English

Directions—(1–5) Produce the correct sentence.

1. P. through the long, hot summer
   Q. if you plan to train hard
   R. continually
   S. you will need to acclimatise yourself
   (A) QPRS   (B) SRPQ
   (C) QRSP   (D) PQRS

2. P. it becomes difficult
   Q. satisfying our desire
   R. but once we set about
   S. if not impossible to restrain them
   (A) RQPS   (B) RQSP
   (C) QRPS   (D) PQRS

3. P. when a chemical substance
   Q. in the food preparations
   R. the food poisoning occurred
   S. was mistaken for salt and used
   (A) RQPS   (B) SRQP
   (C) QPSR   (D) PSRQ

4. P. will normally be granted
   Q. candidates should note
   R. that no request for
   S. change of centre
   (A) PSQR   (B) SPQR
   (C) QRSP   (D) RSPQ

5. P. to dispose of the waste matter
   Q. the modernization would reduce
   R. provide better sanitary facilities
   S. manual labour considerably and would also
   (A) QSRP   (B) SRPQ
   (C) RPQS   (D) PQSR

Directions—(Q. 6–10) Choose the exact meaning of the Idioms/Phrases.

6. Oily Tongue :
   (A) flattery   (B) hungry person
   (C) strong critic   (D) rich food

7. A snake in the grass :
   (A) a very poisonous snake
   (B) an unrecognizable enemy
   (C) a secret agent
   (D) not a reliable person

8. At Sea :
   (A) to travel by boat   (B) to confuse others
   (C) perplexed   (D) to incite others

9. To scale up :
   (A) to measure   (B) to discuss
   (C) to divide   (D) to deliver

10. To see red :
    (A) to find fault with
    (B) to be very angry
    (C) to criticise others
    (D) to victimise someone

Directions—(Q. 11–20) Fill in the blanks with correct options—

Without water …(11)… animal can survive. In desert regions the greatest …(12)… to life is drying up. But many creatures are able to make use of …(13)… little water that exists in arid areas. One of nature's masterpieces …(14)… creatures equipped to …(15)… with desert life is the hardy camel. Stories range the desert lands for and wide about …(16)… endurance feats by camel. It is said that camels can …(17)… a distance of about 800 miles in eight days through continuous travel …(18)… an intake of a single drop of water. The popular …(19)… that camels store water in the humps is …(20)… in a way, water is indeed stored there but in the form of fat.

11. (A) every   (B) no
    (C) any   (D) desert

12. (A) need   (B) threat
    (C) worry   (D) inadequacy

13. (A) what   (B) the
    (C) very   (D) that

14. (A) for   (B) about
    (C) among   (D) with

15. (A) live   (B) resist
    (C) bear   (D) cope

16. (A) remarkable   (B) little
    (C) obvious   (D) popular

17. (A) cover   (B) lead
    (C) reach   (D) reduce

18. (A) for (B) without
    (C) accept (D) receive
19. (A) proverb (B) guess
    (C) belief (D) version
20. (A) baseless (B) wrong
    (C) misleading (D) correct

Directions—(Q. 21–25) One of the words is misspelt. Find it out.

21. (A) supercilous (B) parliament
    (C) benefactor (D) testament
22. (A) elaborate (B) thoroughness
    (C) therapy (D) insitability
23. (A) situation (B) municipal
    (C) contensione (D) pituitary
24. (A) twelth (B) programme
    (C) cunning (D) embarrassment
25. (A) heavenily (B) trumpery
    (C) scientific (D) sovereign

Directions—(Q. 26–35) Choose the antonym of the following words.

26. Anger :
    (A) party (B) happiness
    (C) approval (D) love
27. Outwit :
    (A) laugh (B) victory
    (C) defeat (D) win
28. Extrovert :
    (A) boaster (B) mixer
    (C) introvert (D) social
29. Virtuous :
    (A) vicious (B) vulgar
    (C) miserly (D) insincere
30. Militant :
    (A) religious (B) spiritual
    (C) combative (D) pacifist
31. Latent :
    (A) hidden (B) forbidding
    (C) obvious (D) artificial
32. Baffle :
    (A) make way (B) thwart
    (C) confuse (D) check
33. Cynical :
    (A) mature (B) naive
    (C) eccentric (D) crazy
34. Malevolent :
    (A) kindly (B) vacuous
    (C) ambivalent (D) primitive
35. Morose :
    (A) healthy (B) gloomy
    (C) haggard (D) cheerful

Directions—(Q. 36–40) Choose the Synonym of the following words.

36. Lethargy :
    (A) serenity (B) listlessness
    (C) impassivity (D) laxity
37. Contract :
    (A) tract (B) expand
    (C) give (D) abridge
38. Compendium :
    (A) summary (B) index
    (C) reference (D) glossary
39. Aromatic :
    (A) crippled (B) fragrant
    (C) sentimental (D) stinking
40. Docile :
    (A) vague (B) gentle
    (C) stupid (D) stubborn

Directions—(Q. 41–50) One word Substitution.

