

Duration: 30 Mins

Total Marks: 413

Q.ID: ITISKILL283892

1. Which is the example for dynamically induced Emf?

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

Answer: A) Generator

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

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

Answer: A) Linear expansion

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

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

Answer: B) 36

4. Which one is included in machining estimation sheet?

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

Answer: C) Raw material cost

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

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

Answer: C) Fusibility

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

- A) 3755 cm^2 B) 3740 cm^2
C) 3745 cm^2 D) 3750 cm^2

Answer: D) 3750 cm^2

7. 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.55 B) Rs.50
C) Rs.5 D) Rs.25

Answer: B) Rs.50

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

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

Answer: B) Diameter

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

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

Answer: A) Price catalogue

10. What is the value of $x^2 - y^2$ if $(x+y) = 9$, $(x - y) = 4$?

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

Answer: B) 36

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

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

Answer: D) 10 cm

12. 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. 2400
C) Rs. 2000 D) Rs. 1400

Answer: B) Rs. 2400

13. Convert 0.456 decimal fraction into percentage?

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

Answer: A) 45.6

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

- A) $\frac{(100)}{(100-\text{Loss } \%)} \times \text{S.P}$ B) $\frac{(100+\text{Profit } \%)}{(100)} \times \text{C.P}$
C) $\frac{(100-\text{Loss } \%)}{(100)} \times \text{C.P}$ D) $\frac{(100)}{(100+\text{Profit } \%)} \times \text{S.P}$

Answer: C) $\frac{(100-\text{Loss } \%)}{(100)} \times \text{C.P}$

15. What is the use of engineering drawing?

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

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

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

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

Answer: A) 154 cm²

17. 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) 32 km/hour B) 36 km/hour
C) 30 km/hour D) 34 km/hour

Answer: B) 36 km/hour

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

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

Answer: D) 'P'

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

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

Answer: B) Efficiency

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

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

Answer: C) Ultimate stress

21. Which is the formula for $\frac{a^m}{a^n}$?

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

Answer: A) a^{m-n}

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

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

Answer: C) Velocity ratio

23. What is denoted as 'I'?

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

Answer: A) Interest

24. Which type of levers is bell cranked lever?

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

Answer: C) Curved lever

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

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

Answer: C) Cupola

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

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

Answer: C) 1440 m²

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

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

Answer: A) 70 cm

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

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

Answer: B) Segment

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

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

Answer: B) -40 Degree C

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

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

Answer: A) 0.7

31. 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

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

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

- A) δl B) L
C) l D) e

Answer: A) δl

33. 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

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

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

Answer: C) Metre/second²

35. 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) 4 B) 5
C) 6 D) 3

Answer: B) 5

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

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

Answer: B) IE Rules, 1956

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

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

Answer: B) 20 m

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

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

Answer: B) Ductility

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

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

Answer: B) 1 watt

40. What is the formula for $a^m \times a^n$?

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

Answer: B) a^{m+n}

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

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

Answer: C) Stable

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

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

Answer: C) Radiation pyrometer

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

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

Answer: B) Resistance

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

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

Answer: A) Current

45. What is the resistance? $I = 11.5$ Amps $V = 380$ Volts $R =$ _____ Ohms

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

Answer: B) 33 ohms

46. What is the formula for velocity?

- A) Distance covered/Time B) Change of momentum/Time
C) Displacement/Time D) Change in velocity/Time

Answer: C) Displacement/Time

47. Which instrument is used to measure heat?

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

Answer: B) Calorie meter

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

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

Answer: C) 2.26 cm

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

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

Answer: D) 2.4

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

- A) 7848 Newton B) 7847 Newton

C) 7748 Newton D) 7487 Newton

Answer: A) 7848 Newton

51. Which process produce equilibrium conditions?

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

Answer: D) Annealing and Normalising

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

- A) 340 mm^2 B) 320 mm^2
C) 350 mm^2 D) 330 mm^2

Answer: D) 330 mm^2

53. Which one is non-metal?

- A) Brass B) Graphite
C) Iron D) Mercury

Answer: B) Graphite

54. 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) 80 kg B) 70 kg
C) 90 kg D) 100 kg

Answer: A) 80 kg

55. 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 perfectly matches the actual estimate D) When an estimate is exceeded to actual estimate

