

Duration: 60 Mins

Total Marks: 78

ID: ITISKILL8819V0

Student Name: _____ Roll No: _____

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

- A) Ultimate stress B) Young's modulus
C) Factor of safety D) Yield point

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

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

3. 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 B) Rs. 15 lakhs
C) Rs. 12 lakhs D) Rs. 20 lakhs

4. Which one is the ratio of stress?

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

5. What is the use of engineering drawing?

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

6. Which is thermo plastic material?

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

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

- A) e B) L
C) Δl D) I

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

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

9. 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

10. What cables are used for 132KV lines?

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

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

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

12. Which one of the following geometrical shapes centre of gravity lies from its base is $\frac{1}{3}$ of its height?

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

13. What is the ratio between stress and strain?

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

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

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

15. What is the safe stress if the ultimate stress of a material is 35 kg/mm^2 and factor of safety is 5?

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

16. Which one is included in machining estimation sheet?

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

17. 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.572/-
- B) Rs.752/-
- C) Rs.652/-
- D) Rs.960/-

18. Which specification is other than general specification?

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

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

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

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

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

21. 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

22. 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) 1571.4 N
- B) 1577 N
- C) 1575 N
- D) 1757 N

23. What is the tensile stress if a square rod of 10 mm side is tested for a tensile load of 1000 kg?

- A) 10 kg /mm²
- B) 100 kg/mm²
- C) 1000 kg/mm²
- D) 1 kg/mm²

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

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

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

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

26. 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) 0.01
- B) 0.1
- C) 0.0001
- D) 0.001

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

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

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

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

29. 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) 525 kg
- B) 410 kg
- C) 312 kg
- D) 372 kg

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

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

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

32. Which one is the most reliable estimate?

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

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) 0.0001968
- B) 0.0001867
- C) 0.0001687
- D) 0.0001786

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

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

35. 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, Cable)

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

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

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

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

38. What is a under estimate?

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

39. 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) 440 W
- B) 540 W
- C) 340 W
- D) 640 W

40. 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
- C) Rs.112
- D) Rs.110

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

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

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

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

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

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

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

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

45. Which authority publishes schedule of rates?

- A) Corporate
- B) Individual

C) Government department D) Partnership firm

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

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

47. Which is elastic material?

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

48. Which hand book referred by machine engineer?

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

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

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

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

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

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

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

52. 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

53. What is a hand book?

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

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

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

55. Which is thermosetting plastic?

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

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

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

57. 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) 12500 kg/mm²
- B) 1.25 kg/mm²
- C) 12.5 kg/mm²
- D) 125 kg/mm²

58. 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

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

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

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

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

61. What is an over estimate?

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

62. What is the unit of strain?

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

63. Who prepares the cost of estimation?

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

64. Which force acts on rivets?

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

65. What is the relative permittivity of rubber?

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

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

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

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

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

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

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

69. Which affects the centre of gravity of the object

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

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

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

71. Which force acts on crank shaft?

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

72. What is the formula for bulk modulus?

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

73. Which one is related to estimation of work?

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

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

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

75. 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.60,00,000
- B) Rs.6,00,000
- C) Rs.6,000,000
- D) Rs.30,000,000

76. What is the main factor to be considered while preparing

a detailed estimate?

A) Shape of material

B) Quantity, availability and transportation of materials

C) Brand of the materials

D) Location of material

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

A) Maintenance, Stock, Cost

B) Quality, Quantity, Workmanship, Method of execution

C) Tax, Transport, Overhead expenses

D) Colour

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

A) $h/4$

B) $h/3$

C) $h/2$

D) $h/5$