

June 2026

Answer Key

Duration: 30 Mins

Total Marks: 98

Q.ID: ITISKILL1796TO

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

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

Answer: A) Nitriding in salt-bath

2. What are the various stages of heat treatment?

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

Answer: C) Heating, Soaking and Quenching

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

- A) Hardening B) Normalising
C) Annealing D) Tempering

Answer: C) Annealing

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

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

Answer: A) Unstable

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) 100 kg/mm²
C) 10 kg /mm² D) 1 kg/mm²

Answer: C) 10 kg /mm²

6. What is a hand book?

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

Answer: B) Type of reference work or other collection of instruction

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

- A) At the point of intersection of its diagonals B) Longer side of rectangle

- C) Shorter side of rectangle D) At the corners

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

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

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

Answer: C) Quality, Quantity, Workmanship, Method of execution

9. Which one is included in machining estimation sheet?

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

Answer: D) Raw material cost

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

- A) Martensite B) Ferrite
C) Austenite D) Cementide

Answer: C) Austenite

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

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

Answer: C) Specification of materials

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

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

Answer: C) Price catalogue

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

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

Answer: C) delta l

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

- A) $4r/5$ B) $r/2$

C) $3r/8$

D) $3r/4$

Answer: C) $3r/8$

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

A) 100%

B) 200%

C) 300%

D) 400%

Answer: C) 300%

16. 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) Plan

D) Specification

Answer: B) Estimation

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

A) Less than 20%

B) Less than 8%

C) Less than 10%

D) Less than 5%

Answer: D) Less than 5%

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

A) Weight

B) Shape

C) Density

D) Mass

Answer: D) Mass

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

A) Horizontal

B) Stable

C) Neutral

D) Unstable

Answer: D) Unstable

20. Which is thermosetting plastic?

A) Polystyrenes

B) Vinyl polymers

C) Melamine resins

D) Celluloid

Answer: C) Melamine resins

21. What is the use of engineering drawing?

A) For reducing the cost

B) For colourful appearance

C) For estimation of material and execution of work

D) For increasing the cost

Answer: C) For estimation of material and execution of work

22. What is a total cost?

A) Raw materials cost and machining cost

B) Raw material cost only

C) Advertisement cost only

D) Machining cost only

Answer: A) Raw materials cost and machining cost

23. What is a under estimate?

A) An estimate is exceeded the actual estimate

B) An estimate is fell short of the actual estimate

C) No work started as per estimate

D) An estimate perfectly matches with actual

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

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

A) $h/4$

B) $h/5$

C) $h/2$

D) $h/3$

Answer: A) $h/4$

25. What is an over estimate?

A) No work started as per estimate

B) When an estimate is exceeded to actual estimate

C) When an estimate is fell short of the actual estimate

D) When an estimate perfectly matches the actual estimate

Answer: B) When an estimate is exceeded to actual estimate

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

A) Rhombus

B) Triangle

C) Square

D) Cone

Answer: B) Triangle

27. What are the various types of heat treatment processes?

A) Annealing, Normalising, Hardening and Tempering

B) Normalising, Heating, Cooling and Painting

C) Tempering, Cooling, Packing and Solling

D) Hardening, Soaking, Painting and Packing

Answer: A) Annealing, Normalising, Hardening and Tempering

28. Which is thermo plastic material?

A) Vinyl polymers

B) Butyl rubber

C) Nylon

D) Neoprene

Answer: A) Vinyl polymers

29. What is the formula for bulk modulus?

A) Compressive stress/Compressive strain

B) Tensile stress/Tensile strain

C) Shear stress/Shear strain

D) Volumetric stress/Volumetric strain

Answer: D) Volumetric stress/Volumetric strain

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

A) Working stress

B) Compressive stress

C) Tensile stress

D) Ultimate stress

Answer: D) Ultimate stress

31. What is the centre of gravity of a semi circle of diameter

12 cm?

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

Answer: A) 2.54 cm

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

- A) 10 minutes B) 15 minutes
C) 5 minutes D) 20 minutes

Answer: C) 5 minutes

33. 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.6,00,000
C) Rs.6,000,000 D) Rs.60,00,000

Answer: D) Rs.60,00,000

34. Which one is the ratio of stress?

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

Answer: C) Load and area

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

- A) Brown B) Blue
C) Pale D) Purple

Answer: A) Brown

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

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

Answer: A) Triangle

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

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

Answer: C) IE Rules, 1956

38. 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) 372 kg B) 525 kg
C) 410 kg D) 312 kg

Answer: D) 312 kg

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

- A) 1975 gram B) 1750 gram

- C) 1875 gram D) 1785 gram

Answer: C) 1875 gram

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

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

Answer: D) Sulphur

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

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

Answer: B) Stable

42. Who prepares the cost of estimation?

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

Answer: A) Estimator

43. 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

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

44. Which process produce equilibrium conditions?

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

Answer: D) Annealing and Normalising

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

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

Answer: C) h/4

46. Which force acts on crank shaft?

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

Answer: B) Torsional stress

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

- A) Tempering B) Hardening
C) Normalising D) Annealing

Answer: C) Normalising

48. Which standard schedule of rates to be considered for

estimation?

