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Score: 34/50 (68.00%)

Code: 1545

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

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

2. 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

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 (Incorrect)
C) Unstable D) Horizontal

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

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

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

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

7. 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

8. What is the unit of strain?

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

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

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

10. 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)**

11. 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

12. What is the ratio between stress and strain?

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

13. Which is thermosetting plastic?

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

14. 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 B) 1575 N
C) 1571.4 N (Correct) D) 1577 N

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 (Correct)** B) 0.0001687
C) 0.0001867 D) 0.0001968

16. 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) 1.25 kg/mm² (Incorrect) B) 12.5 kg/mm²
C) 125 kg/mm² **D) 12500 kg/mm² (Correct)**

17. 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 B) 0.7 (Incorrect)
C) 1.43 **D) 7**

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

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

19. Which hand book referred by machine engineer?

- A) Parry's cheorikal
C) Mark standard (Correct)
- B) CRC
D) Oxford Dictionary

20. 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

21. 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 (Incorrect)
D) Standard schedule of rates of the current year

22. What is an over estimate?

- A) When an estimate is exceeded to actual estimate
C) When an estimate perfectly matches the actual estimate
- B) When an estimate is fell short of the actual estimate (Incorrect)
D) No work started as per estimate

23. What is the name of a booklet, the rates of various terms are indicated?

- A) Price bank
C) Price tag
- B) Price bunch
D) Price catalogue (Correct)

24. What is the term, for the details of materials, brand name, grade of quality, rating of current and voltage etc.?

- A) Drawing
C) Raw materials
- B) Specification of materials (Correct)
D) Price catalogue

25. What is the other term of pocket reference in engineering works?

- A) Hand tool
C) Good book
- B) Hand book (Correct)
D) New book

26. What is a total cost?

- A) Raw material cost only
C) Raw materials cost and machining cost (Correct)
- B) Machining cost only
D) Advertisement cost only

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

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

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

- A) Silicon
C) Manganese (Incorrect)
- B) Sulphur
D) Phosphorus

29. Which specification is other than general specification?

- A) Brief specification
C) Detailed specification (Correct)
- B) Bulk specification
D) Main specification

30. What percentage of water absorbed by a good building stone?

- A) Less than 10% (Incorrect)
C) Less than 8%
- B) Less than 20%
D) Less than 5%

31. What is the relative permittivity of rubber?

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

32. 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 (Correct)
C) 410 kg
- B) 372 kg
D) 525 kg

33. 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/-
C) Rs.17700/- (Correct)
- B) Rs.16700/-
D) Rs.18700/-

34. 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
C) Rs.6,00,000
- B) Rs.60,00,000 (Correct)
D) Rs.6,000,000

35. 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.10 lakhs
C) Rs. 12 lakhs
- B) Rs. 20 lakhs
D) Rs. 15 lakhs (Correct)

36. Which affects the centre of gravity of the object

- A) Weight
C) Density (Incorrect)
- B) Mass**
D) Shape

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

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

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

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

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

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

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

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

41. Which one of the following geometrical shape's centre of gravity lies from its base is $1/3$ of its height?

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

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

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

43. What is the process of heat treatment?

- A) The process of heating and cooling to change the structure and properties**
C) The process of cooling to measure the dimensions (Incorrect)
- B) The process of heating to change 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
C) Heating, Soaking and Quenching (Correct)
- B) Quenching, Cooling and Heating
D) Soaking, Quenching and Cooling

45. Which heat treatment process is done to refine the grain structure of the steel?

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

46. What is the name of heat treatment process done to relieve strain and stress?

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

47. Which process steel is heated in a carbonaceous atmosphere for the penetration of carbon?

- A) Case hardening
C) Carburising
- B) Nitriding
D) Induction hardening (Incorrect)

48. Which is the suitable nitriding process for all alloyed and unalloyed steels?

- A) Silver nitriding
C) Nitriding in Quenching tank
- B) Nitriding in salt-bath**
D) Gas nitriding (Incorrect)

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

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

50. What is the purpose of tempering a steel?

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