ITI Quiz - 18-Mar-2026 04:46 PM

Q. ID: ITISKILL283892

March 2026 | **Govt ITI Tagaduru** | Question Paper

Duration: 30 Mins | **Total Marks: 413** | **ID: ITISKILL283892**

Student Name: _____ Roll No: _____

1. What is a hand book?

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

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

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

3. Which type heat is the heat absorbed or given off by a substance without changing its physical state?

A) Latent heat of steam
B) Sensible heat
C) Specific heat
D) Latent heat

4. What is the value of 625⁰?

A) 0
B) 525
C) 1
D) 25

5. What is the equivalent pascal value for 1 bar?

A) 107 pascal
B) 105 pascal
C) 103 pascal
D) 109 pascal

6. What is the unit for velocity?

A) Metre/second²
B) Metre/minute
C) Metre/second
D) Metre/hour

7. What is the name of furnace to obtained cast iron?

A) Mild steel - Blast furnace
B) Alloy metal - Electric furnace
C) Cupola
D) Steel - Rever battery

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

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

9. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?

A) 90 cm²
B) 80 cm²
C) 75 cm²
D) 85 cm²

10. What is the volume of sphere of radius 7 cm?

A) 1346 cm³
B) 1436 cm³
C) 1463 cm³
D) 1636 cm³

11. Which type of heat transmission takes place through physical contact?

A) Convection
B) Reflection
C) Conduction
D) Radiation

12. How the years is denoted in simple interest calculations?

A) n
B) I
C) P
D) r

13. Which machine converts mechanical energy into electrical energy?

A) Heater
B) Battery
C) Generator
D) Iron box

14. What is the volume of mercury in cm3, if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm3?

A) 10.0 cm³
B) 13.6 cm³
C) 10.6 cm³
D) 136 cm³

15. Which furnace is used to get pig iron from iron ore?

A) Cupola
B) Electric furnace
C) Mild steel - Rever battery
D) Blast furnace

16. Which property of material enables to formation of permanent deformation without fracture?

A) Brittleness
B) Plasticity
C) Elasticity
D) Ductility

17. What is the primeter of scalene. Triangle having sides of 40mm, 20mm and 28mm?

A) 98 mm
B) 88 mm

C) 68 mm D) 78 mm

18. Simplify: (17.49x5.2)/(6.5)

A) 13.89 B) 13.79
C) 13.99 D) 13.69

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

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

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

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

21. What is the value of (a⁵)⁷?

A) a²² B) a²1
C) a³⁵ D) a1²

22. Which is the example for dynamicallly induced Emf?

A) Generator B) Motor
C) Motor bike D) Car

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

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

24. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?

A) Malleability B) Toughness
C) Ductility D) Hardness

25. What is called the ratio between the density of a substances density of water at 4 Degree Centigrade?

A) Specific gravity B) Density
C) Weight D) Mass

26. What are fundamental units?

A) Length, Mass, Time B) Length, Pressure, Volume
C) Length, Mass, Area D) Length, Mass, Volume

27. What is the formual for induced emf?

A) BL sinq volts B) B²V sinq volts
C) B²L sinq volts D) BLV sinq volts

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

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

29. What is the formula for acceleration?

A) Metre/hour B) Metre/second
C) Metre/second² D) Metre/minute

30. What is the square root of 0.017?

A) 0.00001 B) 0.13
C) 0.000001 D) 0.001

31. What is the carbon percentage in low carbon steel?

A) 0.25% to 0.50% B) 0.50% to 1.50%
C) 0.02% to 0.03% D) 0.15% to 0.25%

32. Which property of metal has its power of returning to its original shape after the applied force is released?

A) Plasticity B) Tenacity
C) Malleability D) Elasticity

33. What is the block weighs (W) in kg, if volume (V) is 320 cm3 and density 8.9 g/cm³?

A) 2.848 kg B) 2.648 kg
C) 2.448 D) 2.948 kg

34. Which alloy steel is using for making precious instrument?

A) Vanadium B) Silicon steel
C) Invar steel D) Manganese steel

35. What is known for the temperature at which any solid melts into liquid?

A) Boiling point B) Latent heat of vaporisation
C) Melting point D) Latent heat of fusion

36. What is the cross sectional area of a circular ring of D = 38 mm d = 32mm?

A) 330 mm² B) 340 mm²
C) 350 mm² D) 320 mm²

37. What is the interest earned, if the principal is for Rs.12500/- maturity becomes to a amount of Rs.17500/-?

A) Rs.5000 B) Rs.5500
C) Rs.30000 D) Rs.25000

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

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

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

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

40. Which is brittle metal?

A) Cast iron
B) Alloy steel
C) Steel
D) Mild steel

41. What is the other name of low carbon steel?

A) High speed steel
B) Mild steel
C) Low alloy steel
D) High alloy steel

42. What is the selling price if the cost price is Rs.7282/- with a profit of Rs.208?

A) Rs.7290
B) Rs.7074
C) Rs.7698
D) Rs.7490

43. What is the simplified value of (3x + 15) / 5x + 25)

A) (-3/5)
B) (5/3)
C) (-5/3)
D) (3/5)

44. Which hand book referred by machine engineer?

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

45. What is the maximum temperature that can be measured by mercury thermometer?

A) 200 Degree C
B) 300 Degree C
C) 400 Degree C
D) 100 Degree C

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

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

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

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

48. Which metal contains iron as a major content?

A) Bronze metal
B) Brass metal
C) Ferrous metal
D) Zinc

49. What is called if a body does not change its position with respect to its surroundings?

A) Body at rest
B) Body at motion
C) Speed
D) Velocity

50. What is the compounded amount, if the principal of Rs.30000/- and interest earned at 7% per annum is Rs.4347?

A) Rs.33347/-
B) Rs.32347/-
C) Rs.34347/-
D) Rs.30347/-

51. Which is equal to (a^m)ⁿ?

A) a^{mn}
B) a^{m+n}
C) a^{m-n}
D) a^{m/n}

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

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

53. Which law states that at constant termperature the current passing through a closed circuit is directly proportional to the potential difference and inversely proportional to the resistance?

