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Score: 48/50 (96.00%)

Code: 6102

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

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

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

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

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

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

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

- A) Stable
B) Neutral
C) **Unstable (Correct)**
D) Horizontal

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

- A) 2.24 cm
B) **2.54 cm (Correct)**
C) 3.25 cm
D) 2.75 cm

6. Which is elastic material?

- A) **Nylon (Correct)**
B) Polystyrenes
C) Celluloid
D) Polycarbonates

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

- A) 100%
B) 200%
C) **300% (Correct)**
D) 400%

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

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

9. What is the unit of strain?

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

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

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

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

- A) L
B) **delta l (Correct)**
C) I
D) e

12. Which one is the ratio of stress?

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

13. What is the formula for bulk modulus?

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

14. 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 (Correct)**

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

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

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

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

17. What is the ratio between stress and strain?

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

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) 1757 N
C) 1571.4 N (Correct)

B) 1575 N
D) 1577 N

C) When an estimate perfectly matches the actual estimate

D) No work started as per estimate

19. 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
C) 100 kg/mm²
B) 10 kg/mm² (Correct)
D) 1000 kg/mm²

20. 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 (Correct)
C) 0.0001867
B) 0.0001687
D) 0.0001968

21. 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) 0.1
C) 0.001
B) 0.01 (Correct)
D) 0.0001

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

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

23. What is the other term used for reference table?

A) Dictionary
C) Bibliography (Incorrect)
B) Biography
D) Information Table

24. What is a hand book?

A) Model book of various works
C) Design book of latest works
B) Type of reference work or other collection of instruction (Correct)
D) Dictionary of materials

25. Which standard schedule of rates to be considered for estimation?

A) Standard schedule of rates of the last year
C) Standard schedule of rates of the average of last 5 years
B) Standard schedule of rates of the average of the last 10 years
D) Standard schedule of rates of the current year (Correct)

26. What is an over estimate?

A) When an estimate is exceeded to actual estimate (Correct)
B) When an estimate is fell short of the actual estimate

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

A) Estimation (Correct)
C) Specification
B) Drawing
D) Plan

28. What is the minimum permissible size of aluminium wire used in estimation?

A) 1.5 sq.mm (Correct)
C) 5 sq.mm
B) 2.5 sq.mm
D) 3.5 sq.mm

29. Which one is the most reliable estimate?

A) Preliminary estimate
C) Cube rate estimate
B) Plinth area estimate
D) Detailed estimate (Correct)

30. What describes the detailed specification for the item of work?

A) Quality, Quantity, Workmanship, Method of execution (Correct)
C) Tax, Transport, Overhead expenses
B) Colour
D) Maintenance, Stock, Cost

31. Which of the impurity in cast iron makes it hard and brittle?

A) Silicon
C) Manganese
B) Sulphur (Correct)
D) Phosphorus

32. What is the relative permittivity of rubber?

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

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

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

34. What is the estimation of milling cost of a rectangular block size 100 X 80 X 60 mm, if cost of the milling is Rs.2/sq.cm?

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

35. 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) 340 W
B) 440 W
C) 540 W (Correct)
D) 640 W

36. What is the total labour charges for a particular wiring work completed in 2 days by one electrician and one helper.(Electrician @ ₹800/day and helper @ Rs 400/day)

- A) Rs. 2000
B) **Rs. 2400 (Correct)**
C) Rs. 3000
D) Rs. 1400

37. What is the total cost of painting of a class room including ceiling, if the size of length is 6m, breadth is 5m and height is 4m. (Painting + labour cost Rs.150/- per sq.m)

- A) Rs.15000/-
B) Rs.16700/-
C) Rs.17700/- (Correct)
D) Rs.18700/-

38. What is the total construction cost of a house construction area of 3000 sq.ft. (cost of construction Rs.2000/- per sq.ft including material and labour)?

- A) Rs.30,000,000
B) **Rs.60,00,000 (Correct)**
C) Rs.6,00,000
D) Rs.6,000,000

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

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

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

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

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

- A) 2.24 cm
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42. What are the various types of heat treatment processes?

- A) Annealing, Normalising, Hardening and Tempering (Correct)**
B) Normalising, Heating, Cooling and Painting
C) Hardening, Soaking, Painting and Packing
D) Tempering, Cooling, Packing and Soling

43. What is the process of heat treatment?

- A) The process of heating and cooling to change the structure and properties (Correct)**
B) The process of heating to change the dimensions
C) The process of cooling to measure the dimensions
D) The process of heating and bending as per our requirement

44. What are the various stages of heat treatment?

- A) Heating, Cooling and Quenching
B) Quenching, Cooling and Heating
C) Heating, Soaking and Quenching (Correct)
D) Soaking, Quenching and Cooling

45. Which process produce equilibrium conditions?

- A) Annealing and Hardening
B) Normalising and Tempering
C) Annealing and Normalising (Correct)
D) Normalising and Tempering

46. What is the name of the heat treatment process, where the metal is heated and quenched in water or oil?

- A) Hardening (Correct)**
B) Normalising and Tempering
C) Annealing
D) Tempering

47. Which is a kind of surface hardening process?

- A) Cementite
B) Ferrite
C) Nitriding (Correct)
D) Tempering

48. How much time is allowed normally in soaking zone for a 10mm thick metal piece while hardening?

- A) 5 minutes (Correct)**
B) 10 minutes
C) 15 minutes
D) 20 minutes

49. What is colour of a metal piece when heated to 250 Degree C while doing the tempering process?

- A) Blue
B) **Brown (Correct)**
C) Purple
D) Pale

50. What is the purpose of tempering a steel?

- A) To reduce the brittleness (Correct)**
B) To remove the ductility
C) To increase the hardness
D) To increase the brittleness