41. One who knows many languages is called—
    (A) dipsomaniac (B) misogamist
    (C) misogynist (D) polygot
42. One who loves mankind—
    (A) philanthropist (B) anarchist
    (C) parasite (D) versatile
43. One who eats human flesh—
    (A) oculist (B) cannibal
    (C) drover (D) theist
44. One who does not drink wine—
    (A) centenerian (B) cosmopolitan
    (C) teetotaller (D) volunteer
45. One who is new to a profession—
    (A) mimic (B) jockey
    (C) novice (D) heretic
46. A place where money is coined—
    (A) barrack (B) dowar
    (C) mint (D) sheath
47. A medicine to counteract the poison—
    (A) antiseptic (B) anaesthetic
    (C) antidote (D) immune
48. Free from infect—
    (A) sheath (B) panacea
    (C) immune (D) antidote
49. A collection of flags—
    (A) bunting (B) fleet
    (C) hamlet (D) brewery

50. The art of effective speaking—
    (A) anatomy   (B) chromatics
    (C) elocution   (D) epitaph

General Knowledge

51. Black forests are found in—
    (A) France   (B) Germany
    (C) Czechoslovakia (D) Romania

52. What is the largest irrigation canal in India called ?
    (A) Yamuna Canal
    (B) Sirhind Canal
    (C) Indira Gandhi Canal
    (D) Upper Bari Doab Canal

53. Which one of the following is not a port along the western coast of India ?
    (A) Nhava Sheva   (B) Marmagao
    (C) Tuticorin   (D) Kochi

54. The Iron and Steel Industry at which of the following places was developed with German technical collaboration ?
    (A) Durgapur   (B) Bhilai
    (C) Rourkela   (D) Bhadravati

55. Tehri Dam receives water from which of the following rivers ?
    (A) Alaknanda   (B) Bhagirathi
    (C) Gandak   (D) Ghaghra

56. Who among the following was the author of 'Jungle book' ?
    (A) Ruskin Bond   (B) Jim Corbett
    (C) G.B. Shaw   (D) Rudyard Kipling

57. Which from the following rivers does not originate in Indian territory ?
    (A) Mahanadi   (B) Brahmaputra
    (C) Ravi   (D) Chenab

58. The first and last Indian Governor General of India was—
    (A) W.C. Banerjee   (B) Lord Mountbatten
    (C) Dr. Rajendra Prasad (D) Rajgopal

59. The largest Island in the world is Greenland. It is an integral part of—
    (A) Norway   (B) U.S.A.
    (C) Denmark   (D) Canada

60. The capital of the USA is situated on the bank of the river—
    (A) Ohio   (B) Tennessee
    (C) Yukon   (D) Potomac

61. Who was the First speaker of Independent India's Lok Sabha ?
    (A) Hukam Singh   (B) Bali Ram Bhagat
    (C) Rabi Ray   (D) G.V. Mavalankar

62. Cabinet Mission came to India in the year—
    (A) 1946   (B) 1942
    (C) 1945   (D) 1940

63. Muslim League was founded in the year—
    (A) 1900   (B) 1905
    (C) 1906   (D) 1902

64. Formation of ozone hole is maximum over—
    (A) Africa   (B) India
    (C) Antartica   (D) Europe

65. Where is 'Ground Zero' ?
    (A) Greenwich   (B) New York
    (C) Indira point   (D) Shriharikota

66. Headquarters of UNO is situated at—
    (A) New York   (B) Hague
    (C) Geneva   (D) Paris

67. Who among the following is referred to as 'Desert Fox' ?
    (A) Lord Wavell   (B) General Eisenhover
    (C) General Rommel   (D) General MC Arthur

68. Who was the first President of United States ?
    (A) George Washington (B) Thomas Jefferson
    (C) James Monroe   (D) Abraham Lincoln

69. The government of India Act, 1919 is also known as—
    (A) Morley-Minto Reforms
    (B) Montague-Chelmsford Reforms
    (C) Regulating Act
    (D) Pitts India Act

70. Who among the following visited Gandhi Ji in South Africa ?
    (A) Bal Gangadhar Tilak
    (B) Vallabhabhai Patel
    (C) Gopal Krishna Gokhale
    (D) Jawaharlal Nehru

71. The Intensity of Earthquake is measured with—
    (A) Barometer   (B) Hydrometer
    (C) Polygraph   (D) Seismograph

72. Name the recipient of the 2017 Hridayanath Mangeshkar award ?
    (A) Salim Khan   (B) Javed Akhtar
    (C) Anu Malik   (D) Anu Kapoor

73. Whose birth anniversary is celebrated as International Day of non violence ?
    (A) Mahatma Gandhi (B) Adolf Hitler
    (C) Mother Teresa (D) Rajiv Gandhi

