SECTION - I
ENGLISH

1. Identify the city which faced large scale destructions due to 'Hudhud' cyclone recently ?

   (A) Chennai   (B) Vishakhapatnam   (C) Kolkata   (D) Hyderabad

2. The Fundamental Duties of the Indian citizens are incorporated in the following Article of our constitution ?

   (A) Article 21 A   (B) Article 51 A   (C) Article 370 A   (D) Article 19 A

3. The speed of sound in air is approximately equal to :

   (A) 3×10^8 m/sec   (B) 330 m/sec   (C) 5000 m/sec   (D) 1500 m/sec

4. Hot Wire Instruments read :

   (A) Peak value   (B) Average value   (C) r. m. s. value   (D) None of these

5. Strain Gauge is used to convert :

   (A) Force into displacement

   (B) Mechanical displacement into change in resistance

   (C) Electric current into Mechanical displacement

   (D) Sound Energy into Electric Energy

6. If an object lies in third quadrant, its position with respect to reference planes will be :

   (A) Infront of V.P., Above H.P.   (B) Behind V.P., Above H.P.

   (C) Infront of V.P., Below H.P.   (D) Behind V.P., Below H.P.

7. Find the value of $\dfrac{(768)^3 + (232)^3}{(768)^2 - (768 \times 232) + (232)^2}$:

   (A) 1000   (B) 536   (C) 500   (D) 268

8. The Headquarters of West Central Railway is located at :

   (A) Jabalpur   (B) Jaipur   (C) Allahabad   (D) Ahmedabad

9. If fineness Modulus of sand is 2.5, it is graded as :

   (A) Medium sand   (B) Fine sand   (C) Coarse sand   (D) Very coarse sand

10. If $\log_8 x = \dfrac{2}{3}$, then the value of 'x' is :

   (A) $\dfrac{16}{3}$ (B) $\dfrac{4}{3}$ (C) 12   (D) 4

11. A file which contains transient data to be processed in combination with a master file is called :

   (A) Sequential file   (B) Master file

   (C) Random organization file   (D) Transmission file

12. M.C. (Moving Coil) and M.I. (Moving Iron) type of instruments can be distinguished by their :

   (A) Range   (B) Size of terminals   (C) Pointer   (D) Scale

13. Compiler and interpreters are examples of :

   (A) System software   (B) Application software

   (C) Both (A) and (B)   (D) None of these

14. Schmitt trigger is also known as :

   (A) Sweep circuit   (B) Blocking oscillator

   (C) Squaring circuit   (D) Stable multi vibrator

15. Find the missing term of the following series :
4, 7, 12, ?, 28, 39.

   (A) 17   (B) 18   (C) 21   (D) 19

16. Find the value of $(2744)^{\frac{1}{3}}$:

   (A) 24   (B) 14   (C) 34   (D) 16

17. Which of the following is a presentation graphics software ?

   (A) MS Windows   (B) MS Word   (C) MS Excel   (D) MS PowerPoint

18. Find the missing term of the following series :
BZA, DYC, FXE, ? , JVI.

   (A) HWG   (B) HUG   (C) WHG   (D) GUH

19. Which of the following is biodegradable pollutant ?

(A) DDT (B) BHC (C) Cotton cloth (D) Mercury

20. Who is the Chief Minister of Tamil Nadu ? (As on 01.11.2014)

(A) Mr. O. Panneerselvam (B) Ms. J. Jayalalitha

(C) Mr. Karunanidhi (D) Mr. Dayanidhi Maran

21. With the formation of Telangana, how many States are there in our country now ?

(A) 30 (B) 29 (C) 28 (D) 31

22. Find out the term which is different from other terms in the following :
22, 33, 66, 99, 121, 279, 594

(A) 99 (B) 121 (C) 279 (D) 594

23. Transformer cores are laminated in order to :

(A) Minimise eddy current loss (B) Reduce cost

(C) Simplify its constructions (D) None of these

24. Which one of the following is not a Noble Gas ?

(A) Helium (B) Bromine (C) Argon (D) Neon

25. For which of the following applications, a D.C. motor is preferred over an A.C. motor ?

(A) Variable speed operation (B) High speed operation

(C) Low speed operation (D) Fixed speed operation

26. The nucleus of an atom generally, contains :

(A) Protons and Neutrons (B) Protons and Electrons

(C) Electrons and Neutrons (D) Only Neutrons

27. The language which a computer can understand is :

(A) High Level Language (B) Machine Language

(C) Assembly Language (D) All of these

28. A four stroke petrol engine theoretically operates on :

(A) Joule cycle (B) Otto cycle

(C) Brayton cycle (D) Bell coleman cycle

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29. Secretion of Insulin Hormone is by :