A) Lenz's law
B) Ohm's law
C) Hooke's law
D) Newton's law

54. What is the profit amount, if the i - phone cost price is Rs.50000/- and selling price is Rs.70000/-?

A) Rs. 50000/-
B) Rs. 2000/-
C) Rs. 10000/-
D) Rs. 20000/-

55. Which kind of heat transmission takes places by up-ward flow?

A) Radiation
B) Reflection
C) Convection
D) Conduction

56. Which among the following is an insulator?

A) Copper
B) Silver
C) Aluminium
D) Mica

57. What maximum height a stone will reach if it is thrown upwords with a velocity of 20m/sec?(g = 10m/sec²)

A) 10 m
B) 30 m
C) 40 m
D) 20 m

58. What percentage of 80 is 20?

A) 0.8
B) 0.4
C) 0.2
D) 0.25

59. Which is elastic material?

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

60. Which one is the ratio of stress?

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

61. What is the area of a square whose side is 18 cm?

A) 324 cm²
B) 72 cm²
C) 36 cm²
D) 26 cm²

62. What is the velocity ratio of a wheel and axle if the radii of wheel and axle are 375 mm and 75 mm respectively?

A) 3
B) 6
C) 4
D) 5

63. Which is example for second order lever?

A) Bottle opener
B) Common balance
C) Human forearm
D) A pair of scissors

64. What is called if a body posses only magnitude or size alone?

A) Speed
B) Vector quantity
C) Scalar quantity
D) Velocity

65. What are the two classifications of system of units?

A) British and Metric
B) Metric and International
C) Fundamental and derived
D) Gravitational and non-gravitational

66. What is the value of a x a² x a³ x a⁴?

A) a¹⁰
B) a⁹
C) a⁷
D) a⁸

67. Which property of a metal possessed by it melts when heat is applied?

A) Tenacity
B) Conductivity
C) Malleability
D) Fusibility

68. What is volume of the cylinder whose radius is 7 cm and height 12 cm?

A) 1847 c.c
B) 1846 c.c
C) 1842 c.c
D) 1844 c.c

69. Which instrument is used to measure heat?

A) Thermometer
B) Pyrometer
C) Calorie meter
D) Barometer

70. How many degrees is equal to one radian?

A) (360)/(Pi)
B) (Pi)/(360)
C) (Pi)/(180)
D) (180)/(Pi)

71. What is the S.I unit of heat?

A) Centigrade heat unit
B) Joule
C) British thermal unit
D) Calorie

72. What is the capacity of a body to do work is called?

A) Force
B) Acceleration
C) Power
D) Energy

73. What is the diameter of the circle, if the area of the circle is 78.5cm²?

A) 15 cm
B) 10 cm
C) 5 cm
D) 5.5 cm

74. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?

A) 15
B) 10
C) 6
D) 25

75. What are the various stages of heat treatment?

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

76. What is the area of the circle, whose diameter is 50 cm?

A) 1962.5 cm²
B) 1950 cm²
C) 1900 cm²
D) 1960 cm²

77. What is the ratio of force (or) thrust per unit area?

A) Power
B) Energy
C) Pressure
D) Work

78. What is the ratio of power output to power input?

A) Work
B) Acceleration
C) Energy
D) Efficiency

79. What will be the rpm of smaller gear if a 180 mm dia meshes with 60 mm dia gear and the bigger gear makes 60 rpm?

A) 180 rpm
B) 160 rpm
C) 140 rpm
D) 120 rpm

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

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

81. What is the value of x if 11x+4=37?

A) 5
B) 4
C) 2
D) 3

82. What is the power required?
 I = 0.455 Amps
 R = 484 Ohms
 P = _____Watts

A) 100.2 watts
B) 101.2 watts
C) 98.2 watts
D) 99.2 watts

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

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

84. What is the relative permittivity of rubber?

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

85. What is the total surface area of a cylinder having radius 2 metres and height 5 metres?

A) 88 sq.metre
B) 86 sq.metre
C) 90 sq.metre
D) 92 sq.metre

86. Find the total surface area of a cast iron bar whose length, width and height are 20m, 15m and 12m.

A) 1440 m²
B) 1640 m²
C) 1540 m²
D) 1340 m²

87. What is the formula to find selling price (S.P) if there is a loss?

A) ((100-Loss %)/(100))xC.P
B) ((100)/(100+Profit %))xS.P
C) ((100)/(100-Loss %))xS.P
D) ((100+Profit %)/(100))xC.P

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

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

89. What is the formula for kinetic energy?

A) (2/3) mv joule
B) (2/3) mv² joule
C) (1/2) mv joule
D) (1/2) mv² joule

90. Which authority publishes schedule of rates?

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

91. How many days a mechanic takes to assemble 64 machines if he assembles 8 machines in 3 days?

A) 24 days
B) 20 days
C) 26 days
D) 22 days

92. Which is example for third order lever?

A) Common balance
B) Lime squeezer
C) A pair of scissors
D) Forceps

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

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

94. What is the quantity of heat required to raise the temperature of 1 gram of water through 1 Degree Centigrade is called?

A) British thermal unit
B) Colorie
C) Centigrade heat unit
D) Specific heat

95. What is the compounded annual interest, for a loan amount of Rs.80000/- at 10% per annum for a period of 2 years?

A) Rs.94800/-
B) Rs.16800/-
C) Rs.92400/-
D) Rs.96800/

96. What is called if the length of the solid expands when heated?

A) Linear expansion
B) Superficial expansion
C) Area expansion
D) Cubical expansion

97. What is the HCF of 18, 42, 24?

A) 24
B) 18
C) 2
D) 6

98. What is the value of a²+b² if a+b=9 and ab = 20?

A) (-121)
B) 41
C) (-41)
D) 121

99. Which force acts on rivets?

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

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

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

101. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

A) 4 B) 5
C) 2.4 D) 10

102. What is the value of x if 13+x =20?

A) 13 B) 7
C) 9 D) 8

103. What is the current?
 R = 50 Ohms
 220 Volts
 I =_____Amps

A) 4.1 Amps B) 4.2 Amps
C) 4.3 Amps D) 4.4 Amps

104. What is the length L2, if total length (L) is 2.75 metre and L1:L2 = 2:3?

A) 1.25 metre B) 1.65 metre
C) 1.75 metre D) 1.1 metre

105. Calculate the amount of heat required to raise the temperature of 85.5 gm of sand from 20 Degree C to 35 Degree C specific heat of sand = 0.1.