74. Name the world's largest nuclear powered ice-breaker ship ?
    (A) Sibir   (B) Siberia
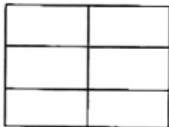   (C) Sib   (D) Serb

75. How many rings are there in Olympic Flag ?
    (A) Five   (B) Four
    (C) Three   (D) Six

76. The study of coins is called—
    (A) Archaeology   (B) Hostoriography
    (C) Numismatics   (D) Epigraphy

77. When is the infantry day celebrate in India ?
    (A) October 25   (B) October 27
    (C) October 26   (D) October 29

78. India has sent the first shipment of wheat through the chabahar port to which country ?
    (A) Iran   (B) Saudi Arabia
    (C) Afghanistan   (D) Pakistan

79. Name the Indian who has won the 2017 French open superseries Badminton Men's single's title ?
    (A) Kidambi Srikanth (B) Rohan Kapoor
    (C) Dhruv Kapila   (D) Tarun Kona

80. Where is the National Defence Academy located ?
    (A) Khadakvasla   (B) Gaya
    (C) Dehradun   (D) Chennai

81. Which Country is separated from India by McMohan line ?
    (A) China   (B) Nepal
    (C) Pakistan   (D) Bhutan

82. The most abundant gas in atmosphere is ?
    (A) Carbon dioxide (B) Nitrogen
    (C) Oxygen   (D) Helium

83. Name the first Indo-Russia Tri-Services military exercise ?
    (A) INDRA   (B) VAYU
    (C) VARUN   (D) HAWA

84. Name the Sri Lankan Port city where India will launch housing projects ?
    (A) Colombo   (B) Hambantota
    (C) Jaffna   (D) Point Pedro

85. Who is president of India ?
    (A) Arun Jaitley   (B) Rajnath Singh
    (C) Pranav Mukherjee (D) Ram Nath Kobind

86. Name the Vice Chairman of NITI Aayog ?
    (A) Rajiv Kumar   (B) Amit Shah
    (C) Arvind Panagriya (D) Narendra Modi

87. Indian Air force has successfully conducted development trials of which missile ?
    (A) VEESTA   (B) TEESTA
    (C) ASTRA   (D) ALPHA

88. Lucknow, The Capital of Uttar Pradesh is situated on the bank of river—
    (A) Ganga   (B) Yamuna
    (C) Gomti   (D) Saryu

89. Capital of Chattisgarh is—
    (A) Raipur   (B) Ranchi
    (C) Patna   (D) Jabalpur

90. Which Indian state is bordered by Bangladesh from three sides ?
    (A) Nagaland   (B) Tripura
    (C) Manipur   (D) Assam

91. The Rohingya are the minorities of which country ?
    (A) South Africa   (B) Canada
    (C) Myanmar   (D) Bhutan

92. We ideally sing National Anthem in ...... Seconds.
    (A) 50   (B) 52
    (C) 54   (D) 53

93. Which Insect is also known as 'White Ant' ?
    (A) Beetle   (B) Grasshopper
    (C) Tempte   (D) Locust

94. Palk Strait connects India to which country ?
    (A) Sri Lanka   (B) Mauritius
    (C) Bangladesh   (D) Pakistan

95. The DRDO has successfully test fired which Anti-Tank Guided Missile (ATGM) ?
    (A) Agni   (B) Nag
    (C) Paras   (D) Vish

96. When is Army day celebrated ?
    (A) October 15   (B) January 15
    (C) November 15   (D) December 15

97. Name the first female refree who officiated in match at FIFA U-17 world cup ?
    (A) Violet Palmer   (B) Amy Fearn
    (C) Bibiana Steinhaus (D) Esther Staubei

98. Where was the 5th Joint Military Exercise 'Mitra Sakti 2017' between India and Sri Lanka was held ?
    (A) Pune   (B) Kochi
    (C) Colombo   (D) Hyderabad

99. The longest river of Peninsular India is—
    (A) Narmada   (B) Godavari
    (C) Mahanadi   (D) Kaveri

100. A person wants to visit the national parks in Ranthambore, Gir and Bandipur located in three different states of India. To which one of the following states he need not go in this connection ?
    (A) Gujarat   (B) Madhya Pradesh
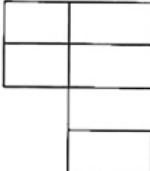   (C) Rajasthan   (D) Karnataka
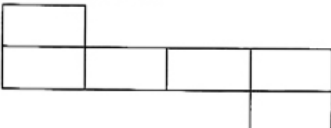
Mathematics/Intelligence Test

