SECTION - I
ENGLISH

1. The process of transferring files from the Internet to your computer is called :
   (A) Downloading   (B) Uploading   (C) FTP   (D) JPEG

2. A tiny piggy bank contains, ₹ 1, 50 paise and 25 paise coins in the ratio 1 : 2 : 3. If their total value is ₹ 154, then what is number of 25 paise coins ?
   (A) 168   (B) 112   (C) 56   (D) 156

3. The banana is the good source of which vitamin ?
   (A) A   (B) C   (C) D   (D) B

4. Which is the only country crossed by a tropic circle/line and the equator ?
   (A) Brazil   (B) Congo   (C) Indonesia   (D) Australia

5. Which of the following countries became the first to have made a space craft enter the orbit of Mars in the first attempt itself ?
   (A) USA   (B) UK   (C) Germany   (D) India

6. The Common Emitter Amplifier is characterized by :
   (A) low voltage gain
   (B) moderate power gain
   (C) signal phase reversal
   (D) very high output impedance

7. In a mixture of 60 litres, the ratio of milk and water is 2 : 1. If this ratio is to be 1 : 2, then the quantity of water to be further added is :
   (A) 20 litres   (B) 30 litres   (C) 40 litres   (D) 60 litres

8. A d.c. shunt motor is found suitable to drive fans because they require :
   (A) small torque at start up
   (B) large torque at high speeds
   (C) practically constant voltage
   (D) small torque at start up as well as practically constant voltage

9. Who was appointed as the Chief Justice of India on 28th September, 2014 ?
   (A) Justice Hardayal Singh Randhawa
   (B) Justice Oberoi
   (C) Justice Durga Banerjee
   (D) Justice Handyala Lakshminarayanaswamy Dattu

10. The ratio of the number of boys and girls in a college is 7 : 8. If the percentage increase in the number of boys and girls be 20% and 10% respectively, what will be the new ratio ?
(A) 8 : 9   (B) 17 : 18
(C) 21 : 22   (D) Cannot be determined

11. Corona (discharge/sparking) takes place between two power transmission wires when they :
(A) are closely spaced   (B) are widely spaced
(C) have high potential difference (D) carry only d.c. power

12. The basic reason why a full-wave rectifier has twice the efficiency of a half-wave rectifier is, that :
(A) it makes use of a transformer
(B) its ripple factor is much less
(C) it utilizes both half-cycles of the input
(D) its frequency output is double the line frequency

13. A man rows to a place 48 km distant and comes back in 14 hours. He finds that he can row 4 km with the stream in the same time as 3 km against the stream. The rate of the stream is :
(A) 1 kmph   (B) 1.5 kmph   (C) 2 kmph   (D) 2.5 kmph

14. Biological Oxygen Demand (BOD) in a river water :
(A) remains unchanged when algal bloom occurs
(B) has no relationship with concentration of oxygen in water
(C) gives a measure of Salmonella in the water
(D) increases when sewage gets mixed with river water

15. Port Blair is situated in :
(A) North Andaman   (B) South Andaman
(C) Middle Andaman   (D) Little Andaman

16. Which one of the following is responsible for converting milk into curd ?
(A) Virus   (B) Insects   (C) Fungi   (D) Bacteria

17. The only drawback of using negative feedback in amplifiers is that it involves :
(A) gain sacrifice   (B) gain stability
(C) temperature sensitivity   (D) frequency dependence

18. Vendor-created program modifications are called :
(A) Patches   (B) Fixes   (C) Holes   (D) Overlaps

19. The hill station Halflong is in which Indian state ?
(A) Sikkim   (B) Himachal Pradesh
(C) Uttaranchal   (D) Assam

20. Which of the following is a storage device that uses rigid, permanently installed magnetic disks to store data/information ?
    (A) Floppy diskette   (B) Hard disk   (C) Permanent disk   (D) None of these

21. What is the address given to a computer connected to a network, called ?
    (A) System Address   (B) SYSID
    (C) Process ID   (D) IP Address