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

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

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

Answer: D) Body at motion

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

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

Answer: B) 746 watts

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

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

Answer: D) 300 Degree C

59. What is the product of 0.003×0.5 ?

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

Answer: D) 0.0015

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

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

Answer: C) 735.5 watts

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

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

Answer: A) Scalar quantity

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

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

Answer: D) Ultimate stress

63. What is the formula for kinetic energy?

- A) $(1/2) mv \text{ joule}$ B) $(2/3) mv^2 \text{ joule}$
C) $(1/2) mv^2 \text{ joule}$ D) $(2/3) mv \text{ joule}$

Answer: C) $(1/2) mv^2 \text{ joule}$

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

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

Answer: D) Co-efficient of linear expansion

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

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

Answer: B) 3

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

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

Answer: B) 10.4 cm

67. Simplify: $(17.49 \times 5.2) / (6.5)$

- A) 13.79 B) 13.69

original shape after the applied force is released?

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

Answer: A) Elasticity

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

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

Answer: C) 0.30 m/sec²

86. What is the value of $1/a^{-5}$?

- A) (-5a) B) 5a
C) a^5 D) a^{-5}

Answer: C) a^5

87. What is the value of $a^2 \times a^3 \times a^4$?

- A) a^7 B) a^9
C) a^{10} D) a^8

Answer: C) a^{10}

88. Which refers the temperature?

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

Answer: D) It tells the state of heat

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

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

Answer: C) 2.54 cm

90. Divide $(20/31)/(15/62)$

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

Answer: A) $2(2/3)$

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

- A) $((100+\text{Profit \%})/(100)) \times \text{C.P}$ B) $((100-\text{Loss \%})/(100)) \times \text{C.P}$
C) $((100)/(100+\text{Profit \%})) \times \text{S.P}$ D) $((100)/(100-\text{Loss \%})) \times \text{S.P}$

Answer: C) $((100)/(100+\text{Profit \%})) \times \text{S.P}$

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

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

Answer: B) 22 cm

93. 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

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

- A) 31 m^3 B) 41 m^3
C) 21 m^3 D) 11 m^3

Answer: C) 21 m^3

95. 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) 2.948 kg
C) 2.448 D) 2.648 kg

Answer: A) 2.848 kg

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

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

Answer: C) 5 minutes

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

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

Answer: D) At its centre

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

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

Answer: D) 22 cm

99. Which is the unit of resistance?

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

Answer: C) Ohm

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

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

Answer: D) 2.54 cm

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

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

Answer: C) Ohm's law

102. 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.225000/- B) Rs.275000/-
C) Rs.250000/- D) Rs.265000/-

Answer: B) Rs.275000/-

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

- A) 1952.5 cm^2 B) 1962.5 cm^2
C) 1932.5 cm^2 D) 1942.5 cm^2

Answer: B) 1962.5 cm^2

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

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

Answer: A) 3

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

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

Answer: C) Specific heat

106. 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) 1757 N
C) 1577 N D) 1571.4 N

Answer: D) 1571.4 N

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

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

Answer: A) 1.65 metre

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

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

Answer: D) Grey cast iron

109. 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) 125 kg/mm² B) 12500 kg/mm²
C) 12.5 kg/mm² D) 1.25 kg/mm²

Answer: B) 12500 kg/mm²

110. What is a total cost?

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

Answer: C) Raw materials cost and machining cost

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

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

Answer: C) 212 Degree F

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

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

Answer: A) 5.49 cm

113. Which insulator is used in over head lines?

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

Answer: B) Porcelain

114. What is the value of $\tan \theta$ if $\sin \theta = 4/5$?

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

Answer: B) (4/3)

115. 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) 3720 Joules B) 3730 Joules
C) 3750 Joules D) 3740 Joules

Answer: C) 3750 Joules

116. 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

117. Which among the following is an insulator?

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

Answer: C) Mica

118. Which is equal to $\sin \theta$?

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

Answer: A) Opposite Side/Hypotenuse

119. 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) 120 rpm
D) 140 rpm

Answer: A) 180 rpm

120. 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

Answer: A) Ductility

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

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

Answer: D) Pressure

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

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

Answer: B) Stable

123. Who prepares the cost of estimation?

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

Answer: B) Estimator

124. Which one of the following geometrical shape's centre of gravity lies from its base is $\frac{1}{3}$ of its height?

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

Answer: A) Triangle

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

- A) High carbon steel
B) Medium carbon steel
C) Stainless steel
D) Low carbon steel