101. The value of $(-1)^7$ is—
    (A) -7 (B) $+7$
    (C) -1 (D) $+1$

102. Place value of 2 in 1·321 is—
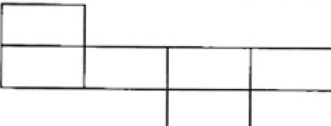   (A) 2·0   (B) 0·2
    (C) 0·02   (D) 20·0

103. 40% of 50 is—
(A) 40 (B) 20
(C) 30 (D) 50

104. Square root of $7\frac{1}{9}$ is—
(A) $2\frac{1}{3}$ (B) $3\frac{2}{3}$
(C) $8\frac{1}{9}$ (D) $3\frac{3}{4}$

105. The successor of -4000 is—
(A) -5999 (B) -3999
(C) 3999 (D) 5000

106. The ratio of 20 minutes to 1 hour is—
(A) $3:1$ (B) $1:3$
(C) $20:1$ (D) $1:20$

107. The value of $1 + 1 - 1 \times 1 \div 1$ is—
(A) 0 (B) 1
(C) 2 (D) 3

108. The average of all prime number between 80 and 100 is—
(A) $85\cdot67$ (B) $89\cdot67$
(C) $93\cdot67$ (D) $95\cdot27$

109. A candidate who gets 220 marks, fails by 11 marks. Maximum marks are 700. The pass percentage is—
(A) 20 (B) 33
(C) 40 (D) 25

110. After spending 40% of total money, Guddu has ₹ 300 in his pocket. The total money Guddu has—
(A) ₹ 500 (B) ₹ 600
(C) ₹ 400 (D) ₹ 700

111. If $a = 2b = 3c = 12$, then $a^2 + b^2 + c^2$ is equal to—
(A) 180 (B) 196
(C) 200 (D) 220

112. $(a + b)(a^2 - b^2) =$
(A) $(a + b)^2 (a - b)$
(B) $(a^2 - b^2)(a^2 + b^2)$
(C) $(a^3 b^3)(a - b)^2 (a + b)$
(D) None of the above

113. The product of $(1 - 3x)$ and $(1 + 3x + 9x^2)$ is—
(A) $1 + 9x^2 + 6x$ (B) $1 + 9x^2$
(C) $1 - 27x^3$ (D) $1 + 27x^3$

114. Sum of $(a + 5)$, $(9 - 2a)$ and $(a + 15)$ is—
(A) $3a + 2a$ (B) 29
(C) $a - 29$ (D) $a + 29$

115. If we divide $4abc + 12ab^2c$ by $2ac$, then quotient is—
(A) $2b(1 + 3b)$ (B) $3b(2 + b)$
(C) $3(2 + 3b)$ (D) None of these

116. An angle which measures between 180° and 360° is called—
(A) Acute angle (B) Straight angle
(C) Reflex angle (D) Right angle

117. How many degrees are there in three right angles ?
(A) 360° (B) 90°
(C) 270° (D) 180°

118. The angle which is complementary angle to itself is—
(A) 180° (B) 90°
(C) 45° (D) 135°

119. If angles of a triangle are $x°$, $2x°$ and $3x°$, then triangle is—
(A) Acute angled triangle
(B) Obtuse angled triangle
(C) Right angled triangle
(D) None of the above

120. Sum of all angles of a triangle is—
(A) 90° (B) 360°
(C) 180° (D) 270°

121. Supplement of angle is 9 times to it, the angle is—
(A) 9° (B) 18°
(C) 27° (D) 36°

122. If sum of two consecutive odd number is 16, then number are—
(A) 11, 5 (B) 13, 3
(C) 9, 7 (D) 16, 0

123. $\left(x + \dfrac{1}{x}\right)^2 - 4$ is—
(A) $x^2 + \dfrac{1}{x^2} - 4$ (B) $x^2 + \dfrac{1}{x^2}$
(C) $\left(x - \dfrac{1}{x}\right)^2$ (D) $x^2 - \dfrac{1}{x^2}$

124. If $x^2 + 6x + 8$ is divided by $(x + 2)$, then remainder is—
(A) -2 (B) 2
(C) 0 (D) 6

125. If length and breath of rectangular field are $(x + y)$ and $(x - y)$, then its area is—
(A) $x^3 + y^3$ (B) $x^2 - y^2$
(C) $(x + y)^2$ (D) $(x + y)^3$

126. The difference of the place value and face value of the digit 2 in the numeral 3124698 is—
(A) 20,000 (B) 2
(C) 19,998 (D) None of these

127. When one is added to the greatest four digit number, the result is—
(A) Smallest 4 digit number
(B) Smallest 5 digit number
(C) Greatest 4 digit number
(D) Greatest 5 digit number

128. Using tally marks which one of the following represents the number eight ?
(A) ⦅IIII⦆ III
(B) IIIIIIII
(C) NI NI
(D) NII III

129. When rounded off to nearest thousands, the number 85642 is—
(A) 85600
(B) 85700
(C) 85000
(D) 86000

130. One million is equal to—
(A) 1 lakh
(B) 10 lakhs
(C) 1 crore
(D) 10 crores

131. The successor and predecessor of 999 respectively is—
(A) 1000, 998
(B) 998, 1000
(C) 1000, 999
(D) None of these

132. The product of a non zero whole number and its successor is always—
(A) An even number
(B) An odd number
(C) A prime number
(D) Divisible by 9