22. A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long ?
    (A) 40 sec   (B) 42 sec   (C) 45 sec   (D) 48 sec

23. Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes the slower train in 36 seconds. The length of each train is :
    (A) 50 m   (B) 72 m   (C) 80 m   (D) 82 m

24. Sakshi can do a piece of work in 20 days. Tanya is 25% more efficient than Sakshi. The number of days taken by Tanya to do the same piece of work is :
    (A) 15   (B) 16   (C) 18   (D) 25

25. Who was sworn in as the Governor of Kerala in September 2014 ?
    (A) P. Sathasivam   (B) K. Narayanan
    (C) V. Namboodaripad   (D) Mohanan Kutty

26. Find the missing term : ADVENTURE, DVENTURE, DVENTUR, _____ , VENTU
    (A) DVENT   (B) VENTURE   (C) VENTUR   (D) DVENTU

27. The emitter of a transistor is generally doped the heaviest because it :
    (A) has to dissipate maximum power
    (B) has to supply the majority charge carriers to the base
    (C) is the first region of the transistor
    (D) must possess low resistance

28. The sole purpose of a commutator in a d.c. generator is to :
    (A) increase output voltage   (B) reduce sparking at the brushes
    (C) provide smoother output   (D) convert the induced a.c. into d.c.

29. $\sqrt{\left(\dfrac{0.49}{0.25}\right)} + \sqrt{\left(\dfrac{0.81}{0.36}\right)} = ?$

    (A) $\dfrac{9}{10}$ (B) $2\dfrac{9}{10}$ (C) $7\dfrac{9}{10}$ (D) $9\dfrac{9}{10}$

30. The Sun shines vertically on the Equator :
    (A) Four times a year   (B) Once a year
    (C) Throughout the year   (D) Twice a year

31. The hottest planet in our solar system is :
    (A) Venus   (B) Earth   (C) Mars   (D) Moon

32. Normal human blood is :
    (A) neutral   (B) slightly acidic
    (C) variable in its acidity or alkalinity (D) slightly alkaline

33. Find the next three numbers in the series : 3, 4, 9, 10, 15, ___ , ___ , ___ .
    (A) 16, 21, 22   (B) 16, 22, 23   (C) 16, 23, 24   (D) None of these

34. In plants, water is absorbed by the root hairs, by a process called :
    (A) Respiration   (B) Transpiration   (C) Osmosis   (D) Perspiration

35. Find the missing letter : A, D, H, M, __?__, Z
    (A) T   (B) G   (C) N   (D) S

36. Which of the following temperature measuring instruments need not touch the object whose temperature is being measured ?
    (A) Radiation/Infrared pyrometer   (B) Filled system thermometer
    (C) Mercury in glass thermometer   (D) Thermo-electric pyrometer

37. Two sinusoidal currents are given by the equations: $i_1 = 10 \sin(\omega t + [\pi/3])$ and $i_2 = 15 \sin(\omega t - [\pi/4])$. What is the phase difference between them in degrees ?
    (A) 105   (B) 75   (C) 15   (D) 60

38. _____ is the process of finding errors in software code.
    (A) Compiling   (B) Assembling   (C) Interpreting   (D) Debugging

39. Insects that can transmit diseases to humans are referred to as :
    (A) Vectors   (B) Carriers   (C) Reservoirs   (D) Incubators

40. Khyber Pass connects Pakistan with :
    (A) India   (B) Afghanistan   (C) Iran   (D) Uzbekistan

41. The coaxial cylinder viscometer makes use of which of the following laws ?
    (A) Newton's law of viscosity   (B) Hagen-Poiseuille equation
    (C) Stoke's law   (D) None of these

42. The most efficient form of damping employed in electrical instruments, is :
   (A) air friction   (B) fluid friction   (C) eddy currents   (D) none of these

43. The electron beam welding can be carried out in :
   (A) open air   (B) a shielded gas environment
   (C) vacuum   (D) none of these