Answer: A) High carbon steel

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

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

Answer: A) Rs.7490

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

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

Answer: C) 33.33

128. Which one is the most reliable estimate?

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

Answer: C) Detailed estimate

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

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

Answer: C) Rs.34347/-

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

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

Answer: B) Fulcrum

131. What is the improper fraction for the given mixed fraction ? $7 \frac{3}{7}$

- A) $\frac{7}{52}$
B) $\frac{28}{7}$
C) $\frac{7}{28}$
D) $\frac{52}{7}$

Answer: D) $\frac{52}{7}$

132. Which insulating material is used for making switches?

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

Answer: A) Bakelite

133. 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

Answer: B) Non-ferrous metals

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

- A) 3.14 cm^2
B) 314 cm^2
C) 30.4 cm^2
D) 31.4 cm^2

Answer: B) 314 cm^2

135. What is equal to $\tan \theta$?

- A) Opposite Side/Hypotenuse
B) Adjacent side/Opposite side

- C) Opposite Side/Adjacent Side D) Adjacent Side/Hypotenuse

Answer: C) Opposite Side/Adjacent Side

136. What is the current? $R = 50 \text{ Ohms}$ $V = 220 \text{ Volts}$
 $I = \underline{\hspace{1cm}}$ Amps

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

Answer: D) 4.4 Amps

137. What is the ore of aluminium?

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

Answer: D) Bauxite

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

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

Answer: C) Hand book

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

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

Answer: B) 273 Degree K

140. What are the various stages of heat treatment?

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

Answer: B) Heating, Soaking and Quenching

141. What is the formula to find Profit %?

- A) $\frac{(\text{Profit})}{(\text{S.P})} \times 100$ B) $\frac{(\text{S.P}-\text{C.P})}{(\text{Profit})} \times 100$
C) $\frac{(\text{C.P})}{(\text{Profit})} \times 100$ D) $\frac{(\text{Profit})}{(\text{C.P})} \times 100$

Answer: D) $\frac{(\text{Profit})}{(\text{C.P})} \times 100$

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

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

Answer: A) Melting point

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

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

Answer: D) 2.166

144. What is the voltage of the immersion heater? $P = 500 \text{ watts}$ $I = 2.27 \text{ Amps}$ $V = \underline{\hspace{1cm}}$ Volts

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

Answer: D) 220.3 volts

145. Which kind of heat transmission takes places by upward flow?

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

Answer: A) Convection

146. Simplify: $\frac{3}{4} + \frac{2}{5} - \frac{5}{20}$

- A) $\frac{12}{10}$ B) $\frac{3}{10}$
C) $\frac{9}{10}$ D) $\frac{13}{10}$

Answer: C) $\frac{9}{10}$

147. What is the unit of strain?

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

Answer: B) No unit

148. What is the value of x, if $x^2(120) = 960$?

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

Answer: D) 8

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

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

Answer: C) Estimation

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

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

Answer: C) Unstable

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

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

Answer: C) Rs. 500

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

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

Answer: C) 8 m/sec

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

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

Answer: B) 23.46

154. Which is example for first order lever?

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

Answer: D) A pair of scissors

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

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

Answer: D) $3r/8$

156. What is the formula for bulk modulus?

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

Answer: A) Volumetric stress/Volumetric strain

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

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

Answer: C) Rs.19000/-

158. Which order lever is claw hammer?

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

Answer: A) 1st order lever

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

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

Answer: C) Specific gravity

160. What is the power required? $I = 0.455$ Amps $R = 484$ Ohms $P =$ ____ Watts

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

Answer: D) 100.2 watts

161. Which is very good conductor?

- A) Cast iron B) Steel

- C) Copper D) Wrought iron

Answer: C) Copper

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

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

Answer: D) Body at rest

163. 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.15000/- D) Rs.17700/-

Answer: D) Rs.17700/-

164. What is the radius of the circle if the angle of sector is 90 Degree and the area of the circle is 196 cm^2 ?

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

Answer: D) 15.77 cm

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

- A) 5900 m^3 B) 6000 m^3
C) 6100 m^3 D) 6200 m^3

Answer: B) 6000 m^3

166. Which one is related to estimation of work?

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

Answer: D) Bill of material

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

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

Answer: A) Mild steel

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

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

Answer: A) Vector quantity

169. Which one is heat insulator?

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

Answer: A) Thermocole

170. 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

Answer: B) Specification of materials

171. 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

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

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

Answer: B) Austenite

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

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

Answer: A) Velocity

174. What is the formula to find Loss %?

- A) $(CP)/(Loss \times 100)$ B) $(Loss + 100)/(S.P)$
C) $(Loss \times 100)/(C.P)$ D) $(S.P)/(Loss + 100)$