A) 126.28 Joules B) 128.26 Joules
C) 125.28 Joules D) 128.25 Joules

106. What is the area of the sector, whose diameter is 40 mm and angle is 120 Degree?

A) 415.5 mm² B) 400.50 mm²
C) 418.66 mm² D) 416.6 mm²

107. At what temperature will Fahrenheit and centigrade thermometers give the same reading?

A) -38 Degree C B) -39 Degree C
C) -41 Degree C D) -40 Degree C

108. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

A) 10 W B) 3 W
C) 1.2 W D) 12 W

109. Divide (20/31)/(15/62)

A) 2(3/2) B) 2(4/3)
C) 2(1/3) D) 2(2/3)

110. What is the unit of strain?

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

111. 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

112. Which property of a metal enables it by which it can be drawn out into wires under tension without rupture?

A) Ductility B) Brittleness
C) Hardness D) Malleability

113. 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

114. Which is mineral insulator

A) Quartz B) Mica
C) Glass D) Porcelain

115. What is the name of fixed or supporting point of a lever?

A) Load B) Fulcrum
C) Effort D) Mechanical advantage

116. What is the expansion of (a+b+c)²?

A) a² + b² + c² + 2ab - 2bc + 2ca B) a² + b² + c²- 2ab + 2bc + 2ca
C) a² + b²+ c²+ 2 (ab + bc + ca) D) a² - b² - c² + 2ab + 2bc + 2ca

117. Which is the formula for a^m/ aⁿ

A) a^{m+n} B) a^{mxn}
C) a^{m-n} D) (a^m)ⁿ

118. Which one is related to estimation of work?

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

119. What is the principal amount deposited, if the maturity proceeds to an amount of Rs.25000/- and interest earned Rs.6000/-?

A) Rs.31000/- B) Rs.25000/-
C) Rs.20000/- D) Rs.19000/-

120. What is the value of x²-y² if (x+y) = 9, (x - y) = 4?

A) 36 B) 13
C) 65 D) 46

121. What is term used for 2 x linear expansion?

A) Co-efficient of friction B) Co-efficient of superficial expansion
C) Co-efficient of linear expansion D) Co-efficient of cubical expansion

122. Which is very good conductor?

A) Copper B) Steel
C) Cast iron D) Wrought iron

123. What is the speed of a train of 80 metre long train passes a railway station platform of 120 metres length in 20 seconds?

A) 34 km/hour B) 32 km/hour
C) 36 km/hour D) 30 km/hour

124. Which one is the radiation method of heat transmission?

A) The heat from sun travels through the space B) On heating gases, heat transmitted to surroundings
C) An iron rod is heated with one of its end and heat transmitted to other end D) Cold water goes to the bottom from top while on heating the water

125. Which is the example for statically induced emf?

A) Motor B) Transformer
C) Refrigerator D) Generator

126. What is the length of arc of the sector whose radius is 15 cm and the intended angle is 30 Degree?

A) 6.75 cm B) 7.25 cm
C) 7.85 cm D) 6.85 cm

127. What is called for the amount of heat required to raise the temperature of unit mass of a substance through 1 Degree C?

A) Specific heat B) Mixing of heat
C) Latent heat D) Sensible heat

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

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

129. Which one has the highest thermal conductivity?

A) Water B) Steam
C) Solid ice D) Melting ice

130. Which is the unit of resistance?

A) Ohm B) Volt
C) Ampere D) Watt

131. What is the area of the sector, if the diameter is 12 cm and the angle is 60 Degree?

A) 19.00 cm² B) 17.75 cm²
C) 18.0 cm² D) 18.84 cm²

132. Which is the unit electrical power?

A) Watts B) Volts
C) Ampere D) Ohms

133. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

A) 97.8 ohms B) 96.8 ohms
C) 94.8 ohms D) 95.8 ohms

134. What is the length of arc of a sector, whose radius is 15 cm and angle is 40 Degree?

A) 10.4 cm B) 9.75 cm
C) 9.8 cm D) 10.60 cm

135. What is the value of ab if (a+b)²=36 (a-b)²=24?

A) 4 B) 2
C) 3 D) 6

136. What is the change in length per unit original length per degree rise in temperature is called?

A) Co-efficient of linear expansion B) Co-efficient of superficial expansion
C) Co-efficient of friction D) Co-efficient of cubical expansion

137. How much is 8% of 40 kg?

A) 2.2 kg B) 3.2 kg
C) 4.2 kg D) 5.2 kg

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

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

139. How the profit / gain is expressed?

A) * B) $
C) Rs. D) %

140. What is the length of each part is a copper wire of 225

metre long is cut into 900 equal parts?

A) 0.29 metre
B) 0.23 metre
C) 0.25 metre
D) 0.28 metre

141. 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.752/-
B) Rs.652/-
C) Rs.572/-
D) Rs.960/-

142. What is the diameter of the semicircle, if the circumference of the semicircle is 21.98 cm?

A) 7.55 cm
B) 8 cm
C) 8.55 cm
D) 7 cm

143. Find the curved surface area of a cylinder 10 cm dia and 20 cm height?

A) 628 cm²
B) 620 cm²
C) 638 cm²
D) 630 cm²

144. What is equal to cos θ?

A) Adjacent Side/Hypotenuse
B) Hypotenuse/Adjacent Side
C) Opposite side/Hypotenuse
D) Hypotenuse/Opposite Side

145. What is the area of a right angled triangle having a base 10 cm and height 5 cm?

A) 25 sq.cm
B) 20 sq.cm
C) 30 sq.cm
D) 35 sq.cm

146. 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. 1400
C) Rs. 2400
D) Rs. 2000

147. What is the work done in joules if a load of 15.5 kg is lifted through a height of 4.4 metres?

A) 669 Joules
B) 659 Joules
C) 649 Joules
D) 639 Joules

148. How many watts for 1 horse power in metric system?

A) 755.5 watts
B) 725.5 watts
C) 745.5 watts
D) 735.5 watts

149. Convert decimal 0.000659 to fraction?

A) (659/1000)
B) (659/100000)
C) (659/1000000)
D) (659/10000)

150. What is the specific gravity of the metal, if the weighs 6.5 kgf in air and 3.5 kgf in water?

A) 6.166
B) 2.166
C) 3.166
D) 1.166

151. 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) 12.5 kg /mm²
C) 125 kg/mm²
D) 1.25 kg/mm²

152. 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) 525 kg
B) 372 kg
C) 410 kg
D) 312 kg

153. Which instrument is used to measure temperatures of red hot metals up to 3000 Degree C?

A) Alcohol thermometer
B) Radiation pyrometer
C) Bimetal thermometer
D) Thermoelectric pyrometer

154. What is the volume (V) of mercury in cm3, if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm³?

A) 73.43 cm³
B) 73.33 cm³
C) 73.23 cm³
D) 73.53 cm³

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

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

156. What is the value in degree centigrade for 20 Degree F?

A) -6.67 Degree C
B) -6.47 Degree C
C) -6.57 Degree C
D) -6.37 Degree C

157. A motor cycle tyre is sold for Rs 300/- what is the purchase price if 25% profit is added to it.

A) Rs 260
B) Rs 220
C) Rs 200
D) Rs 240

158. What is equal to tan θ?

A) Adjacent Side/Hypotenuse
B) Opposite Side/Hypotenuse
C) Adjacent side/Opposite side
D) Opposite Side/Adjacent Side

159. What is the acceleration of a car if the speed of the car has increased from 25 km per hour to 40 km per hour in one

minute?