44. An electronic oscillator is :
   (A) just like an alternator   (B) nothing but an amplifier
   (C) an amplifier with feedback   (D) a converter of a.c. to d.c. energy

45. Which of the following meters/instruments is suitable for measuring only direct current ?
   (A) moving-iron type   (B) permanent-magnet type
   (C) electrodynamic type   (D) hot-wire type

46. Which of the following is **not** a basic element of a transformer ?
   (A) core   (B) primary winding
   (C) secondary winding   (D) mutual flux

47. What is the angle between two vectors, if their sum is to be maximum ?
   (A) 90°   (B) 45°   (C) 0°   (D) 180°

48. The maximum stress produced in a bar of tapering section is at :
   (A) smaller end   (B) larger end   (C) middle   (D) anywhere

49. Junction breakdown occurs :
   (A) under high temperature conditions
   (B) with forward bias
   (C) under reverse bias
   (D) because of manufacturing defect

50. The difference of $1\dfrac{3}{16}$ and its reciprocal is :

   (A) $1\dfrac{1}{8}$ (B) $1\dfrac{1}{3}$ (C) $\dfrac{15}{16}$ (D) $\dfrac{105}{304}$

51. Which part of the potato plant do we eat ?
   (A) Root   (B) Seed   (C) Flower   (D) Stem

52. Alcohol contains :
   (A) nitrogen, hydrogen, oxygen   (B) carbon, hydrogen, oxygen
   (C) oxygen, carbon, nitrogen   (D) hydrogen, chlorine, oxygen

53. Which of the following is **not** a renewable energy of natural resources ?
    (A) Tidal energy   (B) Wind energy   (C) Fossil fuels   (D) Solar energy

54. Bricks used for lining furnaces are :
    (A) under burnt bricks   (B) over burnt bricks
    (C) refractory bricks   (D) all of these

55. IC chips used in computers are usually made of :
    (A) Lead   (B) Silicon   (C) Chromium   (D) Gold

56. Find the missing numbers in the series : 1, 3, 6, 8, 16, 18, ___, ___, 76, 78.
    (A) 26, 67   (B) 36, 38   (C) 32, 45   (D) 52, 104

57. Find the next two numbers in the series : 1, 2, 4, 7, 11, 16, ___ , ___.
    (A) 21, 24   (B) 22, 29   (C) 31, 39   (D) 32, 39

58. A bullet of mass A and velocity B is fired into a block of wood of mass C. If loss of any mass and friction be neglected, what is the end velocity of the system ?
    (A) $\dfrac{(AB)}{(A + C)}$ (B) $\dfrac{(AC)}{(B + C)}$ (C) $\dfrac{(A + C)}{(BC)}$ (D) $\dfrac{(A + B)}{AC}$

59. A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is :
    (A) 2 : 1   (B) 3 : 1   (C) 3 : 2   (D) 4 : 3

60. Find the missing number in the blank in the series :
    1, 4, 9 , 16, 25, ___, 49, 64.
    (A) 21   (B) 31   (C) 26   (D) 36

61. The computer code for interchange of information between terminals is :
    (A) ASCII   (B) BCD   (C) BCDIC   (D) Hollerith

62. An area legally reserved for wild life in its natural surroundings is a :
    (A) Social Forest   (B) Biosphere Reserve
    (C) National Park   (D) Sanctuary

63. Global agreement in specific control strategies to reduce the release of ozone depleting substances was adopted by :
    (A) Rio de Janeiro Conference   (B) Montreal Protocol
    (C) Kyoto Protocol   (D) Vienna Convention

64. A flow, for which the resistance to shearing deformation is zero, is :
    (A) laminar flow
    (B) turbulent flow
    (C) supersonic flow
    (D) ideal flow

65. In amplitude modulation :
    (A) carrier frequency is changed
    (B) carrier amplitude is changed
    (C) three sidebands are produced
    (D) fidelity is improved