A) Standard schedule of rates of the current year

B) Standard schedule of rates of the average of the last 10 years

C) Standard schedule of rates of the average of last 5 years

D) Standard schedule of rates of the last year

Answer: A) Standard schedule of rates of the current year

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

A) Young's modulus

B) Modulus of rigidity

C) Factor of safety

D) Bulk modulus

Answer: C) Factor of safety

50. Which is elastic material?

A) Polystyrenes

B) Nylon

C) Polycarbonates

D) Celluloid

Answer: B) Nylon

51. What is the ratio between stress and strain?

A) Poisson's ratio

B) Factor of safety

C) Yield point

D) Young's Modulus

Answer: D) Young's Modulus

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

A) 3.5 sq.mm

B) 5 sq.mm

C) 2.5 sq.mm

D) 1.5 sq.mm

Answer: D) 1.5 sq.mm

53. 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) 540 W

B) 640 W

C) 340 W

D) 440 W

Answer: A) 540 W

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

A) Bulk modulus

B) Yield point

C) Modulus of rigidity

D) Modulus of elasticity

Answer: C) Modulus of rigidity

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

A) Poisson's ratio

B) Factor of safety

C) Stress

D) Strain

Answer: D) Strain

56. 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.10 lakhs

C) Rs. 20 lakhs

D) Rs. 12 lakhs

Answer: A) Rs. 15 lakhs

57. 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, Cables)

A) Rs.225000/-

B) Rs.275000/-

C) Rs.265000/-

D) Rs.250000/-

Answer: B) Rs.275000/-

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

A) Joules law

B) Hooks law

C) Charles law

D) Newton's law

Answer: B) Hooks law

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

A) Any where on its diameter

B) At its centre

C) Any where on its radius

D) Any where on its circumference

Answer: B) At its centre

60. 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

61. What is the young's 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) 12500

B) 12.5 kg

kg/mm²

/mm²

C) 125

D) 1.25

kg/mm²

kg/mm²

Answer: A) 12500 kg/mm²

62. 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.572/-

B) Rs.960/-

C) Rs.752/-

D) Rs.652/-

Answer: C) Rs.752/-

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

A) 2.75 cm

B) 2.24 cm

C) 3.25 cm

D) 2.54 cm

Answer: D) 2.54 cm

64. 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. 1400
- C) Rs. 2400
- D) Rs. 3000

Answer: C) Rs. 2400

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

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

Answer: C) Stable

66. Which one is the most reliable estimate?

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

Answer: C) Detailed estimate

67. What is the process of heat treatment?

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

Answer: C) The process of heating and cooling to change the structure and properties

68. Which affects the centre of gravity of the object

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

Answer: A) Mass

69. Which specification is other than general specification?

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

Answer: A) Detailed specification

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

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

Answer: C) At the centre

71. 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) 0.1
- C) 0.01
- D) 0.001

Answer: C) 0.01

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

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

Answer: A) At the centre

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

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

Answer: C) Information Table

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

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

Answer: A) Hardening

75. What is the purpose of tempering a steel?

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

Answer: C) To reduce the brittleness

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

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

Answer: B) Linear strain

77. What is the unit of strain?

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

Answer: D) No unit

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

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

Answer: B) Poisson's ratio

79. What cables are used for 132KV lines?

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

Answer: A) Extra super voltage

80. 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.18700/-
- B) Rs.16700/-
- C) Rs.17700/-
- D) Rs.15000/-

Answer: C) Rs.17700/-

81. 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) 1575 N
- B) 1571.4 N
- C) 1757 N
- D) 1577 N

Answer: B) 1571.4 N

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

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

Answer: B) $3r/8$

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

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

Answer: B) Ultimate stress

84. 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.112
- B) Rs.102
- C) Rs.110
- D) Rs.100

Answer: A) Rs.112

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

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

Answer: A) Carburising

86. Which hand book referred by machine engineer?

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

Answer: A) Mark standard

87. Which authority publishes schedule of rates?

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

Answer: C) Government department

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

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

Answer: A) Quantity, availability and transportation of materials

89. What is the minimum permissible area of conductor (U/G

cable) for three and half cores cable?

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

Answer: A) 50 sq.mm

90. Which one is related to estimation of work?

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

Answer: A) Bill of material

91. What is the relative permittivity of rubber?

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

Answer: A) Between 2 and 3

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

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

Answer: D) 7

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

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

Answer: C) Hand book

94. Which is a kind of surface hardening process?

- A) Ferrite
- B) Nitriding
- C) Cementide
- D) Tempering

Answer: B) Nitriding

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

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

Answer: C) Centre of gravity

96. 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) 0.0001867
- C) 0.0001687
- D) 0.0001786

Answer: D) 0.0001786

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

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

Answer: A) Centre of gravity

98. Which force acts on rivets?

A) Compressive force
C) Tensile force

B) Bending force
D) Shear force

Answer: D) Shear force