    (A) Thyroid   (B) Pituitary   (C) Adrenal   (D) Pancreas

30. Jama Masjid at Delhi was built by :

    (A) Akbar   (B) Jahangir   (C) Shah Jahan   (D) Aurangzeb

31. Which one of the following is also known as Red Planet ?

    (A) Mercury   (B) Venus   (C) Earth   (D) Mars

32. Who wrote the book "Not Just An Accountant" published recently ?

    (A) P.C. Parakh   (B) Sanjay Baru

    (C) Vinod Rai   (D) Natwar Singh

33. In sand Moulding, the top flask is known as :

    (A) Cope   (B) Drag   (C) Check   (D) Fillet

34. In a well conditioned triangle, no angle should be less than :

    (A) 60°   (B) 50°   (C) 30°   (D) 45°

35. Find the value of $(1+2+3+4+\ _\ _\ _\ _\ _\ _\ _\ +45)$:

    (A) 2140   (B) 2070   (C) 1035   (D) 1280

36. If a thin rectangular plate of 60 mm × 30 mm is inclined at an angle of 60° to the Horizontal Plane, its top view may be :

    (A) Square of 30 mm size

    (B) Square of 60 mm size

    (C) Rectangle of 60 mm × 45 mm size

    (D) Rectangle of 45 mm × 30 mm size

37. Red rot is a plant disease which affects :

    (A) Wheat   (B) Rice   (C) Sugarcane   (D) Cotton

38. Pipe 'P' can fill a tank in 36 hours and pipe 'Q' can fill this tank in 45 hours. If both the pipes are opened simultaneously, then how much time will be taken to fill this tank ?

    (A) 20 hours   (B) $40\frac{1}{2}$ hours   (C) 9 hours   (D) 42 hours

39. Earthworm belongs to which of the following Animal Phyla ?

    (A) Arthropoda   (B) Mollusca   (C) Annelida   (D) Protozoa

40. When Ram and Mohan work together, they complete a work in 4 days. If Ram alone can complete this work in 12 days then in how many days Mohan alone can complete this work ?

    (A) 10 days   (B) 8 days   (C) 6 days   (D) 16 days

41. A simply supported beam of length L is loaded with a uniformly distributed load of ω per unit length. The maximum bending moment will be :

    (A) $\dfrac{\omega L^2}{4}$ (B) $\dfrac{\omega L^2}{8}$ (C) $\dfrac{\omega L^2}{2}$ (D) ωL^2

42. Fins are provided on heat transferring surface in order to increase :

    (A) Heat transfer area   (B) Heat transfer coefficient
    (C) Temperature gradient   (D) Mechanical strength of the equipment

43. For perfectly elastic bodies, the value of coefficient of restitution is :

    (A) zero   (B) 0.5   (C) 1.0   (D) 0.25

44. Which one of the following is not a scalar quantity ?

    (A) Volume   (B) Mass   (C) Force   (D) Length

45. Find the average of all prime numbers between 30 and 50 :

    (A) 48   (B) 39   (C) 39.8   (D) 38

46. In an examination, 35% of the students passed and 455 failed. How many students appeared for the examination ?

    (A) 700   (B) 1300   (C) 845   (D) 1250

47. Find the L.C.M. of 148 and 185.

    (A) 680   (B) 740   (C) 2960   (D) 3700

48. A 4 - pole, 1500 r.p.m. alternator will generate e.m.f. at :

    (A) 20 Hz   (B) 60 Hz   (C) 40 Hz   (D) 50 Hz

49. In an examination, a student gets 4 marks for every correct answer and loses 1 mark for every wrong answer. If he attempts in all 60 questions and secures 130 marks, then find the number of questions he attempted correctly.