66. Who won the Men's singles Tennis Championship at the 2014 US Open ?
    (A) John Wayne
    (B) Roger Federer
    (C) Marin Cilic
    (D) Wilfried Tsonga

67. Which of the following may be treated as a "rotating transformer" ?
    (A) d.c. series motor
    (B) d.c. shunt motor
    (C) induction motor
    (D) none of these

68. Which of the following sequences is different from the rest ?
    (A) 1, 1, 2, 3, 5, 8, 13, ...
    (B) 0, 2, 2, 4, 6, 10, 16, ...
    (C) 1, 3, 4, 7, 11, 18, 29, ...
    (D) 1, 2, 3, 6, 11, 20, 37, ...

69. What comes next : GH, JL, NQ, SW, YD, ___?___
    (A) EJ
    (B) FJ
    (C) EL
    (D) FL

70. Which of the following drawings represents the details of the machine in pictorial forms as it is assembled ?
    (A) Production drawing
    (B) Exploded assembly drawing
    (C) Schematic assembly drawing
    (D) None of these

71. A vertical column has two moments of inertia (i.e. I_{xx} and I_{yy}). The column will tend to buckle in the direction of the :
    (A) axis of load
    (B) perpendicular to the axis of load
    (C) maximum moment of inertia
    (D) minimum moment of inertia

72. A charge q_1, exerts some force on a second charge q_2. Now, if a third charge q_3 is brought near, then the force exerted by q_1 on q_2 :
    (A) will increase in magnitude
    (B) will decrease in magnitude
    (C) will remain unaffected
    (D) will increase if q_3 is of the same sign as q_1 and will decrease if q_3 is of opposite charge to q_1

73. Which of the following produces highest amount of energy upon oxidation ?
    (A) Glucose
    (B) Fat
    (C) an Alkane
    (D) Protein

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AB

74. The main job of a voltage regulator is to provide a nearly _____ output voltage.
   (A) sinusoidal   (B) constant   (C) smooth   (D) fluctuating

75. The largest producer of Coffee in India is :
   (A) Kerala   (B) Tamil Nadu
   (C) Karnataka   (D) Unified Andhra Pradesh

76. International Date Line Passes through :
   (A) 0° Greenwich   (B) 180° Greenwich
   (C) 90° Greenwich   (D) 270° Greenwich

77. Three equal glasses are filled with mixtures of milk and water. The proportion of milk and water in each glass is as follows : In the first glass 3 : 1, in the second glass 5 : 3 and in the third glass 9 : 7. The contents of the three glasses are emptied into a single vessel. What is the proportion of milk and water in it ?
   (A) 21 : 17   (B) 17 : 21   (C) 31 : 17   (D) 17 : 31

78. The rock having calcium carbonate as main mineral constituent, is called :
   (A) calcareous rock   (B) argillaceous rock
   (C) siliceous rock   (D) sandy rock

79. The useful part of livable area of a building is also known as :
   (A) Carpet area   (B) Circulation area
   (C) Horizontal circulation area   (D) Plinth area

80. A train can travel 50% faster than a car. Both start from point A at the same time and reach point B, 75 km away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is :
   (A) 100 kmph   (B) 110 kmph   (C) 120 kmph   (D) 130 kmph

81. Where were the 2014 Asian Games also known as the XVII Asiad held ?
   (A) Sochi, Russia   (B) Banzai, Chile
   (C) Copernicus, Argentina   (D) Incheon, South Korea

82. In an ideal transformer :
   (A) windings have no resistance   (B) core has no losses
   (C) core has infinite permeability   (D) all of these

83. Principal plane is a plane on which the shear stress is :
   (A) zero   (B) minimum   (C) maximum   (D) none of these

84. High levels of uric acid in the blood is characteristic of :
   (A) Arthritis   (B) Gout
   (C) Rheumatism   (D) Rheumatic heart

85. What comes next : AZ, CX, FU, __?__
    (A) IR   (B) IV   (C) JQ   (D) KP

86. Eutrophication results in reduction of :
    (A) mineral salts   (B) dissolved oxygen
    (C) parasitic protozoa   (D) dissolved nitrate