133. Which of the following statement is not true ?
(A) $0 + 0 = 0$
(B) $0 - 0 = 0$
(C) $0 \times 0 = 0$
(D) $0 \div 0 = 0$

134. Number of even numbers between 58 and 80 is—
(A) 10
(B) 11
(C) 12
(D) 13

135. Sum of the number of primes between 16 to 80 and 90 to 100 is—
(A) 20
(B) 18
(C) 17
(D) 16

136. Which of the following statements is not true ?
(A) The HCF of two distinct prime numbers is 1
(B) The HCF of two co prime numbers is 1
(C) The HCF of two consecutive even numbers is 2
(D) The HCF of an even and odd number is even

137. The number of distinct prime factors of the largest 4 digit number is—
(A) 2
(B) 3
(C) 5
(D) 11

138. If the number 7254 * 98 is divisible by 22, the digit at * is—
(A) 1
(B) 2
(C) 6
(D) 0

139. Which of the following pairs is not co prime ?
(A) 8, 10
(B) 11, 12
(C) 1, 3
(D) 31, 33

140. L.C.M. of two numbers is 180. Then which of the following is not the HCF of the numbers ?
(A) 45
(B) 60
(C) 75
(D) 90

141. Which of the following numbers is divisible by 11 ?
(A) 1011011
(B) 1111111
(C) 22222222
(D) 33333

142. Roman numeral for 49 is—
(A) XXXXIX
(B) XLIX
(C) LXIX
(D) XCIX

143. Which of the following relation is not correct ?
(A) 1 km = 1,00,000 cm
(B) 1 liters = 1000 milliliters
(C) 100 hectare = 1 sq. km
(D) $1 \ m^2 = 1000 \ dm^2$

144. $\frac{4}{50} = ?$
(A) 0·450
(B) 0·4
(C) 0·50
(D) 0·08

145. $1·07 \times 65 + 1·07 \times 26 + 1·07 \times 9 = ?$
(A) 10·73
(B) 10·7
(C) 107
(D) 1·07

146. 0·7499 lies between—
(A) 0·7 and 0·74
(B) 0·75 and 0·79
(C) 0·749 and 0·75
(D) 0·7492 and 0·75

147. $0·07 + 0·005$ is equal to—
(A) 0·15
(B) 0·015
(C) 0·075
(D) 0·75

148. If $615 + (222 + 38) = (615 + 222) + 38$. The property used is—
(A) Closure property
(B) Commutative property
(C) Associative property
(D) Distributive property

149. When $\frac{1}{4}$ is written with denominator as 12, then its numerator is—
(A) 3
(B) 6
(C) 24
(D) 12

150. The two consecutive integers between which $\frac{5}{7}$ lies are—
(A) 5 and 6
(B) 0 and 1
(C) 6 and 7
(D) 1 and 2

151. The fraction which is not equal to $\frac{4}{5}$ is—
(A) $\frac{40}{50}$
(B) $\frac{12}{15}$
(C) $\frac{16}{20}$
(D) $\frac{9}{15}$

152. A parallelogram has …… lines of symmetry.
(A) 2
(B) 1
(C) 0
(D) 3

153. Which of the following alphabets has both horizontal as well as vertical line of symmetry ?
   (A) S
   (B) A
   (C) H
   (D) V

154. Which inequality below is true ?
   (A) $\frac{11}{25} < 0.04$
   (B) $\frac{2}{20} > 0.13$
   (C) $\frac{3}{50} = 6\%$
   (D) None of these

155. The average of first 50 natural numbers is—
   (A) 25·30
   (B) 25·5
   (C) 25·00
   (D) 12·25

156. Evaluation of $8^3 \times 8^2 \times 8^{-5}$ is—
   (A) 1
   (B) 0
   (C) 8
   (D) None of these

157. $106 \times 106 - 94 \times 94 = ?$
   (A) 2004
   (B) 2400
   (C) 1904
   (D) 1906

158. A clock strikes once at 1 o'clock, twice at 2 o'clock thrice at 3 o'clock and so on. How many times will it strike in 24 hours ?
   (A) 78
   (B) 136
   (C) 156
   (D) 300

159. Which of the following number gives 240 when added to its own square ?
   (A) 15
   (B) 16
   (C) 18
   (D) 20

160. Which of the following does not have solution in integer ?
   (A) $x + 1 = 1$
   (B) $2x - 1 = 3$
   (C) $2x + 1 = 6$
   (D) $1 - x = 5$

161. Number of faces in a cubical shape table is—
   (A) 12
   (B) 6
   (C) 8
   (D) 10

162. Which figure has no line of symmetry ?
   (A) Circle
   (B) A scalene triangle
   (C) An isosceles triangle
   (D) An equilateral triangle