A) 0.69 m/sec²
B) 0.059 m/sec²
C) 0.069 m/sec²
D) 0.59 m/sec²

160. What is the diameter of the circle, if the circumference is 31.4 cm?

A) 10 cm
B) 8 cm
C) 5 cm
D) 8.5 cm

161. What is the efficiency of a simple screw jack having velocity ratio is 314.2 and mechanical advantage is 220?

A) 0.65
B) 0.7
C) 0.75
D) 0.6

162. What is the angle of elevation of the top of a light house of 15 m height seen at a point 15 m away from the base?

A) 90 Degree
B) 60 Degree
C) 45 Degree
D) 30 Degree

163. Which order lever is claw hammer?

A) 1st order lever
B) 2nd order lever
C) Curved lever
D) 3rd order lever

164. Which is the expansion of a³ + b³?

A) (a-b) (a² + b² - ab)
B) a³ - b³ + 3ab (a-b)
C) (a+b) (a² + b² - ab)
D) a³ + b³ + 3ab (a+b)

165. What metals contained in brass alloy?

A) Copper and aluminium
B) Copper and lead
C) Copper and tin
D) Copper and zinc

166. What is the radius of the semicircle, if the circumference of the semicircle is 28.26 cm?

A) 8.5 cm
B) 8.75 cm
C) 5.49 cm
D) 6.49 cm

167. Which process produce equilibrium conditions?

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

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

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

169. Convert 52% into fraction?

A) (17/25)
B) (11/25)
C) (13/25)
D) (9/25)

170. What is the value of x if (x + 2) / 2 = 19?

A) 33
B) 35
C) 38
D) 36

171. Which statement is correct according to ohm's law?

A) I = R
B) I = V/R
C) I = R/V
D) I = 1/V

172. What is the freezing point of water in kelvin scale (K)?

A) 303 Degree K
B) 273 Degree K
C) 313 Degree K
D) 373 Degree K

173. What is the selling price, if the profit is 5% for a computer table bought at Rs.1150/- with Rs.50/- as a transport charge?

A) 1160
B) 1620
C) 1060
D) 1260

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

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

175. How much quantity of heat is required?
 m = 120 litres <br> t1 = 20 Degree C <br> t2 = 85 Degree C
 S = 4.2
 Q = _____ KJ

A) 32750 KJ
B) 32760 KJ
C) 32780 KJ
D) 32770 KJ

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

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

177. 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
B) 10 kg /mm²
C) 1000 kg/mm²
D) 100 kg/mm²

178. Which steel is used for making files and cold chisel?

A) Stainless steel
B) High carbon steel
C) Low carbon steel
D) Midium carbon steel

179. What is the unit of co-efficient of linear expansion?

A) Number / Degree C
B) Number / Degree C / mm length
C) Number / Degree C / cm length
D) Number / Degree C / meter length

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

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

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

A) 1975 gram
B) 1785 gram
C) 1875 gram
D) 1750 gram

182. What is called for the materials that restricts heat flow by radiation, conduction and convection?

A) Conductors
B) Insulators
C) Non-ferrous
D) Ferrous

183. Which type of levers is bell cranked lever?

A) 2nd order lever
B) 3rd order lever
C) Curved lever
D) 1st order lever

184. What is the specific heat of the material if we require 510 calories to raise the temperature of 170 gm of material from 50 Degree C to 80 Degree C?

A) 0.01
B) 0.1
C) 1.1
D) 1.11

185. What is the voltage of the immersion heater?
P = 500 watts
 I = 2.27 Amps
 V = _____Volts

A) 230.3 volts
B) 210.3 volts
C) 200.3 volts
D) 220.3 volts

186. What is the melting point of aluminium?

A) 660 Degree C
B) 620 Degree C
C) 670 Degree C
D) 680 Degree C

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

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

188. What is the unit of speed?

A) Metre/second
B) Metre/hour
C) Metre/second²
D) Metre/minute

189. What is the square root of decimal number 550.37?

A) 21.26
B) 23.46
C) 22.46
D) 22.26

190. What is the multiplication value of 5a²b x 8a⁵b³?

A) 40a⁷b⁴
B) 40a³b²
C) 40a⁴b⁷
D) 40a²b³

191. Which specification is other than general specification?

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

192. Which cast iron cannot be welded?

A) Grey cast iron
B) White cast iron
C) Nodular cast iron
D) Malleable cast iron

193. What is the melting point of mercury?

A) -209 Degree C
B) -357 Degree C
C) -7.1 Degree C
D) -38.72 Degree C

194. What is the maturity amount if Rs.20000 is deposited at 5% compound interest per annum for 2 years?

A) Rs.22500
B) Rs.25000
C) Rs.22000
D) Rs.22050

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

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

196. What is the mechanical advantage, if a load of 1000 kg is lifted by a simple machine and effort applied is 250 kg?

A) 6
B) 4
C) 8
D) 3

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

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

198. How much quantity of heat is required to raise the temperature of 300 grams of copper (sp.heat 0.092 cal/gram) from 25 Degree C to 75 Degree C in Kcal?