    (A) 42   (B) 48   (C) 36   (D) 38

50. Ampere second is the unit of :

(A) Charge   (B) Power   (C) Voltage   (D) Energy

51. One side of a rectangular field is 15 metres. The length of diagonal of this rectangular field is 17 metres. Find the area of this rectangular field.

(A) 120 m^2 (B) 60 m^2 (C) 255 m^2 (D) $144 \frac{1}{2} \text{ m}^2$

52. The resultant of two forces P and Q acting at an angle θ, is given by :

(A) $\sqrt{P^2+Q^2+2PQ\tan\theta}$ (B) $\sqrt{P^2+Q^2+2PQ\sin\theta}$

(C) $\sqrt{P^2+Q^2+2PQ\cos\theta}$ (D) $P+Q+2PQ\tan\theta$

53. Power Loss in a resistor is given by :

(A) $P = V^2R$ (B) $P = \dfrac{V}{I}$ (C) $P = \dfrac{I^2}{R}$ (D) $P = \dfrac{V^2}{R}$

54. If the cost of 'x' metres of wire is 'd' rupees, then what is the cost of 'y' metres of same wire ?

(A) $\dfrac{yd}{x}$ (B) $\dfrac{xd}{y}$ (C) $\dfrac{xy}{d}$ (D) $\dfrac{d}{xy}$

55. Primary storage in computer terminology refers to :

(A) Hard Disc Drive
(B) Random Access Memory (RAM)
(C) Read Only Memory (ROM)
(D) The storage device where the operating system is stored

56. Which of the following flip-flops is used as Latch ?

(A) JK flip-flop   (B) RS flip-flop   (C) D flip-flop   (D) T flip-flop

57. _____ will translate the complete programme at once from a high level language to the machine language.

(A) Compiler   (B) Assembler   (C) Joystick   (D) Bus

58. Which of the following is a prime number ?

(A) 33   (B) 87   (C) 93   (D) 97

59. The total number of bones in the average adult human skeleton is :
    (A) 350   (B) 206   (C) 115   (D) 540

60. Water has its maximum density at :
    (A) 0°C   (B) 100°C   (C) 50°C   (D) 4°C

61. Which of the following processes is generally used for mass production of connecting rod of Automobile Engines ?
    (A) Sand Casting   (B) Cold Heading   (C) Forging   (D) Spinning

62. What is the General formula of Alkanes ?
    (A) C_nH_{2n+2} (B) C_nH_{2n} (C) C_nH_{2n-2} (D) C_nH_{2n+4}

63. A gate in which all inputs must be high to get a low output is :
    (A) An inverter   (B) AND gate   (C) NOR gate   (D) NAND gate

64. Which of the following Amplifiers produces the least distortion ?
    (A) Class A   (B) Class B   (C) Class AB   (D) Class C

65. Cyclo converter converts :
    (A) AC to DC
    (B) DC to AC
    (C) A fixed AC to a variable magnitude AC
    (D) A fixed DC to a variable magnitude DC

66. Separation of water or sand or cement from a freshly mixed concrete is known as :
    (A) Segregation   (B) Creeping   (C) Bleeding   (D) Flooding

67. The value of binary 1111 is :
    (A) 2^3 (B) $2^3 - 1$ (C) 2^4 (D) $2^4 - 1$

68. The load which does not change its magnitude and position with time is called :
    (A) Live load   (B) Dynamic load   (C) Creep load   (D) Dead load

69. Find the missing term of the following series :
    1, 4, 27, 16, ___?___, 36, 343.
    (A) 25   (B) 216   (C) 64   (D) 125

70. The entropy of universe tends to be :

    (A) Minimum   (B) Zero   (C) Average   (D) Maximum

71. Ammonia is prepared commercially by the :

    (A) Oswald process   (B) Hall process   (C) Contact process   (D) Haber process

72. A bullet is fired vertically upwards with a velocity of 196 m/sec. What is the maximum height reached by the bullet ? (Assuming $g = 9.8$ m/sec^2)