Answer: C) $(Loss \times 100)/(C.P)$

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

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

Answer: C) $(3/5)$

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

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

Answer: D) 96.8 ohms

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

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

Answer: D) Selling Price

178. What is the diameter of the circle, if the area of the circle is 706.5 cm^2 ?

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

Answer: A) 30 cm

179. What is the subtracted value of $3x - 4x^2$ from $4y^2 - 2x +$

$8x^2$?

- A) $(-2y^2 - 5x + 12x^2)$ B) $2y^2 + 5x - 12x^2$
C) $2y^2 - 5x + 12x^2$ D) $2y^2 - 5x - 12x^2$

Answer: C) $2y^2 - 5x + 12x^2$

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

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

Answer: B) Energy

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

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

Answer: B) Hooks law

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

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

Answer: B) 0.50% to 1.50%

183. 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) 4 B) 1
C) 2 D) 3

Answer: D) 3

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

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

Answer: D) 1962 Joules

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

- A) 400.50 mm^2 B) 416.6 mm^2
C) 415.5 mm^2 D) 418.66 mm^2

Answer: D) 418.66 mm^2

186. Which is a kind of surface hardening process?

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

Answer: A) Nitriding

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

- A) Longer side of rectangle B) Shorter side of rectangle

- C) At the corners
D) At the point of intersection of its diagonals

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

188. What is the formula for $(a-b)^2$?

- A) $a^2 - 2ab + b^2$
B) $a^2 - 2ab - b^2$
C) $a^2 + 2ab + b^2$
D) $(-a)^2 - 2ab - b^2$

Answer: A) $a^2 - 2ab + b^2$

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

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

Answer: C) 669 Joules

190. Which force acts on rivets?

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

Answer: A) Shear force

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

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

Answer: A) Joule

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

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

Answer: B) 36

193. What is the volume (V) of mercury in cm^3 , if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm^3 ?

- A) 73.43 cm^3
C) 73.23 cm^3
B) 73.33 cm^3
D) 73.53 cm^3

Answer: D) 73.53 cm^3

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

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

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

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

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

Answer: B) Ductility

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

- A) 167.1 cm^2
C) 147.1 cm^2
B) 157.1 cm^2
D) 177.1 cm^2

Answer: B) 157.1 cm^2

197. 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) 65 kg
C) 70 kg
B) 80 kg
D) 75 kg

Answer: D) 75 kg

198. What is the formula for potential energy?

- A) $1/2 mgh$ joule
C) $2/3 mgh$ joule
B) mgh^2 joule
D) mgh joule

Answer: D) mgh joule

199. What is the unit of speed?

- A) Metre/second^2
C) Metre/second
B) Metre/hour
D) Metre/minute

Answer: C) Metre/second

200. Which metal cannot be forged?

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

Answer: A) Cast iron

201. Which law states about electromagnetic induction?

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

Answer: C) Faraday's law

202. Which alloy used in electric lamp as filament?

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

Answer: B) Tungsten

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

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

Answer: A) Triangle

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

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

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

205. What is the mass if the density of a body is 7.6 g/cm^3 and its volume is 25 cm^3 ?

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

Answer: A) 190 grams

206. 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 current year
C) Standard schedule of rates of the average of last 5 years D) Standard schedule of rates of the last year

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

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

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

Answer: C) Weight

208. What is the process of heat treatment?

- A) The process of heating and bending as per our requirement B) The process of cooling to measure the dimensions
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

209. What is the side of a square whose area is 625 mm^2 ?

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

Answer: C) 25 mm

210. 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) 10 metre/sec^2 B) 12 metre/sec^2
C) 8 metre/sec^2 D) 14 metre/sec^2

