

ITI Quiz - 28-Mar-2026

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Q. ID: ITISKILL2902HS

March 2026

Question Paper

Duration: 30 Mins

Total Marks: 98

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Student Name: _____ Roll No: _____

1. 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) 0.0001867 B) 0.0001968
C) 0.0001687 D) 0.0001786

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

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

3. 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

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

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

5. Which one is the most reliable estimate?

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

6. Which one is the ratio of stress?

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

7. What is the relative permittivity of rubber?

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

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

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

9. What cables are used for 132KV lines?

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

10. Who prepares the cost of estimation?

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

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

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

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

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

13. What is the process of heat treatment?

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

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

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

15. Which IE rules are to be verified on completion of wiring on a new installation?

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

16. 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

17. 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

18. 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

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

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

20. 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

21. 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. 1400
B) Rs. 2000
C) Rs. 2400
D) Rs. 3000

22. What is a total cost?

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

23. 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) 1.43
C) 0.7
D) 7

24. 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.6,000,000
B) Rs.6,00,000
C) Rs.60,00,000
D) Rs.30,000,000

25. Which one is related to estimation of work?

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

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

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

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

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

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

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

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

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

30. 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/-

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

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

32. What is the use of engineering drawing?

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

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

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

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

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

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

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

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

- A) Cementite
B) Ferrite

C) Austenite

D) Martensite

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

A) On the circumference

B) At the radius

C) At the centre

D) At the diameter

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

A) $h/3$

B) $h/5$

C) $h/2$

D) $h/4$

39. What is the unit of strain?

A) Kg/cm^2

B) Metre

C) No unit

D) Newton/metre^2

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

A) Cone

B) Triangle

C) Rhombus

D) Square

41. Which force acts on rivets?

A) Tensile force

B) Compressive force

C) Bending force

D) Shear force

42. Which is a kind of surface hardening process?

A) Nitriding

B) Ferrite

C) Tempering

D) Cementite

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

A) Tempering

B) Hardening

C) Annealing

D) Normalising

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

A) Less than 5%

B) Less than 20%

C) Less than 10%

D) Less than 8%

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

A) Any where on its diameter

B) Any where on its radius

C) At its centre

D) Any where on its circumference

46. 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. 20 lakhs

B) Rs. 15 lakhs

C) Rs.10 lakhs

D) Rs. 12 lakhs

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

A) 1750 gram

B) 1975 gram

C) 1785 gram

D) 1875 gram

48. Which authority publishes schedule of rates?

A) Government department

B) Individual

C) Corporate

D) Partnership firm

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

A) $h/2$

B) $h/4$

C) $h/3$

D) $h/5$

50. 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

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

A) Poisson's ratio

B) Hooks law

C) Young's modulus

D) Bulk modulus

52. Which affects the centre of gravity of the object

A) Weight

B) Shape

C) Density

D) Mass

53. Which is thermo plastic material?

A) Nylon

B) Neoprene

C) Vinyl polymers

D) Butyl rubber

54. Which force acts on crank shaft?

A) Tensile stress

B) Compressive stress

C) Torsional stress

D) Shear stress

55. Which one is included in machining estimation sheet?

A) Tax

B) Raw material cost

C) Advertisement cost

D) Transport cost

56. What is a under estimate?

A) An estimate is fell short of the actual estimate

B) An estimate perfectly matches with actual

C) An estimate is exceeded the actual estimate

D) No work started as per estimate

57. 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/-

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

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

59. What are the various stages of heat treatment?

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

60. 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

61. What is the formula for bulk modulus?

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

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

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

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

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

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

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

65. Which process produce equilibrium conditions?

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

66. 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) 410 kg
- B) 372 kg
- C) 312 kg
- D) 525 kg

67. Which specification is other than general specification?

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

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

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

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

70. 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.100
- C) Rs.110
- D) Rs.102

71. Which hand book referred by machine engineer?

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

72. 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) 0.001
- D) 0.01

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

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

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

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

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

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

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

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

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

- A) Δl
- B) L
- C) e
- D) l

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

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

79. 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) 1575 N
- B) 1577 N
- C) 1571.4 N
- D) 1757 N

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

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

81. Which is thermosetting plastic?

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

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

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

83. What is the ratio between stress and strain?

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

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

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

85. What is a hand book?

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

86. What is the purpose of tempering a steel?

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

87. Which is elastic material?

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

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

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

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

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

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

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

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

- A) Specification
- B) Estimation
- C) Plan
- D) Drawing

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

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

93. 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.265000/-
- B) Rs.225000/-
- C) Rs.275000/-
- D) Rs.250000/-

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

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

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

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

96. 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
kg/mm ² | B) 1.25
kg/mm ² |
| C) 12.5 kg
/mm ² | D) 125
kg/mm ² |
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97. What are the various types of heat treatment processes?

A) Normalising, Heating,
Cooling and Painting
C) Tempering, Cooling,
Packing and Soling

B) Hardening, Soaking,
Painting and Packing
D) Annealing, Normalising,
Hardening and Tempering

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

A) Centre of gravity
C) Central point

B) Centroid
D) Initial point