    (A) 1960 m   (B) 196 m   (C) 980 m   (D) 490 m

73. If $\dfrac{x}{y} = \dfrac{6}{5}$, then find the value of $\dfrac{x^2 + y^2}{x^2 - y^2}$:

    (A) 11   (B) $\dfrac{61}{11}$ (C) $\dfrac{11}{5}$ (D) 6

74. Goutam Buddha delivered his first sermons at :

    (A) Kusinagar   (B) Sarnath   (C) Pataliputra   (D) Vaishali

75. The 'Quit India Movement' was launched in the year :

    (A) 1920 A.D.   (B) 1930 A.D.   (C) 1942 A.D.   (D) 1946 A.D.

76. 'When a body is wholly or partially, immersed in a fluid, it experiences an upthrust equal to the weight of the fluid displaced'. This is known as :

    (A) Pascal's principle   (B) Archimedes principle

    (C) Stoke's law   (D) Newton's Laws of Motion

77. Disinfection of drinking water is done to remove :

    (A) Odour   (B) Bacterias   (C) Turbidity   (D) Colour

78. Projection of an object shown by three views is known as :

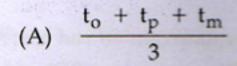   (A) Perspective   (B) Oblique   (C) Orthographic   (D) None of these

79. The United Nations Day (U.N.Day) is celebrated every year on :

    (A) Dec 26   (B) Nov 14   (C) Sept 5   (D) Oct 24

80. If t_o, t_p and t_m are the optimistic, pessimistic and most likely time estimates of an activity respectively, then the expected time 't' of the activity will be :
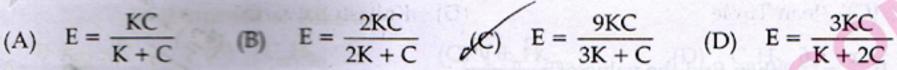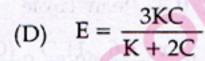
(A) $\dfrac{t_o + t_p + t_m}{3}$

(B) $\dfrac{t_o + t_p + 3t_m}{5}$

(C) $\dfrac{t_o + t_p + 2t_m}{4}$

(D) $\dfrac{t_o + t_p + 4t_m}{6}$

81. Choose the option which correctly shows the relationship between Modulus of Elasticity (E); Modulus of Rigidity (C) and Bulk Modulus (K) :

(A) $E = \dfrac{KC}{K + C}$

(B) $E = \dfrac{2KC}{2K + C}$

(C) $E = \dfrac{9KC}{3K + C}$

(D) $E = \dfrac{3KC}{K + 2C}$

82. Who is the winner of Mens Singles Title in Tennis in US open, 2014 ?

(A) Roger Federer

(B) Kei Nishikori

(C) Marin Cilic

(D) Rafael Nadal

83. The elements which have same mass number but different atomic numbers are known as :

(A) Isotones

(B) Isobars

(C) Isotopes

(D) Halogens

84. Weld spatter is a/an :

(A) Flux

(B) Electrode

(C) Welding defect

(D) None of these

85. A CRO can display :

(A) D.C. signals only

(B) A.C. signals only

(C) Both D.C. and A.C. signals

(D) Time - invariant signals

86. The pollutant responsible for ozone holes is :

(A) CO_2

(B) CO

(C) SO_2

(D) CFC

87. A transformer has 1000 primary turns. It is connected to 250 volts A.C. supply. Find the number of secondary turns to get secondary voltage of 400 volts.