Answer: B) 12 metre/sec^2

211. What is equal to $\cos \theta$?

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

Answer: B) Adjacent Side/Hypotenuse

212. Which is brittle metal?

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

Answer: D) Cast iron

213. What is a profit?

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

Answer: A) Selling price - Cost price

214. What is the boiling point of mercury?

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

Answer: C) 357 Degree C

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

- A) 27 cm^2 B) 37 cm^2
C) 57 cm^2 D) 47 cm^2

Answer: D) 47 cm^2

216. Which is elastic material?

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

Answer: A) Nylon

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

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

Answer: B) $3r/8$

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

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

Answer: D) $I = V/R$

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

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

Answer: A) 6

220. What is the volume of mercury in cm^3 , if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm^3 ?

- A) 13.6 cm^3 B) 10.6 cm^3
C) 10.0 cm^3 D) 136 cm^3

Answer: C) 10.0 cm^3

221. 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) 0.0001687
C) 0.0001867 D) 0.0001786

Answer: D) 0.0001786

222. 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) 125.28 Joules B) 128.25 Joules
C) 128.26 Joules D) 126.28 Joules

Answer: B) 128.25 Joules

223. How many newtons for 1 kilogram?

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

Answer: B) 9.81 Newtons

224. What is the work done in unit time?

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

Answer: D) Power

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

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

Answer: D) Factor of safety

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

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

Answer: B) Co-efficient of superficial expansion

227. 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

Answer: B) 9.6 watts

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

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

Answer: D) 73.57 KJ

229. 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) 3
C) 8 D) 4

Answer: D) 4

230. What is the value of $(6^3) / ((-3)^3)$?

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

Answer: A) (-8)

231. What percentage of 80 is 20?

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

Answer: C) 0.25

232. 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) 4.13 m B) 4.23 m
C) 4.43 m D) 2.165 m

Answer: D) 2.165 m

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

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

Answer: B) At the centre

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

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

Answer: C) 40 cm

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

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

Answer: B) Silicon

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

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

Answer: A) Plasticity

237. 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) 17 m B) 16 m
C) 15 m D) 18 m

Answer: B) 16 m

238. Which is the example for statically induced emf?

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

Answer: A) Transformer

239. Which metal contains iron as a major content?

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

Answer: C) Ferrous metal

240. Which is thermo plastic material?

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

Answer: C) Vinyl polymers

241. What denotes letter M in MKS system?

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

Answer: B) Meter

242. 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) 0.1 B) 1.11
C) 0.01 D) 1.1

Answer: A) 0.1

243. 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

Answer: B) Centre of gravity

244. How much watt second in 1 watt hour?

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

Answer: A) 3600 watt sec

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

- A) 1960 cm^2 B) 1900 cm^2
C) 1962.5 cm^2 D) 1950 cm^2

Answer: C) 1962.5 cm^2

246. What is the value of $(a^5)^7$?

- A) a^{35} B) a^{22}
C) a^{12} D) a^2

Answer: A) a^{35}

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

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

Answer: C) 7

248. Which cast iron cannot be welded?

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

Answer: D) White cast iron

249. 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. 12 lakhs
C) Rs. 15 lakhs D) Rs. 20 lakhs

Answer: C) Rs. 15 lakhs

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

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

Answer: D) 625 Joules

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

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

Answer: C) 39.59 cm

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

- A) 856.82 cm^2 B) 866.82 cm^2
C) 876.82 cm^2 D) 886.82 cm^2

Answer: C) 876.82 cm^2

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

- A) 20.93 cm^2 B) 20.98 cm^2
C) 20.39 cm^2 D) 20.89 cm^2

Answer: A) 20.93 cm^2

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

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

Answer: A) 7

255. What is the value for specific heat of water

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

Answer: B) 1

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

- A) Specific heat B) British thermal unit

C) Centigrade heat unit D) Calorie

Answer: D) Calorie

257. How many ergs for 1 Joule?

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

Answer: C) 10^7 ergs

258. Which is the expansion of $a^3 + b^3$?

- A) $a^3 + b^3 + 3ab(a+b)$ B) $(a+b)(a^2 + b^2 - ab)$
C) $(a-b)(a^2 + b^2 - ab)$ D) $a^3 - b^3 + 3ab(a-b)$

Answer: B) $(a+b)(a^2 + b^2 - ab)$

259. How much strain is developed in an iron rod of 1 metre length gets elongated by 1 cm, if a force of 100 kg is applied at one end?