A) 1.38 Kcal
B) 138 Kcal
C) 2.07 Kcal
D) 207 Kcal

199. What is the value of any number raised to the power of 0?

A) (-1) B) 0
C) Alpha (?) D) 1

200. What is the value of x, if 3 (2x - 4) = -4x + 28 ?

A) 4 B) 6
C) 12 D) 8

201. What is the product of 0.003 x 0.5?

A) 0.015 B) 0.15
C) 0.0015 D) 0.00015

202. What is the length of arc of a sector whose radius is 3.6 cm and angle is 36 Degree?

A) 22.6 cm B) 2.26 cm
C) 21.0 cm D) 2.10 cm

203. What cables are used for 132KV lines?

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

204. What is the formula to find Profit %?

A) ((C.P)/(Profit))x100 B) ((S.P-C.P)/(Profit))x100
C) ((Profit)/(C.P))x100 D) ((Profit)/(S.P))x100

205. What is the value of adding (5x+2y), (4x - 7z) and (15z - 3y)?

A) 9x - y + 8z B) x - 9y + 8z
C) 9x + y - 8z D) x + 9y + 8z

206. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

A) 9.8 watts B) 9.6 watts
C) 9.2 watts D) 9.4 watts

207. 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.6,000,000
C) Rs.6,00,000 D) Rs.60,00,000

208. What is the LCM of 12, 18, 6, 36?

A) 36 B) 12
C) 18 D) 42

209. What is the perimeter of a rectangle whose length and breadth are 20 cm and 18 cm?

A) 86 mm B) 56 cm
C) 76 cm D) 66 cm

210. What is called if a body changes its position with respect to its surroundings?

A) Body at rest B) Body at motion
C) Velocity D) Speed

211. What is the formula for potential energy?

A) mgh joule B) 1/2 mgh joule
C) 2/3 mgh joule D) mgh² joule

212. How much watt second in 1 watt hour?

A) 1000 watt sec B) 3600 watt sec
C) 4000 watt sec D) 2000 watt sec

213. What is the name of the region of a circle between any two point on the circumference?

A) Chord B) Arc
C) Sector D) Segment

214. What is the compound interest on a principal of Rs.25000/- after 3 years at the rate of 12% per annum?

A) Rs.9720 B) Rs.10483.20
C) Rs.10123.20 D) Rs. 9000

215. What is the equivalent unit for 1 horse power in metric system?

A) 76 kg.m/sec B) 75 kg.m/sec
C) 78 kg.m/sec D) 77 kg.m/sec

216. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

A) Cu 94% B) Cu 92%
C) Cu 96% D) Cu 98%

217. Which is equal to electric power?

A) I²R watts B) RI
C) R²I watts D) IRA

218. What is discount?

A) Selling price is less than Cost price B) Selling price is greater than Cost price
C) The reduction given to the selling price of a product D) Selling price + discount

219. What is the square root of 529?

A) 43 B) 12
C) 33 D) 23

220. What is the simple interest for the principal amount of Rs.100000 at 10% per annum for 1 year period?

A) Rs.1000/- B) Rs.50000/-
C) Rs.10000/- D) Rs.5000/-

221. What is the improper fraction for the given mixed fraction ? 7 x (3/7)

A) "28/7" B) "7/52"
C) (52/7) D) "7/28"

222. What is the ratio between stress and strain?

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

223. What is the ore of aluminium?

A) Mallatite B) Hematite
C) Bauxite D) Lemonite

224. What is the length of arc of a sector, whose perimeter is 64.8cm and radius is 12.4 cm?

A) 42 cm B) 40.8 cm
C) 45 cm D) 40 cm

225. Which is the unit of current?

A) Watt B) Volt
C) Ampere D) Ohm

226. What is the velocity ratio of a simple machine of a mass 120 kg is lifted to a height of 5 metres by a force of 60 kg moving 15 metre. Calculate velocity ratio?

A) 2 B) 4
C) 1 D) 3

227. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

A) 7 ohm B) 17 ohms
C) 1/17 ohms D) 11 ohms

228. What is the resistance?
 I = 11.5 Amps
 V = 380 Volts
 R = _____Ohms

A) 43 ohms B) 23 ohms
C) 13 ohms D) 33 ohms

229. Which insulator is used in over head lines?

A) Mica B) P.V.C
C) Rubber D) Porcelain

230. Find the total surface area of cube whose side is 25 cm.

A) 3750 cm² B) 3755 cm²
C) 3745 cm² D) 3740 cm²

231. What is the area of a (A) semicircle whose dia is 20 cm (d)?

A) 167.1 cm² B) 177.1 cm²
C) 157.1 cm² D) 147.1 cm²

232. Which alloy steel is used to make permanent magnets?

A) Cobalt steel B) Manganese steel
C) Silicon steel D) Vanadium steel

233. What is the definition of ratio?

A) Equality between two ratios B) Relation of two quantities of the same kind
C) Relation of two quantities of the different kind D) Inequality between two ratios

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

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

235. What is the area of the circle, if the circumference of the circle is 44cm?

A) 129 cm² B) 130 cm²
C) 154 cm² D) 128 cm²

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

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

237. Which one is the most reliable estimate?

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

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

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

239. Which one of the following is not a property of heat insulating material?

A) Resistance to fire B) Low conductivity
C) Less moisture absorption D) Ductility

240. How much load is lifted if an effort of 25 kg is applied to a simple machine having velocity ratio of 4 and efficiency 75%?

A) 70 kg B) 80 kg
C) 65 kg D) 75 kg

241. 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) 1577 N
B) 1571.4 N
C) 1757 N
D) 1575 N

242. 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/-
B) Rs.265000/-
C) Rs.225000/-
D) Rs.250000/-

243. Which force acts on crank shaft?

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

244. Which is expanded form of a³-b³?

A) (a+b) (a² - b²- ab)
B) (a-b) (a² - b² - ab)
C) (a-b) (a² + b² + ab)
D) (a-b) (a² - b²+ ab)

245. What is the height of the building if a ladder at 45 Degree touches the building placed 16 m from the base of the building?

A) 18 m
B) 17 m
C) 16 m
D) 15 m

246. What is called if a body posses both magnitude and direction of velocity?

A) Scalar quantity
B) Speed
C) Velocity
D) Vector quantity

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

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

248. What is the rate of change of displacement of a body?

A) Body at rest
B) Velocity
C) Speed
D) Body at motion

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

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

250. 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

251. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm³?

A) 18.5
B) 19.5
C) 19
D) 8

252. What is the capacity of a conical tank of radius 2 m and height 5m?

A) 41 m³
B) 31 m³
C) 21 m³
D) 11 m³

253. Who prepares the cost of estimation?

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

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

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

255. Which is example for first order lever?

A) Lime squeezer
B) Fire tongs
C) A pair of scissors
D) A wheel barrow

256. Which metal cannot be forged?

A) Steel
B) Cast iron
C) Mild steel
D) Alloy steel

257. What is the subtracted value of 3x - 4x² +2y² from 4y²-2x + 8x²?

A) (-2y²-5x + 12x²)
B) 2y² - 5x -12x²
C) 2y²- 5x + 12x²
D) 2y²+ 5x -12x²

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

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

259. What is the formula for (a-b)²?

A) a²- 2ab + b²
B) (-a² - 2ab - b²)
C) a² + 2ab + b²
D) a² - 2ab - b²

260. Which is a kind of surface hardening process?

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

261. What is the density (r) in g/cm3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm,³?

A) 7.5 g/cm³ B) 7.2 g/cm³
C) 6.9 g/cm³ D) 6.6 g/cm³

262. How many watts for 1 horse power in British system?

A) 736 watts B) 756 watts
C) 726 watts D) 746 watts

263. What is the voltage?
 R = 250 Ohms
 I = 0.44 Amps
 V = _____Volts

A) 100 Volts B) 105 Volts
C) 108 Volts D) 110 Volts

264. What is the mass in gram, if a force of 15 dyres acting on a mass m producing an acceleration of 2.5 cm/sec²?

A) 6 grams B) 9 grams
C) 7 grams D) 8 grams

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

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

266. What is the formula for total surface area of a cylinder?

A) 2 Pi rh B) 2 Pi r (h + r)
C) Pi rh D) Pi r (h + r)