(A) 1600

(B) 625

(C) 100

(D) 1250

88. Lokpriya Gopinath Bardoloi International Airport is located at :

(A) Jaipur

(B) Bangalore

(C) Guwahati

(D) Hyderabad

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89. Time constant of a series R-L circuit is :

(A) LR seconds   (B) $\frac{L}{R}$ seconds   (C) L^2R seconds   (D) LR^2 seconds

90. Who wrote 'Indica' ?

(A) Kautilya   (B) Kalidasa   (C) Shudraka   (D) Megasthenes

91. Who is the winner of Nobel Prize, 2014 in the field of Economics ?

(A) Patrick Modiano   (B) Malala Yousafzai

(C) Jean Tirole   (D) Kailash Satyarthi

92. A cyclotron is a :

(A) Bunch of Gamma Rays   (B) High Frequency Oscillator

(C) Particle Accelerator   (D) None of these

93. A man buys an article for ₹ 490 and sells it for ₹ 465.50. Find his loss percentage.

(A) 4%   (B) 4.5%   (C) 5%   (D) 5.5%

94. 'The Servants of India Society' was founded by :

(A) Jyotiba Phule   (B) G.K. Gokhale   (C) B.G. Tilak   (D) B.R. Ambedkar

95. Find the angle between the hour hand and the minute hand of a clock when the time is 10.25 hours i.e. 25 minutes past 10 ?

(A) 180°   (B) 165°   (C) $162\frac{1}{2}°$ (D) $152\frac{1}{2}°$

96. Hopkinson's test for D.C. motors is conducted of :

(A) Low Load   (B) Half Load   (C) Full Load   (D) No Load

97. The dimensions of a brick are 10 cm × 4 cm × 3 cm. What is the total surface area of this brick ?

(A) 82 cm²   (B) 164 cm²   (C) 120 cm²   (D) 180 cm²

98. To be eligible for elected as President, a candidate must be :

(A) Over 25 years of age   (B) Over 30 years of age

(C) Over 35 years of age   (D) Over 60 years of age

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99. The reduced bearing of a line is N 87° W. Its whole circle bearing is :

(A) 273° (B) 3° (C) 93° (D) 87°

100. Arrange the fractions $\frac{3}{5}, \frac{4}{7}, \frac{8}{9}$ and $\frac{9}{11}$ in their descending order :

(A) $\frac{8}{9} > \frac{9}{11} > \frac{3}{5} > \frac{4}{7}$

(B) $\frac{9}{11} > \frac{8}{9} > \frac{4}{7} > \frac{3}{5}$

(C) $\frac{3}{5} > \frac{4}{7} > \frac{8}{9} > \frac{9}{11}$

(D) $\frac{4}{7} > \frac{8}{9} > \frac{3}{5} > \frac{9}{11}$

101. The pressure exerted on the walls of a container by a gas is due to the fact that Gas molecules :

(A) Stick to the walls of the container
(B) Lose their kinetic energy
(C) Get accelerated towards the wall
(D) Change their momentum due to collision with the wall.

102. The thermal diffusivity of a substance is given by :

(A) $\frac{K\rho}{C}$ (B) $\frac{K}{\rho C}$ (C) $\frac{KC}{\rho}$ (D) $\frac{\rho C}{K}$

[Where K = Thermal conductivity; ρ = Mass density; C = Specific heat]

103. Boyle's law states that :

(A) The pressure of a gas varies directly with temperature at constant volume i.e. P∝T.
(B) The product of pressure and volume of a given mass of a gas is constant at constant temperature i.e. PV = constant.
(C) The volume of a gas varies directly with temperature at constant pressure i.e. V∝T.
(D) The pressure of a gas varies directly with volume at constant temperature i.e. P∝V.

104. At what temperature, both Celsius and Fahrenheit scales will show the identical readings ?

(A) 100° (B) 0° (C) −40° (D) 40°

105. A capacitor stores 1 coulomb at 10 volts. Its capacitance is (f = farad) :

(A) 1 f (B) 10 f (C) 0.1 f (D) 0.01 f

106. Who is the Chairperson of National Commission for Women in India ? (As on 01.11.2014)

(A) Jayanti Patnaik (B) Girija Vyas
(C) Mamta Sharma (D) Lalitha Kumaramangalam

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107. In a certain code language, 'HAND' is written as 'SZMW', then what will be the code of 'MILK' ?