163. Number of radii a circle can have is/are—
   (A) 1
   (B) 2
   (C) 4
   (D) Infinite

164. A man travels 230 km in 6 hours in which he took break for an hour. How much distance he will cover if he travels for 8 hours non-stop ?
   (A) 307 km
   (B) 360 km
   (C) 336 km.
   (D) 368 km

165. Kirti had seven tenth of the pizza and her younger brother had two tenth of pizza. How much pizza is still lift ?
   (A) $\frac{1}{5}$
   (B) $\frac{3}{5}$
   (C) $\frac{1}{10}$
   (D) None of these

166. Compute $5555 + 6666 - 8888 - 2222 -$
   (A) 1001
   (B) 1221
   (C) 1111
   (D) 1011

167. If x and y are co-primes, then their LCM and HCF are respectively—
   (A) 1 and xy
   (B) xy and 1
   (C) $\frac{x}{y}$ and 1
   (D) 1 and $\frac{x}{y}$

168. The following figures are formed by joining six unit squares. Which figure has the smallest perimeter—

   1.
   2.
   3.
   4.

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

169. The side of a square is 10 cm. How many times will the new perimeter becomes if the side of the square is doubled ?
   (A) 2 times
   (B) 4 times
   (C) 6 times
   (D) 8 times

170. A tetrahedron is a pyramid whose base is—
   (A) Triangle
   (B) Square
   (C) Rectangle
   (D) Quadrilateral

171. If a bicycle wheel has 36 spokes, then the angle between a pair of adjacent spokes is—
   (A) 10°
   (B) 15°
   (C) 20°
   (D) 12°

172. Through how many right angles does the minute hand moves between 8:00 am and 10:30 am ?
   (A) 8
   (B) 9
   (C) 10
   (D) None of these

173. Two numbers are in the ratio 3 : 5 and their sum is 96. The larger number is—
    (A) 36   (B) 42
    (C) 60   (D) 70

174. In a room there are x^2 rows of chairs and each row contains $2x^2$ chairs. The total number of chairs in the room is—
    (A) $2x^3$ (B) $2x^4$
    (C) $\frac{x^4}{2}$ (D) x^4

175. Line segment joining the vertices to the mid points of the opposite sides of a triangle are known as—
    (A) Altitude
    (B) Perpendicular bisector
    (C) Angle bisectors
    (D) Medians

Directions—(Q. 176–180) In the questions given below, a series is given in which one term is missing. Choose the correct alternative from the given ones that will complete the series.

176. DF, GJ, KM, NQ, RT, ?
    (A) UX   (B) UW
    (C) YZ   (D) XZ

177. CX, FU, IR, ?, OL, RI
    (A) LO   (B) MN
    (C) NO   (D) OP

178. OTE, PUF, QVG, RWH, ?
    (A) SYJ   (B) TCI
    (C) SXJ.   (D) SXI

179. EAC, GCE, IEG, ?
    (A) JHI   (B) JGI
    (C) KGI   (D) KIJ

180. EJO, TYD, INS, XCH, ?
    (A) NRW   (B) MRW
    (C) MSX   (D) NSW

Directions—(Q. 181–185) In each of the following question, find the odd word from the given alternatives.

181. (A) Black pepper   (B) Chilli
    (C) Salt   (D) Coriander

182. (A) Mica·   (B) Zinc
    (C) Chlorine   (D) Aluminium

183. (A) Table   (B) Chair
    (C) Cupboard   (D) Computer

184. (A) Red   (B) Pink
    (C) Blue   (D) Yellow

185. (A) Bat   (B) Spider
    (C) Mosquito   (D) Butterfly

Directions—(Q. 186–190) In the questions given below, a series is given in which one number is missing.

Choose the correct alternative from the given ones that will complete the series.

186. 0, 2, 6, 12, ?, 30, 42
    (A) 18   (B) 20
    (C) 22   (D) 24

187. 5, 7, 11, 19, 35, 67, ?, 259
    (A) 119   (B) 89
    (C) 212   (D) 131

188. 33, 28, 24, ?, 19, 18
    (A) 21   (B) 23
    (C) 17   (D) 22

189. 6, 10, 18, 34, ?
    (A) 66   (B) 56
    (C) 42   (D) 63

190. 4, 8, 12, 24, 36, ?
    (A) 40   (B) 67
    (C) 76   (D) 72

Directions—(Q. 191–200) In the questions given below, select the related letters/words/numbers from the given alternatives.