267. What is the carbon percentage in medium carbon steel?

A) 0.5% to 1.5% B) 0.25% to 0.5%
C) 0.05% to 0.15% D) 0.15% to 0.25%

268. What is the expanded form of S.P?

A) Special Price B) Selling Price
C) Selected Price D) Super Price

269. What is the formula for a^m x aⁿ?

A) a^{m+n} B) a^{mn}
C) a^{m-n} D) n.a^m

270. What does EMF stands for?

A) Electro Magnetic Force B) Electronic Magnetic Force
C) Electromated Force D) Electro Motive Force

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

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

272. How much heat is absorbed by a copper ingot weighing 400 Kg is heated from 40 Degree C to 72 Degree C for the purpose of forging? (sp.heat of copper is 0.09)

A) 1521 Kcal B) 1251 Kcal
C) 1215 Kcal D) 1152 Kcal

273. What is the unit of acceleration of an object?

A) Metre/minutes B) Metre/second
C) Metre/minutes² D) Metre/second²

274. How many liters of water a cylindrical tank of radius 75 cm and height 100 cm can hold?

A) 1769.25 liters B) 1767.25 liters
C) 1766.25 liters D) 1768.25 liters

275. Convert - 273 Degree C (Centigrade) into kelvin scale?

A) 3 Degree K B) 1 Degree K
C) 2 Degree K D) 0 Degree K

276. What is the area of an equilateral triangle of side 450 mm?

A) 856.82 cm² B) 886.82 cm²
C) 866.82 cm² D) 876.82 cm²

277. Which alloy used in electric lamp as filament?

A) Tungsten B) Vanadium
C) Cobalt D) Silicon

278. How many newtons for 1 kilogram?

A) 98.1 Newtons B) 0.981 Newtons
C) 9.81 Newtons D) 981 Newtons

279. 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

280. Which law states about electromagnetic induction?

A) Ohm's law B) Hooke's law
C) Lenz's law D) Faraday's law

281. What is the formula for velocity?

A) Change in velocity/Time B) Distance covered/Time

C) Change of momentum/Time
D) Displacement/Time

282. What is the density of aluminium?

A) 3.7 g/cm³
B) 5.7 g/cm³
C) 2.7 g/cm³
D) 4.7 g/cm³

283. Which is equal to sin θ?

A) Opposite Side/Hypotenuse
B) Hypotenuse/Opposite side
C) Adjacent Side/Hypotenuse
D) Hypotenuse/Adjacent side

284. What effort required to lift a load of 150 kg in a wheel and axle, if the velocity ratio is 2.5 and the efficiency of the machine is 75%?

A) 100 kg
B) 80 kg
C) 70 kg
D) 90 kg

285. What is term called for 3 x linear expansion?

A) Co-efficient of superficial expansion
B) Co-efficient of friction
C) Co-efficient of cubical expansion
D) Co-efficient of linear expansion

286. What is the formula to find Loss %?

A) (S.P)/(Loss+100)
B) (CP)/(Lossx100)
C) (Loss+100)/(S.P)
D) (Lossx100)/(C.P)

287. 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.18700/-
C) Rs.17700/-
D) Rs.16700/-

288. What is the radius of the circle, whose circumference is 440 cm?

A) 70 cm
B) 71.5 cm
C) 72.2 cm
D) 70.5 cm

289. 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

290. What is the name called biggest chord of the circle?

A) Arc
B) Diagonal
C) Radius
D) Diameter

291. Convert 0.456 decimal fraction into percentage?

A) 0.456
B) 0.000456
C) 0.0456
D) 45.6

292. What is the SI unit of pressure?

A) Newton
B) Pascal
C) Joule
D) Bar

293. What is the carbon percentage in high carbon steel?

A) 0.02% to 0.03%
B) 0.25% to 0.50%
C) 0.15% to 0.25%
D) 0.50% to 1.50%

294. What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 seconds?

A) 0.40 m/sec²
B) 0.20 m/sec²
C) 0.10 m/sec²
D) 0.30 m/sec²

295. What is the current Flow in the bulb?
 P = 550 watts
 R = 22 Ohms
 I = _____Amps

A) 3 Amps
B) 5 Amps
C) 4 Amps
D) 2 Amps

296. What is the distance of the load from the fulcrum called?

A) Effort
B) Load arm
C) Effort arm
D) Power arm

297. What is the x value for x² + 62 = 126?

A) 10
B) 6
C) 8
D) 4

298. What is the unit of intensity of magnetic field?

A) wb/m
B) m/wb
C) Coloumb
D) Hertz

299. What is the area of the circle if the radius is 10 cm?

A) 3.14 cm²
B) 31.4 cm²
C) 314 cm²
D) 30.4 cm²

300. What is the area of the semicircle, if the diameter is 14 cm?

A) 86.93 cm²
B) 76.93 cm²
C) 70 cm²
D) 75.06 cm²

301. How much power does it consumes if an electric heater draws a current of 10 amps at 200 volts?

A) 2020 watts
B) 2000 watts
C) 2030 watts
D) 2010 watts

302. What is the circumference of a circle whose diameter is 7 cm?

A) 21 cm
B) 44 cm
C) 22 cm
D) 25 cm

303. 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. 20 lakhs
C) Rs. 12 lakhs
D) Rs. 15 lakhs

304. Which rubber is used as insulator for power cables and control wires?

A) Nitrite butadiene
B) Butyl
C) Silicon
D) Hypalone

305. Which is equal to (a+b)²-(a-b)²

A) 5ab
B) 3ab
C) 4ab
D) 2ab

306. What is an over estimate?

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

307. What is the acceleration of an aeroplane taking off from landing field has to run 700 metres if it leaves the ground in 10 seconds from the start?