- A) 0.1 B) 0.01
C) 0.001 D) 0.0001

Answer: B) 0.01

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

- A) $2\pi rh$ B) $2\pi r(h+r)$
C) $\pi r(h+r)$ D) πrh

Answer: B) $2\pi r(h+r)$

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

- A) 100 kg/mm^2 B) 1 kg/mm^2
C) 10 kg/mm^2 D) 1000 kg/mm^2

Answer: C) 10 kg/mm^2

262. What does EMF stands for?

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

Answer: A) Electro Motive Force

263. 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) 60 Degree B) 30 Degree
C) 90 Degree D) 45 Degree

Answer: D) 45 Degree

264. Which is equal to electric power?

- A) IR B) R^2I watts
C) RI D) I^2R watts

Answer: D) I^2R watts

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

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

Answer: B) Number / Degree C

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

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

Answer: D) Rs.10000/-

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

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

Answer: B) wb/m

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

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

Answer: B) 88 sq.metre

269. What is a under estimate?

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

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

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

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

Answer: D) n

271. What is the unit for velocity?

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

Answer: B) Metre/second

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

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

Answer: A) 1847 c.c

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

- A) Silicon B) Manganese

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

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

Answer: B) 7.85 cm

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

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

Answer: B) The heat from sun travels through the space

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

- A) 630 cm^2 B) 638 cm^2
C) 620 cm^2 D) 628 cm^2

Answer: D) 628 cm^2

293. What is the melting point of aluminium?

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

Answer: B) 660 Degree C

294. 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) 640 W B) 340 W
C) 540 W D) 440 W

Answer: C) 540 W

295. Which hand book referred by machine engineer?

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

Answer: B) Mark standard

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

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

Answer: B) $h/4$

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

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

Answer: A) Rs.10123.20

298. What is the melting point of mercury?

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

Answer: A) -38.72 Degree C

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

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

Answer: B) 4

300. 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

Answer: B) Brown

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

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

Answer: A) 8.55 cm

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

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

Answer: A) 13,14,15

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

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

Answer: C) 75 kg.m/sec

304. How many millimetres are there in 1 inch?

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

Answer: D) 25.4 mm

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

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

Answer: B) 0 Degree K

306. What is the relative permittivity of rubber?

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

Answer: B) Between 2 and 3

307. What is the square root of 529?

- A) 23 B) 43

325. Which affects the centre of gravity of the object

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

Answer: A) Mass

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

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

Answer: B) Modulus of rigidity

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

- A) 70 cm^2
B) 75.06 cm^2
C) 76.93 cm^2
D) 86.93 cm^2

Answer: C) 76.93 cm^2

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

- A) $\frac{4}{3} \pi (R^2 - r^2)h$
B) $\frac{\pi}{3} (R^2 - r^2)h$
C) $\pi (R^2 - r^2)h$
D) $\frac{2}{3} \pi (R^2 - r^2)h$

Answer: C) $\pi (R^2 - r^2)h$

329. What is the density of aluminium?

- A) 4.7 g/cm^3
B) 5.7 g/cm^3
C) 3.7 g/cm^3
D) 2.7 g/cm^3

Answer: D) 2.7 g/cm^3

330. Which is expanded form of $a^3 - b^3$?

- A) $(a-b)(a^2 + b^2 + ab)$
B) $(a+b)(a^2 + b^2 - ab)$
C) $(a-b)(a^2 - b^2 - ab)$
D) $(a-b)(a^2 + b^2 + ab)$

Answer: D) $(a-b)(a^2 + b^2 + ab)$

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

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

Answer: D) Di-electric strength

332. What is discount?

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

Answer: D) The reduction given to the selling price of a product

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

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

Answer: D) 76 cm

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

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

Answer: D) Sensible heat

335. 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) 6
C) 10
D) 25

Answer: B) 6

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

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

Answer: A) Unstable

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

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

Answer: A) 113 Degree F

338. How many degrees is equal to one radian?

- A) $(\pi)/(180)$
B) $(180)/(\pi)$
C) $(360)/(\pi)$
D) $(\pi)/(360)$

Answer: B) $(180)/(\pi)$

339. Convert decimal 0.000659 to fraction?

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

Answer: D) $(659/1000000)$

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

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

Answer: C) 24 days

341. What is the SI unit of pressure?

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

Answer: C) Pascal

342. How much quantity of heat is required? $m = 120$ litres $t_1 = 20$ Degree C $t_2 = 85$ Degree C $S = 4.2$ $Q = \text{ ____ KJ}$