87. Glass is attacked by which of the following ?
    (A) hydrogen chloride   (B) hydrogen bromide
    (C) hydrogen iodide   (D) hydrogen fluoride

88. Who was the first Indian women to swim across the English Channel ?
    (A) Nafisa Ali   (B) Arati Saha
    (C) Bula Choudhury   (D) J. Sikder

89. The desirable property of a refrigerant is :
    (A) low boiling point   (B) high critical temperature
    (C) high latent heat of vaporization   (D) all of these

90. The velocity at which the flow changes from laminar to turbulent for the case of a given liquid at a given temperature and in a given pipe, is known as :
    (A) Turbulence velocity   (B) Critical velocity
    (C) Reynolds velocity   (D) Froude velocity

91. Increase in atmospheric temperature due to carbon dioxide, is called :
    (A) Pasteur effect   (B) Greenhouse effect
    (C) Blackman effect   (D) Emerson effect

92. In a steady flow process, the value of :
    (A) heat transfer is constant
    (B) work transfer is constant
    (C) mass flow at inlet and outlet is same
    (D) all of these

93. The Representative Fraction used in the case of drawings of buildings is always :
    (A) equal to 1   (B) less than 1   (C) greater than 1   (D) none of these

94. Multi-stage centrifugal pumps are used to :
    (A) give high discharge   (B) produce high heads
    (C) pump viscous fluids   (D) all of these

95. For a silicon diode, the value of the forward bias voltage typically :
    (A) must be greater than 0.3 V
    (B) must be greater than 0.7 V
    (C) depends on the width of the depletion region
    (D) depends on the concentration of the majority carriers

96. The sum of internal energy (U) and the product of pressure and volume (p.v) is known as :
    (A) work done   (B) entropy   (C) enthalpy   (D) none of these

97. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more in the same time. The usual distance travelled by him is :
    (A) 50 km   (B) 56 km   (C) 70 km   (D) 80 km

98. A pixel is :
    (A) A computer program that draws picture
    (B) A picture stored in secondary memory
    (C) The smallest resolvable part of a picture
    (D) None of these

99. The property of sand due to which it evolves a great amount of steam and other gases is called :
    (A) collapsibility   (B) permeability   (C) cohesiveness   (D) adhesiveness

100. "Under the same conditions of temperature and pressure, equal volumes of all gases contain the same number of molecules". This law was propounded by :
    (A) Gay-Lussac
    (B) Isaac Newton
    (C) Amadeo Avogadro
    (D) Kelvin

101. Normally which animal's skin gives us Morocco leather ?
    (A) Cow   (B) Camel   (C) Goat   (D) Pig

102. The hyperbolic process is governed by :
    (A) Boyle's law
    (B) Charles' law
    (C) Gay-Lussac law
    (D) Avogadro's law

103. Which of the following is a zinc diffusion process ?
    (A) zincation   (B) anoding   (C) parkerising   (D) sherardizing

104. In what ratio must a grocer mix two varieties of tea worth ₹ 60 a kg and ₹ 65 a kg so that by selling the mixture at ₹ 68.20 a kg he may gain 10% ?
    (A) 3 : 2   (B) 3 : 4   (C) 3 : 5   (D) 4 : 5

105. Dead organs are generally stored in formalin. Formalin is :
    (A) aqueous formaldehyde   (B) aqueous ferrous sulphate
    (C) aqueous formic acid   (D) aqueous ferric alum

106. The expression $(11.98 \times 11.98 + 11.98 \times a + 0.02 \times 0.02)$ will be a perfect square for 'a' equal to :
    (A) 0.02   (B) 0.2   (C) 0.04   (D) 0.4

107. The atomic mass of an element indicates :

    (A) the number of times one atom of the element is heavier than $\frac{1}{12}^{th}$ of the C^{12} isotope.

    (B) the volume of the atom.

    (C) the number of times one atom of the element is heavier than $\frac{1}{16}^{th}$ of the O^{18} isotope.