A) 8 metre/sec²
B) 14 metre/sec²
C) 12 metre/sec²
D) 10 metre/sec²

308. What is the boiling point of mercury?

A) 357 Degree C
B) 759 Degree C
C) 280 Degree C
D) 767 Degree C

309. Which one of the following properties is the mechanical properties of metal?

A) Ductility
B) Fusibility
C) Corrosion
D) Structure

310. What is called mass per unit volume of a substances?

A) Mass
B) Density
C) Weight
D) Volume

311. What is the decimal fraction of conversion of 18.5%?

A) 0.175
B) 0.195
C) 0.165
D) 0.185

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

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

313. Which is thermo plastic material?

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

314. What is the boiling point of water in fahrenheit scale?

A) 100 Degree F
B) 112 Degree F
C) 180 Degree F
D) 212 Degree F

315. Which refers the temperature?

A) It tells the state of heat
B) It is measured by calorie meter
C) It is a form of energy
D) It tells specifie heat of substance

316. How much work done in one hour, if a pump can raise 100 liters of water through a height of 200 meters in one minutes?

A) 12 x 106 kg meter
B) 12 x 105 kg meter
C) 12 x 104 kg meter
D) 12 x 107 kg meter

317. What is the cost price (C.P) formula if there is a profit?

A) ((100+Profit %)/(100))xC.P
B) ((100)/(100+Profit %))xS.P
C) ((100-Loss %)/(100))xC.P
D) ((100)/(100-Loss %))xS.P

318. Which metal is widely used for making casting of machinery parts?

A) White cast iron
B) Wrought iron
C) Malleable cast iron
D) Grey cast iron

319. Wha is the mass if the density of a body is 7.6 g/cm³ and its volume is 25 cm³?

A) 210 grams
B) 220 grams
C) 190 grams
D) 200 grams

320. Which insulating material is most widely used in refrigerators?

A) Glass wool
B) Polyurethane
C) Thermocole
D) Cork sheet

321. What is the area of a circular surface if the radius is 14 cm?

A) 615.44 cm²
B) 612.25 cm²

C) 614.5 cm² D) 612.44 cm²

322. What is a total cost?

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

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

A) Annealing, Normalising, Hardening and Tempering
B) Hardening, Soaking, Painting and Packing
C) Tempering, Cooling, Packing and Solling
D) Normalising, Heating, Cooling and Painting

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

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

325. What is the work done in unit time?

A) Energy
B) Power
C) Force
D) Acceleration

326. What is the work done, if a force of 250 newtons acted upon a body and the body has been moved through a distance of 15 metres?

A) 3740 Joules
B) 3720 Joules
C) 3730 Joules
D) 3750 Joules

327. How many millimetres are there in 1 inch?

A) 2.54 mm
B) 25.4 mm
C) 2.45 mm
D) 24.5 mm

328. Which one is a poor heat insulator?

A) Glass
B) Rubber
C) Cork
D) Saw dust

329. How many hours will take for a 100 watts bulb to consume 1 kwh energy?
 W = 1 Kwh
 P = 100 Watts <br> t = _____Hours

A) 24 hours
B) 10 hours
C) 12 hours
D) 18 hours

330. What is the expanded form of (a+b)²?

A) a² - 2ab + b²
B) a² + 2ab + b²
C) (-a² - 2ab + b²)
D) a² + 2ab - b²

331. Which insulating material is used for making switches?

A) Bakelite
B) PVC
C) Ebonite
D) Porcelain

332. What is the profit % if the cost price of 16 bolts is equal to the selling price of 12 bolts?

A) 33.33
B) 23.33
C) 13.33
D) 43.33

333. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?

A) Non absorption
B) Di-electric strength
C) Mechanical strenth
D) Specific resistance

334. What is the value of x³+3y²x² if x=3, y=2?

A) 63
B) 135
C) 81
D) 54

335. What denotes letter M in MKS system?

A) Mile
B) Meter
C) Micron
D) Millimeter

336. 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) Specification
D) Plan

337. What is the value of 12x³y² / 4x²y?

A) 16xy
B) (-3xy)
C) 8xy
D) 3xy

338. What are the three consecutive numbers if there sum is 42?

A) 11,12,13
B) 13,14,15
C) 12,13,14
D) 14,15,16

339. What is the kinetic energy of a bullet of mass 5gm travels with a speed of 500 m/sec?

A) 620 Joules
B) 630 Joules
C) 635 Joules
D) 625 Joules

340. How the 'Principal' is denoted in simple interest calculation?

A) 'n'
B) 'I'
C) 'P'
D) 'R'

341. What is the use of engineering drawing?

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

342. Simplify: (3/4)+(2/5)-(5/20)

A) (3/10)
B) (12/10)
C) (9/10)
D) (13/10)

343. What is a under estimate?

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

344. What is the radius of the circle if the angle of sector is 90 Degree and the area of the circle is 196 cm²?

A) 15 cm
B) 15.77 cm
C) 14.85 cm
D) 14.95 cm

345. What is the formula for bulk modulus?

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

346. What is the boiling point of water?

A) 0 Degree C
B) 212 Degree C
C) 32 Degree C
D) 100 Degree C

347. What is the value of tan θ if sin θ = 4/5 ?

A) (4/5)
B) (3/4)
C) (5/3)
D) (4/3)

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

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

349. What is the purpose of tempering a steel?

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

350. Which property of a substance is opposing the flow of electric current?

A) Current
B) Resistance
C) EMF
D) Voltage

351. What is the value of x, if x*(120) = 960?

A) 6
B) 10
C) 7
D) 8

352. How many ergs for 1 Joule?

A) 10^3 ergs
B) 10^7 ergs
C) 10^9 ergs
D) 10^5 ergs

353. What is the value of (6³) / ((-3)³) ?

A) (-27)
B) 8
C) (-8)
D) 27

354. What is the term, if an article is purchased?

A) Discount price
B) Margin price
C) Cost price
D) Selling price

355. 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

356. What is the cost price if the product is sold at Rs. 572 with a profit of Rs. 72?

A) Rs. 472
B) Rs. 1000
C) Rs. 644
D) Rs. 500

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

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

358. What is the co-efficient of linear expansion of a rod if it is found to be 100 m long at 20 Degree C and 100.14 m long at 100 Degree C?