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

Answer: C) 32760 KJ

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

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

Answer: D) At its centre

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

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

Answer: D) 1

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

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

Answer: D) Hardening

346. What is the value of $625^{0/3}$?

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

Answer: C) 1

347. Which one is the ratio of stress?

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

Answer: A) Load and area

348. What is the value of $a^2 + b^2$ if $a+b=9$ and $ab = 20$?

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

Answer: A) 41

349. What is the current Flow in the bulb? $P = 550$ watts $R = 22$ Ohms $I = \text{ ____ Amps}$

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

Answer: D) 5 Amps

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

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

Answer: C) Mass

351. What is the x value for $x^2 + 62 = 126$?

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

Answer: D) 8

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

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

Answer: C) Blast furnace

353. 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) 1620 B) 1060
C) 1260 D) 1160

Answer: C) 1260

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

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

Answer: B) Cu 94%

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

- A) 1636 cm^3 B) 1346 cm^3
C) 1463 cm^3 D) 1436 cm^3

Answer: D) 1436 cm^3

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

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

Answer: A) Current

357. What is the diameter of the circle, if the area of the circle is 78.5 cm^2 ?

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

Answer: C) 10 cm

358. 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) 1750 gram D) 1875 gram

Answer: D) 1875 gram

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

- A) Less than 8% B) Less than 20%

C) Less than 5%

D) Less than 10%

Answer: C) Less than 5%

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

A) Dictionary

B) Biography

C) Information Table

D) Bibliography

Answer: C) Information Table

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

A) Specific gravity

B) Density

C) Volume

D) Mass

Answer: D) Mass

362. What is the boiling point of aluminium?

A) 1897 Degree C

B) 2469 Degree C

C) 660 Degree C

D) 2519 Degree C

Answer: D) 2519 Degree C

363. What is the voltage? $R = 250 \text{ Ohms}$ $I = 0.44 \text{ Amps}$ $V = \text{___Volts}$

A) 110 Volts

B) 108 Volts

C) 105 Volts

D) 100 Volts

Answer: A) 110 Volts

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

A) 11 ohms

B) 7 ohm

C) 1/17 ohms

D) 17 ohms

Answer: D) 17 ohms

365. Which is equal to $(a^m)^n$?

A) a^{m-n}

B) a^{m+n}

C) $a^{m/n}$

D) a^{mn}

Answer: D) a^{mn}

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

A) 109 pascal

B) 103 pascal

C) 107 pascal

D) 105 pascal

Answer: D) 105 pascal

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

A) Effort

B) Power arm

C) Effort arm

D) Load arm

Answer: D) Load arm

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

A) 1.5 sq.mm

B) 3.5 sq.mm

C) 2.5 sq.mm

D) 5 sq.mm

Answer: A) 1.5 sq.mm

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

A) Rs 200

B) Rs 240

C) Rs 220

D) Rs 260

Answer: B) Rs 240

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

A) At the diameter

B) On the circumference

C) At the centre

D) At the radius

Answer: C) At the centre

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

A) Manganese steel

B) Vanadium steel

C) Cobalt steel

D) Silicon steel

Answer: C) Cobalt steel

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

A) Silicon steel

B) Manganese steel

C) Invar steel

D) Vanadium

Answer: C) Invar steel

373. How many hours will take for a 100 watts bulb to consume 1 kwh energy? $W = 1 \text{ Kwh}$ $P = 100 \text{ Watts}$ $t = \text{___Hours}$

A) 18 hours

B) 24 hours

C) 10 hours

D) 12 hours

Answer: C) 10 hours

374. What is the value of $5x^4 / 5x^3$?

A)