    (D) none of these

108. Which one is an organic acid ?
    (A) Citric   (B) Sulphuric   (C) Nitric   (D) Phosphoric

109. Find the missing term : AYD, BVF, DRH, ___, KGL
    (A) FMI   (B) GMJ   (C) GLJ   (D) HLK

110. Humidity is most commonly measured by :
    (A) partial vapour pressure determination
    (B) dry and wet bulb temperature measurement
    (C) physical expansion
    (D) evaporation

111. In a centrifugal casting method :
    (A) core is made of sand   (B) core is made of ferrous metal
    (C) core is made of nonferrous metal (D) no core is used

112. Reinforced concrete is advantageous because of its :
    (A) fire resistance and durability   (B) less maintenance cost
    (C) monolithic character   (D) all of these

113. If the length of a simple pendulum is increased, then its time period will :
    (A) increase   (B) decrease
    (C) go on changing   (D) remain the same

114. A, B and C can complete a piece of work in 24, 6 and 12 days respectively. Working together, they will complete the same work in :

    (A) $\dfrac{1}{24}$ day   (B) $\dfrac{7}{24}$ day   (C) $3\dfrac{3}{7}$ days   (D) 4 days

115. In negative logic, the logic state 1 corresponds to :

    (A) negative voltage   (B) zero voltage
    (C) more negative voltage   (D) lower voltage

116. Which of the following is a cycle consisting of one constant pressure, one constant volume and two isentropic processes ?

    (A) Carnot cycle   (B) Stirling cycle   (C) Otto cycle   (D) Diesel cycle

117. If $20.4 \times a = 12.24$, then $a = ?$

    (A) 0.6   (B) 0.06   (C) 6.60   (D) 0.66

118. If $\left(\dfrac{a}{b}\right)^{(x-1)} = \left(\dfrac{b}{a}\right)^{(x-3)}$, then the value of 'x' is :

    (A) $\dfrac{1}{2}$ (B) 1   (C) 2   (D) $\dfrac{7}{2}$

119. The Halley's Comet will most probably be visible again in the year :

    (A) 2066 A.D.   (B) 2064 A.D.   (C) 2062 A.D.   (D) 2060 A.D.

120. If $3\sqrt{5} + \sqrt{125} = 17.88$, then what will be the value of $\sqrt{80} + 6\sqrt{5}$?

    (A) 13.41   (B) 20.46   (C) 21.66   (D) 22.35

121. A car travels 70 km in one hour before some fault happens, then it travels for 120 km at 30 kmph. For the entire trip, what was the average speed ?

    (A) 33 kmph   (B) 36 kmph   (C) 38 kmph   (D) 40 kmph

122. Electric current in a metal wire is due to the flow of :

    (A) Protons   (B) Electrons   (C) Ions   (D) None of these

123. If $(17)^{3.5} \times (17)^{x} = 17^{8}$, what is the value of '$x$' ?

    (A) 2.29   (B) 2.75   (C) 4.25   (D) 4.5

124. Dimensions of cylindrical parts should as far as possible be shown in the views in which they are seen as _____ .

    (A) Cones   (B) Ellipses   (C) Rectangles   (D) Triangles

125. Rare Gases are generally chemically inert because they :
    (A) are monostomic
    (B) have low ionization energy
    (C) have stable electronic configuration
    (D) have a high electron affinity

126. Which of the following is an intensive property of a thermodynamic system ?
    (A) Volume   (B) Temperature   (C) Mass   (D) Energy

127. If $\left(\dfrac{5}{8}\right)$ of 24 $=\left(\dfrac{15}{7}\right) \times$ a, then the value of 'a' is :

    (A) $\dfrac{7}{225}$ (B) 7   (C) 8   (D) 15

128. The deepest trenches of the ocean are found in the :
    (A) Indian Ocean   (B) Pacific Ocean
    (C) Arctic Ocean   (D) Atlantic Ocean