   (A) ORNP   (B) PNRO   (C) NROP   (D) RNOP

108. The famous chinese pilgrim 'Hieun Tsang' visited India during the reign of :

   (A) Harshavardhan   (B) Chandragupta II

   (C) Ashoka   (D) Kanishka

109. When an object is cut by a section plane, parallel to H.P. and perpendicular to V.P., then the sectional view of the object is obtained in :

   (A) Top view   (B) Front view   (C) Left side view   (D) Right side view

110. A conductor of axial length 30 cms carries a current of 100 A and lies at right angle to a magnetic field of strength 0.4 tesla. What is the force exerted on it ?

   (A) 10 N   (B) 12 N   (C) 1.2 N   (D) 0

111. The property of a material by which it can be rolled into sheets is called :

   (A) Elasticity   (B) Plasticity   (C) Ductility   (D) Malleability

112. 'Giddha' is a folk dance of :

   (A) Punjab   (B) Uttar Pradesh   (C) Assam   (D) Maharashtra

113. Identify the disease which is caused due to deficiency of Protein ?

   (A) Scurvy   (B) Beri-Beri   (C) Night-Blindness   (D) Kwashiorkor

114. With which of the following, the intrinsic semi conductor Silicon be doped in order to obtain p-type semi-conductor ?

   (A) Boron   (B) Phosphorus   (C) Gallium   (D) None of these

115. Which of the following is a universal gate ?

   (A) AND   (B) NAND   (C) OR   (D) NOR

116. The length of two trains are 140 m and 160 m respectively. If they run at the speed of 60 km/h and 40 km/h respectively in opposite directions on parallel tracks, then find the time in which they will cross each other.

   (A) 10 sec   (B) 10.8 sec   (C) 9 sec   (D) 9.6 sec

117. Which device changes the alternating e.m.f. generated by the D.C. Generator in its armature coil to D.C. ?

    (A) Slip ring   (B) Rectifier   (C) Commutator   (D) None of these

118. If 1st January, 2014 was Wednesday, then 29th December, 2014 will be :

    (A) Thursday   (B) Monday   (C) Saturday   (D) Friday

119. A triac is a :

    (A) Two terminal bi-directional switch

    (B) Three terminal bi-directional switch

    (C) Two terminal uni-directional switch

    (D) Three terminal uni-directional switch

120. The angle of elevation of a ladder leaning against a wall is 60° i.e. ladder makes an angle of 60° with the ground. The foot of the ladder is 4.6 metres away from the wall. What is the length of this ladder ?

    (A) 9.2 m   (B) 2.3 m   (C) 6.9 m   (D) 7.8 m

121. Galena is an ore of :

    (A) Lead   (B) Copper   (C) Aluminium   (D) Iron

122. The sum of two numbers is 40 and the difference of these two numbers is 4. Find the ratio of these two numbers.

    (A) 11 : 9   (B) 11 : 18   (C) 22 : 9   (D) 17 : 13

123. The BIS code which deals with steel structures is :

    (A) BIS : 456   (B) BIS : 800   (C) BIS : 875   (D) BIS : 1893

124. The area of an equilateral triangle is $24\sqrt{3}$ cm^2. What is the perimeter of this equilateral triangle ?

    (A) 96 cm   (B) $4\sqrt{6}$ cm   (C) $12\sqrt{6}$ cm   (D) $6\sqrt{6}$ cm

125. When we open an internet site, we see 'www' ? What is the full form of 'www' ?

    (A) World Wide Web   (B) World Wide Word

    (C) Words Wise Web   (D) None of these

126. The term 'Operating System' means :
   (A) A set of programmes which controls computer working
   (B) The way a computer operator works
   (C) Conversion of high level language into machine level language
   (D) None of these

127. If a point moves in a plane in such a way that the sum of its distances from two fixed points is constant, the curve so traced is called :
   (A) Parabola   (B) Ellipse   (C) Hyperbola   (D) All of these

128. A byte is group of :
   (A) 2 bits   (B) 4 bits   (C) 8 bits   (D) 16 bits

129. Who is the President of China ? (As on 01.11.2014)
   (A) Li Keqiang   (B) Xi Jinping   (C) Shinzo Abe   (D) Hu Jintao

130. Who is the speaker of present Lok Sabha ? (As on 01.11.2014)
   (A) Smt. Sumitra Mahajan   (B) Smt. Sushma Swaraj
   (C) Smt. Meira Kumar   (D) None of these