$5x^4 / 5x^3$

B) $5x^2$

C) x

D) 5x

Answer: C) x

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

A) Stress

B) Factor of safety

C) Poisson's ratio

D) Strain

Answer: D) Strain

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

A) 02:04

B) 05:01

C) 08:04

D) 04:08

Answer: B) 05:01

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

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

Answer: A) 25 sq.cm

378. Which is example for second order lever?

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

Answer: D) Bottle opener

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

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

Answer: B) Rs.5000

380. What cables are used for 132KV lines?

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

Answer: D) Extra super voltage

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

- A) 614.5 cm^2 B) 612.25 cm^2
C) 612.44 cm^2 D) 615.44 cm^2

Answer: D) 615.44 cm^2

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

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

Answer: B) Cost price

383. What are fundamental units?

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

Answer: B) Length, Mass, Time

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

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

Answer: A) 0.25% to 0.5%

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

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

Answer: A) Linear strain

386. What is the length of each part is a copper wire of 225 metre long is cut into 900 equal parts?

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

Answer: C) 0.25 metre

387. Which authority publishes schedule of rates?

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

Answer: B) Government department

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

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

Answer: A) Conduction

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

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

Answer: A) 400 volts

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

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

Answer: A) 300%

391. Which is example for third order lever?

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

Answer: B) Forceps

392. How the profit / gain is expressed?

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

Answer: C) %

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

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

Answer: C) Quantity, availability and transportation of materials

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

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

Answer: B) Centre of gravity

395. Convert 52% into fraction?

- A) (17/25) B) (11/25)

C) (13/25)

D) (9/25)

Answer: C) (13/25)

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

A) Rs.2600

B) Rs.4600

C) Rs.5600

D) Rs.3600

Answer: D) Rs.3600

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

A) PRO & LOS

B) PR & LS

C) P & L

D) L & P

Answer: C) P & L

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

A) 36 cm^2

B) 26 cm^2

C) 324 cm^2

D) 72 cm^2

Answer: C) 324 cm^2

399. 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.96800/

C) Rs.16800/-

D) Rs.92400/-

Answer: C) Rs.16800/-

400. How much is 8% of 40 kg?

A) 5.2 kg

B) 3.2 kg

C) 4.2 kg

D) 2.2 kg

Answer: B) 3.2 kg

401. Which force acts on crank shaft?

A) Torsional stress

B) Tensile stress

C) Shear stress

D) Compressive stress

Answer: A) Torsional stress

402. Which one has the highest thermal conductivity?

A) Melting ice

B) Water

C) Solid ice

D) Steam

Answer: C) Solid ice

403. What is the value of $x^3 + 3y^2x^2$ if $x=3$, $y=2$?

A) 81

B) 54

C) 63

D) 135

Answer: D) 135

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

A) 78 mm

B) 88 mm

C) 98 mm

D) 68 mm

Answer: B) 88 mm

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

A) 100 sq.mm

B) 5 sq.mm

C) 50 sq.mm

D) 25 sq.mm

Answer: C) 50 sq.mm

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

A) Rs.6500

B) Rs.5500

C) Rs.6000

D) Rs.4500

Answer: B) Rs.5500

407. Which is thermosetting plastic?

A) Polystyrenes

B) Melamine resins

C) Vinyl polymers

D) Celluloid

Answer: B) Melamine resins

408. Which is the unit of current?

A) Watt

B) Ampere

C) Ohm

D) Volt

Answer: B) Ampere

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

A) Rs.22500

B) Rs.22000

C) Rs.25000

D) Rs.22050

Answer: D) Rs.22050

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

A) 7.2 g/cm^3

B) 7.5 g/cm^3

C) 6.6 g/cm^3

D) 6.9 g/cm^3

Answer: B) 7.5 g/cm^3

411. What is the expansion of $(a+b+c)^2$?

A) $a^2 +$

B) $a^2 -$

$b^2 +$

$b^2 -$

$c^2 - 2ab + 2bc$

$c^2 + 2ab +$

$+ 2ca$

$2bc + 2ca$

C) $a^2 +$

D) $a^2 +$

$b^2 +$

$b^2 +$

$c^2 + 2(ab + bc$

$c^2 + 2ab - 2bc$

$+ ca)$

$+ 2ca$

Answer: C) $a^2 + b^2 + c^2 + 2(ab + bc + ca)$

412. 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) 7 grams

C) 8 grams

D) 9 grams

Answer: A) 6 grams

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

A) -6.57 Degree C

B) -6.37 Degree C

C) -6.47 Degree C

D) -6.67 Degree C

Answer: D) -6.67 Degree C