129. What is the resistance of a wire of length 100 m having an area of cross section of 0.1 mm^2 and a resistivity of 50×10^{-8} $\Omega-m$?
    (A) 500 Ω (B) 5000 Ω (C) 250 Ω (D) 50 kΩ

130. Find the ratio in which rice at ₹ 7.20 a kg be mixed with rice at ₹ 5.70 a kg to produce a mixture worth ₹ 6.30 a kg.
    (A) 1 : 3   (B) 2 : 3   (C) 3 : 4   (D) 4 : 5

131. What is Dry Ice ?
    (A) Solid Carbon dioxide   (B) NaCl Crystal
    (C) Ice at minus 50 degrees C   (D) Solid H_2O

132. The sum of two numbers is 45. Their difference is 1/9th of their sum. Their LCM is :
    (A) 100   (B) 150   (C) 200   (D) 250

133. Cape Canaveral, the site from which space shuttles, are launched, is located on the coast of :
    (A) North Carolina   (B) South Carolina   (C) Florida   (D) Virginia

134. Which one of the following is the youngest folded mountain range in India ?
    (A) Aravalli Hills   (B) Eastern Ghats
    (C) Himalayas   (D) Western Ghats

135. The algebraic sum of the IR (I = current, R = resistance) drop is primarily dependent upon the :
    (A) amount of current flowing through it
    (B) value of R
    (C) direction of current flow
    (D) battery connection

136. What are .bas, .doc, and .html examples of ?
    (A) Extensions   (B) Domains   (C) Database   (D) Protocols

137. The curve traced by a point moving on a plane in one direction, towards a fixed point while also moving around that point, is called ?
    (A) Trochoid   (B) Spiral   (C) Parabola   (D) Catenary

138. If a trolley starts from rest with an acceleration of 2 m/s^2, what would its velocity be after 4 seconds ?
    (A) 8 m/s   (B) 2 m/s   (C) 8 m/s^2 (D) 2 m/s^2

139. Which of the following is a non-metallic mineral ?
    (A) Bauxite   (B) Magnesium   (C) Manganese   (D) Gypsum

140. What is the name of the software that allows us to browse through web pages called ?
    (A) Browser   (B) Mail Client   (C) FTP Client   (D) Messenger

141. The absolute zero pressure will be obtained :
    (A) when molecular momentum of the system becomes zero
    (B) at sea level
    (C) at the temperature of −273 K
    (D) at the centre of the earth

142. What is the SI unit of absolute permittivity of a medium ?

    (A) $\dfrac{J}{C}$ (B) $\dfrac{C^2}{\left(Nm^2\right)}$ (C) $\dfrac{C^2}{(Nm)}$ (D) $\dfrac{(Nm)}{C^2}$

143. In low heat cement, the constituent that is kept at minimum, is :
    (A) dicalcium silicate   (B) tricalcium silicate
    (C) tricalcium aluminate   (D) tetracalcium aluminate

144. A Tachometer measures the :
    (A) composition of an alloy   (B) flow rate of a liquid
    (C) temperature   (D) rotational speed of a flywheel

145. The greatest problem faced in water conservation is to reduce the amount of :

    (A) precipitation   (B) run-off water   (C) groundwater   (D) evaporation

146. An aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours, it must travel at a speed of :

    (A) 300 kmph   (B) 360 kmph   (C) 600 kmph   (D) 720 kmph

147. Of the following, identify the dimensionless entities.

    (A) Pressure coefficient   (B) Froude number

    (C) Darcy Weisbach friction factor   (D) All of these

148. A natural region has the similarity of :

    (A) Climate and occupation   (B) Soil and drainage

    (C) Climate and natural vegetation   (D) Economic base and races

149. Measurements from the scale to the drawing are transferred with the aid of a :

    (A) Scale   (B) Compass   (C) Divider   (D) Bow compass

150. Fullers are used :

    (A) for finishing flat surfaces   (B) for necking down a piece of work

    (C) for punching a hole   (D) to finish the punched hole

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