A) 1.75 x 10-7 / Degree C
B) 1.75 x 10-6 / Degree C
C) 1.75 x 10-4 / Degree C
D) 1.75 x 10-5 / Degree C

359. What is velocity of a body travels a distance of 168 metres in a line in 21 seconds?

A) 6 m/sec
B) 10 m/sec
C) 12 m/sec
D) 8 m/sec

360. Which affects the centre of gravity of the object

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

361. What is denoted as 'I'?

A) Rate
B) Year
C) Interest
D) Principal

362. What is the name of the metal which do not contain iron?

A) Ferrous metals
B) Non-ferrous metals
C) Non-Insulating metals
D) Insulating metals

363. What is the interest earned, if the principal is Rs.12000/- becomes to an amount of Rs.15600/-?

A) Rs.3600
B) Rs.5600
C) Rs.2600
D) Rs.4600

364. What is the flow of electrons in any conductor?

A) Current
B) Voltage
C) Resistance
D) Power

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

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

366. Which one is included in machining estimation sheet?

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

367. What is the potential energy in a body of mass 10 kg kept on the top of a pole 20 metres height?

A) 1972 Joules
B) 1962 Joules
C) 1942 Joules
D) 1952 Joules

368. What is termed as the quantity of matter contained in a body?

A) Density
B) Mass
C) Volume
D) Specific gravity

369. What is the side of a square whose area is 625 mm²?

A) 25 mm
B) 20 mm
C) 30 mm
D) 15 mm

370. Convert 45 Degree C (Centigrade) into Degree F (Fahrenheit)

A) 112 Degree F
B) 110 Degree F
C) 111 Degree F
D) 113 Degree F

371. What is the potential energy, if a body of mass 250 kg is at a height of 30 metre?

A) 72.57 KJ
B) 73.57 KJ
C) 75.57 KJ
D) 74.57 KJ

372. What is the height of the wall where the ladder touches the wall if the ladder is 2.5 m long makes an angle of 60 Degree with the ground?

A) 2.165 m
B) 4.13 m
C) 4.23 m
D) 4.43 m

373. What is the formula for speed?

A) Change in momentum/Time
B) Distance in definite direction /Time
C) Distance covered/Time
D) Change in velocity/Time

374. What is the formula for finding volume of a hollow cylinder having outer radius 'R' inner radius 'r' and height 'h'?

A) 4/3 Pi (R² - r²)h
B) 2/3 Pi (R² - r²) h
C) Pi (R² - r²)h
D) Pi/3 (R² - r²) h

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

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

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

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

377. What is the ratio between the distance moved by the effort to the distance moved by the load?

A) Velocity ratio
B) Mechanical advantage
C) Efficiency
D) Fulcrum

378. 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) 0.0001687
B) 0.0001786
C) 0.0001867
D) 0.0001968

379. What is the area of a sector of a circle of radius 5 cm and its angle is 96 Degree?

A) 20.89 cm²
B) 20.39 cm²
C) 20.93 cm²
D) 20.98 cm²

380. What is the area of an ellipse if the major and minor axes are 5 cm and 3 cm respectively?

A) 37 cm²
B) 47 cm²
C) 57 cm²
D) 27 cm²

381. 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.100
B) Rs.112
C) Rs.110
D) Rs.102

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

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

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

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

384. What is the radius of a circle whose diameter is 44 cm?

A) 22 cm
B) 44 cm
C) 23 cm
D) 20 cm

385. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

A) 395 volts
B) 400 volts
C) 405 volts
D) 390 volts

386. What is the boiling point of aluminium?

A) 2469 Degree C
B) 660 Degree C
C) 1897 Degree C
D) 2519 Degree C

387. Which is the short form of profit and loss statement?

A) PRO & LOS
B) PR & LS
C) L & P
D) P & L

388. What is the value of 1 / a⁻⁵?

A) a⁵
B) a⁻⁵
C) 5a
D) (-5a)

389. What is the value of 'X' if x - y = 6 and x + y = 8?

A) 5
B) 14
C) 6
D) 7

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

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

391. Which one is heat insulator?

A) Aluminium
B) Copper
C) Thermocole
D) Brass

392. What is the matured amount for the deposit of Rs.5000/- and the simple interest earned for Rs.500/-?

A) Rs.4500
B) Rs.5500
C) Rs.6500
D) Rs.6000

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

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

394. What is the value for specific heat of water

A) 1
B) 4
C) 2
D) 3

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

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

396. What is the weight force of a car has a mass of 800 kg?(Take g = 9.81m/sec)

A) 7748 Newton
B) 7848 Newton
C) 7847 Newton
D) 7487 Newton

397. What is called if a force of 1Newton acts on a body and moves it through a distance of 1 metre?

A) 10 dynes
B) 10 Joules
C) 1 dyne
D) 1 Joule

398. What is the value of 14x+3y+25x+2y?

A) 44xy
B) 16x + 28y
C) 39x + 5y
D) 17x + 27y

399. What is the difference between the simple and the compound interest amount at 5% per annum for 2 years on a principal of Rs.20000/-?

A) Rs.5
B) Rs.50
C) Rs.55
D) Rs.25

400. What is the diameter of the circle, if the area of the circle is 706.5cm²?

A) 29 cm
B) 30.5 cm
C) 30 cm
D) 29.5 cm

401. What is the area of a circle of diameter 50 cm?

A) 1932.5 cm²
B) 1942.5 cm²
C) 1962.5 cm²
D) 1952.5 cm²

402. What is the volume of a rectangular tank of 30 m length, 20m width and 10m height?

A) 5900 m³
B) 6000 m³
C) 6100 m³
D) 6200 m³

403. Which one is non-metal?

A) Mercury
B) Graphite

C) Brass D) Iron

404. Which is same in series connection of resistors in a circuit?

A) Resistance B) Current
C) Voltage D) Power

405. What is the ratio of 4 kg to 800 grams?

A) 05:01 B) 02:04
C) 04:08 D) 08:04

406. What is the diagonal of a square plate whose side is 28 cm?

A) 39.49 cm B) 39.29 cm
C) 39.59 cm D) 39.39 cm

407. What is the value of 5x⁴ / 5x³ ?

A) x B) 5x²
C) 5x⁴/³ D) 5x

408. What is the power if an emf of one volt causes a current flow of 1ampere?

A) 1 HP B) 1 kilowatt
C) 1 Kilowatt hour D) 1 watt

409. 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

410. What is the force with which a body is attracted by the earth towards its centre?

A) Mass B) Density
C) Volume D) Weight

411. Which is thermosetting plastic?

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

412. What is a profit?

A) Selling price - Cost price B) Cost price - Selling price
C) Selling price + Cost price D) Cost price + Selling price

413. 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