131. Ravi runs 200 metres in 24 seconds. Find his average speed :
   (A) 20 km/h   (B) 24 km/h   (C) 28.5 km/h   (D) 30 km/h

132. The relationship between Bulk density (γ), Dry density (γ_d) and water content (ω) for soil is :
   (A) $\gamma = \gamma_d(1 + \omega)$ (B) $\gamma_d = \gamma(1 + \omega)$ (C) $\gamma = \dfrac{\gamma_d}{1 + \omega}$ (D) $\gamma = \gamma_d(1 - \omega)$

133. Which country won the FIFA world cup, 2014 in Football ?
   (A) Germany   (B) Argentina   (C) Brazil   (D) France

134. Which of the following is not a cold working process ?
   (A) Extrusion   (B) Slitting   (C) Blanking   (D) Lancing

135. Pointing to a man in a photograph, Asha said, "His mother's only daughter is my mother". How is that man related to Asha ?
   (A) Brother   (B) Maternal Uncle   (C) Grand father   (D) Father

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136. What is 15% of 34 kg ?

    (A) 3.4 kg   (B) 3.75 kg   (C) 4.50 kg   (D) 5.10 kg

137. Sachin is younger than Rahul by 4 years. If their ages are in the ratio of 7 : 9, then how old is Sachin ?

    (A) 14 years   (B) 21 years   (C) 18 years   (D) 25 years

138. Which one of the following instruments will be used for measuring electric current ?

    (A) Voltmeter   (B) Ammeter   (C) Ohmmeter   (D) Wavemeter

139. If $2^{2n-1} = \dfrac{1}{8^{n-3}}$, then the value of 'n' is :

    (A) 3   (B) 2   (C) 0   (D) − 2

140. The length of a bar is L metres. It extends by 2 mm when a tensile force F is applied. Find the strain produced in the bar :

    (A) $\dfrac{0.002}{L}$ (B) $\dfrac{2}{L}$ (C) $\dfrac{0.2}{L}$ (D) $\dfrac{L}{0.002}$

141. Large scale deforestation decreases :

    (A) Soil Erosion   (B) Rain fall   (C) Drought   (D) Global warming

142. Zeroth Law of thermodynamics forms the basis of _____ measurement.

    (A) Pressure   (B) Temperature   (C) Work   (D) Momentum

143. BOD (Bio Chemical Oxygen Demand) of safe drinking water must be :

    (A) 0   (B) 50 ppm   (C) 100 ppm   (D) 200 ppm

144. The slenderness ratio of a compression member is :

    (A) $\dfrac{\text{Effective length}}{\text{Least radius of gyration}}$ (B) $\dfrac{\text{Actual length}}{\text{Moment of inertia}}$

    (C) $\dfrac{\text{Moment of inertia}}{\text{Actual length}}$ (D) $\dfrac{\text{Actual length}}{\text{Radius of gyration}}$

145. Which National Park is known for the 'Asiatic Lions' ?

    (A) Corbett National Park   (B) Kanha National Park

    (C) Bandipur National Park   (D) Gir National Park

146. In which of the following movement did Gandhiji make the first use of Hunger Strike as a weapon ?

   (A) Ahmedabad strike, 1918   (B) Rowlatt Satyagraha, 1919

   (C) Swadeshi Movement, 1905   (D) Champaran Satyagraha, 1917

147. Find the simple interest on ₹ 4800 at the rate of $8\frac{1}{2}$ % per annum for a period of 2 years 3 months.

   (A) ₹ 796   (B) ₹ 816   (C) ₹ 918   (D) ₹ 990

148. Global warming is caused by :

   (A) N_2 (B) CO_2 (C) Ozone   (D) None of these

149. How many terms are there in the following series ?

   201, 208, 215, ……, 369.

   (A) 26   (B) 25   (C) 24   (D) 23

150. The Indian Standard Time (I.S.T.) is ahead of Greenwich Mean Time (G.M.T.) by :

   (A) 6 hours   (B) 5 hours

   (C) 6 hours 30 minutes   (D) 5 hours 30 minutes

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