191. Volume : Litre :: Area : ?
    (A) Hectare   (B) Degree
    (C) Radian   (D) Newton

192. Candle : wax :: Paper : ?
    (A) Wood   (B) Tree
    (C) Bamboo   (D) Pulp

193. Wimbledon Trophy : Tennis :: Walker's cup : ?
    (A) Hockey   (B) Polo
    (C) Golf   (D) Wrestling

194. Producer : Film :: Author : ?
    (A) Food   (B) Newspaper
    (C) Book   (D) Poem

195. Pen : Author :: sword : ?
    (A) Carpenter   (B) Warrior
    (C) Tailor   (D) Farmer

196. Eye : Myopia :: Teeth : ?
    (A) Pyorrhoea   (B) Cataract
    (C) Trachoma   (D) Eczema

197. Ottawa : Canada :: Canberra : ?
    (A) Argentina   (B) Switzerland
    (C) Sri Lanka   (D) Australia

198. Race : Fatigue :: Fast : ?
    (A) Hunger   (B) Sleep
    (C) Energy   (D) Disease

199. Virology : Virus :: Entomology : ?
    (A) Insects   (B) Animals
    (C) Fungi   (D) Fishes

200. Genuine : Authentic :: Mirage : ?

    (A) Image   (B) Transpiration

    (C) Reflection   (D) Illusion

96. (B) 15 January

97. (D) Ester Staubee

98. (B) Kochi

99. (B) Godavari

100. (B) Madhya Pradesh

101. (C) $(-1)^7 = -1$

As 7 is the odd power on (-1).

102. (C) ·02

Place value of 2 in 1·321.

103. (B) 40% of 50 $= \dfrac{40 \times 50}{100}$

$= 20$

104. (*) $\sqrt{7\dfrac{1}{9}} = \sqrt{\dfrac{64}{9}}$

$= \dfrac{8}{3}$

$= 2\dfrac{2}{3}$

105. (B) Successor of -4000 is $= -4000 + 1$

$= -3999$

106. (B) 20 minutes : 1 hour

$= 20$ minutes : 60 minutes

$= 1 : 3$

107. (B) $1 + 1 - 1 \times 1 \div 1 = 2 - 1 \div 1$

$= 2 - 1 = 1$

108. (B) Prime numbers between 80 and 100 are 83, 89 and 97.

Average $= \dfrac{83 + 89 + 97}{3}$

$= \dfrac{269}{3} = 89{\cdot}67$

109. (B) Pass marks $= 220 + 11$

$= 231$

Pass percentage $= \dfrac{231 \times 100}{700}$

$= 33\%$

110. (A) $100 - 40 = 60$

Total money in Guddu's pocket $= \dfrac{100 \times 300}{60}$

$= ₹\ 500$

111. (B) Given, $a = 2b = 3c = 12$

$\therefore\qquad a = 12;\ b = 6;\ c = 4$

$a^2 + b^2 + c^2 = 12^2 + 6^2 + 4^2$

$= 144 + 36 + 16$

$= 196$

112. (A) $(a + b)(a^2 - b^2) = (a + b)(a + b)(a - b)$

$= (a + b)^2 (a - b)$

113. (C) $(1 - 3x)(1 + 3x + 9x^2) = 1 - (3x)^3$

$= 1 - 27x^3$

114. (B) $(a + 5) + (9 - 2a) + (a + 15)$

$= a + 5 + 9 - 2a + a + 15$

$= 5 + 9 + 15$

$= 29$

115. (A) $(4abc + 12ab^2c) \div 2ac = \dfrac{4abc}{2ac} + \dfrac{12ab^2c}{2ac}$

$= 2b + 6b^2$

$= 2b(1 + 3b)$

116. (C) Reflex angle

117. (C) 270°.

118. (C) 45°.

119. (C) $x + 2x + 3x = 180°$

$6x = 180°$

$\therefore\qquad x = 30°$

The engles are 30°, 60° and 90° respectively

Hence the triangle is right angied triangle

120. (C) 180°

121. (B) Let the angle be $x°$.

Its supplement $= 180° - x°$

Given, $180° - x = 9x$

$\therefore\qquad 10x = 180°$

$x = 18°$

122. (C) Let two consecutive odd numbers be x and $x + 2$.

$\therefore\qquad x + x + 2 = 16$

$\therefore\qquad 2x = 16 - 2$

$\therefore\qquad 2x = 14$

$\therefore\qquad x = 7$

Consecutive odd numbers are 7 and 9.

123. (C) $\left(x + \dfrac{1}{x}\right)^2 - 4 = x^2 + \dfrac{1}{x^2} + 2 - 4$

$= x^2 + \dfrac{1}{x^2} - 2$

$= \left(x - \dfrac{1}{x}\right)^2$

124. (C)

$$x + 2 \enclose{longdiv}{x^2 + 6x + 8}\ \ x + 4$$
$$\underline{x^2 + 2x}$$
$$4x + 8$$
$$\underline{4x + 8}$$
$$0$$

