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Score: 62/98 (63.27%)

Code: 3468

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

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

2. 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

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) Square
 B) Rhombus

- C) **Triangle (Correct)**
 D) Cone

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

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

11. 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

12. Which is elastic material?

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

13. Which is thermo plastic material?

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

14. 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%

15. 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

16. What is the unit of strain?

- A) Kg/cm^2 (Incorrect)
 B) Newton/metre^2
 C) Metre
 D) **No unit**

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

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

18. 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)**

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

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

20. Which one is the ratio of stress?

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

21. Which force acts on rivets?

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

22. What is the formula for bulk modulus?

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

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

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

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

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

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

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

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

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

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

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

28. What is the ratio between stress and strain?

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

29. Which force acts on crank shaft?

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

30. Which is thermosetting plastic?

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

31. 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

32. 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

33. 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

34. 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

35. 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
C) 125 kg/mm²
B) 12.5 kg /mm²
D) 12500 kg/mm² (Correct)

36. 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)

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

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

38. Which hand book referred by machine engineer?

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

39. 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

40. 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)**

41. What is an over estimate?

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

42. What is a under estimate?

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

43. 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

44. What is the main factor to be considered while preparing a detailed estimate?

- A) Shape of material
C) **Quantity, availability and transportation of materials (Correct)**
B) Brand of the materials
D) Location of material

45. Which authority publishes schedule of rates?

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

46. 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)**

47. 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

48. What is the use of engineering drawing?

- A) **For estimation of material and execution of work (Correct)**
C) For reducing the cost
B) For colourful appearance
D) For increasing the cost

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

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

50. Which one is related to estimation of work?

- A) **Bill of material**
C) Information table
B) Packing
D) Hand book (Incorrect)

51. 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

52. Who prepares the cost of estimation?

- A) Operator
C) **Estimator (Correct)**
B) Quality Inspector
D) Draughts man

53. Which one is included in machining estimation sheet?

- A) Transport cost
C) **Raw material cost (Correct)**
B) Advertisement cost
D) Tax

54. 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

55. 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

56. Which one is the most reliable estimate?

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

57. Which IE rules are to be verified on completion of wiring on any new installation?

- A) IE Rules, 1956 (Correct)** B) IE Rules, 1960
C) IE Rules, 1961 D) IE Rules, 1967

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

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

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

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

60. What cables are used for 132KV lines?

- A) High tension B) Super tension
C) Extra high tension **D) Extra super voltage (Correct)**

61. Which specification is other than general specification?

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

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

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

63. What is the relative permittivity of rubber?

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

64. What is the weight of the iron ball has volume of 250 cc and density 7.5 gm/cc?

- A) 1750 gram **B) 1875 gram**
C) 1975 gram D) 1785 gram (Incorrect)

65. 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** B) 372 kg
C) 410 kg D) 525 kg (Incorrect)

66. What is the total estimation cost for making the component of 8 drilled hole dia 10 mm and 4 Numbers of M6 taps in the plate, if Rs.8/- per drilled holes and Rs.12 per drill and tap?

- A) Rs.102 B) Rs.100 (Incorrect)
C) Rs.112 D) Rs.110

67. 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.652/- **B) Rs.752/-**
C) Rs.572/- (Incorrect) D) Rs.960/-

68. 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

69. 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 (Incorrect) **B) Rs. 2400**
C) Rs. 3000 D) Rs. 1400

70. 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/-

71. What is the total cost to assemble 10 personal computer systems, spares cost as given for one system: 1 TB hard disc Rs.4500/-, Intel i3 mother board Rs.7000/-, SMPS Rs.2500/-, monitor Rs.6000/-, keyboard Rs.1000/-, other material cost (Switches, USB, Cabl

- A) Rs.275000/- (Correct)** B) Rs.250000/-
C) Rs.225000/- D) Rs.265000/-

72. 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**
C) Rs.6,00,000 (Incorrect) D) Rs.6,000,000

73. 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)

- A) Un-stable
C) Stable (Correct)

- B) Neutral
D) Both A and B

74. Which affects the centre of gravity of the object

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

75. 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)**
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- A) At its centre**
C) Any where on its circumference
- B) Any where on its radius
D) Any where on its diameter (Incorrect)

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C) $h/4$
- B) $h/3$ (Incorrect)
D) $h/5$

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

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

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

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

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

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

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

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

82. 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

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

84. 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)**
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85. What are the various types of heat treatment processes?

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

86. 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
D) The process of heating and bending as per our requirement (Incorrect)
- C) The process of cooling to measure the dimensions

87. 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

88. What is the name of the structure formed, if a steel is heated for about 723 Degree C?

- A) Cementite (Incorrect)
C) Martensite
- B) Austenite**
D) Ferrite

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

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

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

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

91. Which process produce equilibrium conditions?

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

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

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

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

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

94. 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

95. Which is a kind of surface hardening process?

- A) Cementite (Incorrect) B) Ferrite

- C) Nitriding** D) Tempering

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

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

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

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

98. What is the purpose of tempering a steel?

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