) Stress

D) Poisson's ratio

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

A) At the corners

B) Shorter side of rectangle

C) Longer side of rectangle

D) At the point of intersection of its diagonals