Remainder $= 0$

125. (B) Area of the given rectangular field

$= (x + y)(x - y)$

$= x^2 - y^2$

126. (C) Place value of 2 in 3124698 $= 20000$

Face value of 2 $= 2$

Difference $= 20000 - 2$

$= 19998$

127. (B) Smallest 5 digit number
128. (D)
129. (D) 86000
130. (B) 10 lakh
131. (A) 1000, 998
132. (A) an even number.
133. (D) $0 \div 0 = 0$ is not true
134. (A) 10
135. (C) 17
136. (D)
137. (B) 3
138. (C) 6
139. (A) 8, 10
140. (C) 75
141. (C) 22222222
142. (B)
143. (D) $1 m^2 = 1000\ dm^2$ is not correct
144. (D) 0·08
145. (C) 107
146. (*) Option (C) or (D)
147. (C) 0·075
148. (C) Associative property
149. (A) 3
150. (B) 0 and 1
151. (D) $\dfrac{9}{15}$
152. (C)   153. (C)
154. (C) $\dfrac{3}{5} = 60\%$
155. (B) $1 + 2 + 3 + 4 + 5 + \ldots\ 50 = \dfrac{50 \times 51}{2}$

Average $= \dfrac{25 \times 51}{50} = \dfrac{51}{2}$

$= 25 \cdot 5$

156. (A) $8^3 \times 8^2 \times 8^{-5} = 8^5 \times 8^{-5}$
$= 8^\circ$
157. (B) $106 \times 106 - 94 \times 94 = 106^2 - 94^2$
$= (106 + 94)(106 - 94)$
$= 200 \times 12$
$= 2400$
158. (D) 300 times
159. (A) Let the number be x

$\therefore$ $x^2 + x = 240$

$\Rightarrow$ $x^2 + x - 240 = 0$

$\Rightarrow$ $x^2 + 16x - 15x - 240 = 0$

$\Rightarrow$ $x(x + 16) - 15(x + 16) = 0$

$\Rightarrow$ $(x + 16)(x - 15) = 0$

$\Rightarrow$ $x = 15$

160. (C) 161. (B) 162. (B) 163. (A)
164. (D) $6 - 1 = 5$

Speed $= \dfrac{230}{5} = 46$ km/hr

Distance moved in 8 hrs $= 46 \times 8$
$= 368$ km

165. (C) $\left(1 - \dfrac{7}{10} - \dfrac{2}{10}\right) = \left(1 - \dfrac{9}{10}\right) = \dfrac{1}{10}$

166. (C) $5555 + 6666 - 8888 - 2222$
$= 12221 - 11110$
$= 1111$

167. (B) xy and 1
168. (A) 169. (A)
170. (A) Triangle
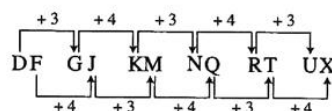171. (A) $\dfrac{360^\circ}{36} = 10^\circ$
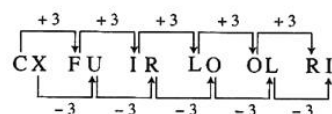172. (B) 9
173. (C) 60
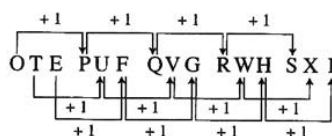174. (B) $2x^4$
175. (D) Median
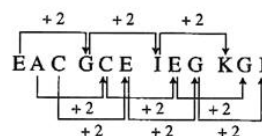176. (A) UX

177. (A) LO

178. (D) SXI

179. (C) KGI

180. (B) MRW

181. (C) Salt
182. (C) Chlorine
183. (D) Computer

184. (B) Pink
185. (A) Bat is a mammal
186. (B) 20

$$0 + 2 = 2$$
$$2 + 4 = 6$$
$$6 + 6 = 12$$
$$12 + 8 = 20$$
$$20 + 10 = 30$$
$$30 + 12 = 42$$

187. (D) 131

$$5 + 2 = 7$$
$$7 + 4 = 11$$
$$11 + 8 = 19$$
$$19 + 16 = 35$$
$$35 + 32 = 67$$
$$67 + 64 = 131$$
$$131 + 128 = 259$$

188. (A) 21

$$33 - 5 = 28$$
$$28 - 4 = 24$$
$$24 - 3 = 21$$

$$21 - 2 = 19$$
$$19 - 1 = 18$$

189. (A) 66

$$6 + 4 = 10$$
$$10 + 8 = 18$$
$$18 + 16 = 34$$
$$34 + 32 = 66$$

190. (D) 72
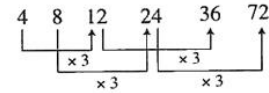
191. (A) **Hectare**—Area is measured in Hectare (Unit).
192. (A) **Wood**—Paper is made of wood.
193. (C) **Golf**—Walker's cup is of Golf.
194. (C) **Book**—Author writes Book.
195. (B) **Warrier**—Sword is used by Warrier.
196. (A) **Pyorrhoea**—Pyorrhoea is a teeth disease.
197. (D) **Australia**—Canberra is the capital of Australia.
198. (A) **Hunger**—We feel hunger after fast.
199. (A) **Insects**—Entomology studies insects.
200. (D) **Illusion**—From Mirage we feel illusion.