PART- I

Directions (1-10): Select the related word/letter/figure/number from the given alternatives.

1. Mechanic : Spanner : : Carpenter : ?
   (a) Tree       (b) Wood
   (c) Furniture  (d) Saw
2. Fish : Gills : : Min : ?
   (a) Ears       (b) Eyes
   (c) Lungs      (d) Nose
   (a) Drink      (b) Dam
   (c) Canal      (d) River
4. AZBY : CXDW : : HSIR : ?
   (a) JQKP       (b) KPLO
   (c) YBXC       (d) TGSH
   (a) GOXF       (b) FOXG
   (c) GOXG       (d) FNWG
6. Question Figures:

Answer Figures:

(a) (b) (c) (d)

7. Question Figures:

Answer Figures:

(a) (b) (c) (d)

8. Question Figures:

Answer Figures:

(a) (b) (c) (d)
9. 16 : 49 : : 100 :?
   (a) 85  (b) 121
   (c) 144  (d) 169

10. 15 : 220 : : 100 :?
    (a) 600  (b) 620
    (c) 625  (d) 650

Directions (11-18): Select the one which is different from the other three responses.

11. (a) Son  (b) Niece
    (c) Grandson  (d) Grand-daughter

12. (a) January  (b) February
    (c) July  (d) December

13. (a) Intelligent  (b) Precis
    (c) Stupid  (d) Comprehensive

14. (a) ZXVT  (b) RPNL
    (c) OMKI  (d) HFDC

15. (a) MONJK  (b) ACAZV
    (c) GMRGS  (d) METEI

16. (a) 19  (b) 25
    (c) 16  (d) 49

17. (a) 26, 119  (b) 35, 513
    (c) 10, 27  (d) 17, 65

18. (a) (b) (c) (d)

19. (a) 6 – 13 – 24
    (b) 12 – 19 – 30
    (c) 18 – 25 – 34
    (d) 24 – 31 – 42

20. A series of figures is given which can be grouped into classes. Select the group into which the figures can be classified from the given responses:

Directions (21-25): In each of the following questions, arrange the following words in a meaningful order:

    3. Infant  4. Embryo
    (a) 1, 3, 2, 4  (b) 4, 1, 3, 2
    (c) 4, 3, 2, 1  (d) 3, 1, 4, 2

22. 1. Plastering  2. Painting
    3. Foundation  4. Walls
    5. Ceiling
    (a) 3, 4, 1, 2, 5  (b) 1, 2, 3, 4, 5
    (c) 5, 4, 3, 2, 1  (d) 3, 4, 5, 1, 2

Directions (23-30): A series is given with one term missing. Choose the correct alternative from the given one that will complete the series.

23. Z3a, W5a, T8g, Q12j, ?
    (a) M16n  (b) N17m
    (c) N16k  (d) K17n

24. DGJ, FLN, HKN, JMP, ?
    (a) LON  (b) LOR
    (c) LOQ  (d) LOM
25. 321, 301, ?, 181, 21
   (a) 281 (b) 161
   (c) 241 (d) 261
26. 2816, ?, 176, 44, 11
   (a) 704 (b) 1408
   (c) 352 (d) 2640
27. Question Figure
   (a) (b) (c) (d)
28. Question Figure
   (a) (b) (c) (d)
29. Question Figures:
   Answer Figures:
   (a) (b) (c) (d)
30. Question Figures:
   Answer Figures:
   (a) (b) (c) (d)
31. In a row of children, Harish is eleventh from the left and Mangesh is seventeenth from the right. When they exchange their places, Harish will be thirteenth from the left. Which of the following will be the new position of Mangesh from the right?
   (a) Eleventh (b) Twenty-first
   (c) Nineteenth (d) Twenty-ninth
32. A is the son of B, while B and C are sisters to one another. E is the mother of C. If D is the son of E, which of the following statements is correct?
   (a) D is the maternal uncle of A
   (b) E is the brother of B
   (c) D is the cousin of A
   (d) B and D are brothers
33. Question Figure
   Answer Figures
   (a) (b) (c) (d)
34. If BOMBAY is coded as FSQFEC, which 
word could be coded as QCWSVI?
(a) MANDYA  (b) MANDAL  
(c) MYSORE (d) MYSOER

35. If D = 4 and READ is coded as 7, then 
what is HEAR coded as?
(a) 32  (b) 33  
(c) 7  (d) 8

36. Some equations are solved on the basis of 
a certain system. On the same basis, find 
out the correct answer from amongst the 
four alternatives for the unsolved equation:
72 × 96 = 6927
58 × 87 = 7885
79 × 86 = ?
(a) 7689  (b) 8976  
(c) 6897  (d) 6978

37. If ‘+’ means ‘×’, ‘−’ means ‘+’, ‘×’ means 
‘−’, ‘−’ means ‘÷’, then what will be the 
value of the following?
20 + 4 × 6 − 5 = ?
(a) 28  (b) 32  
(c) 34  (d) 36

Directions (38-40): Select the missing number 
from the given responses.

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<th>12</th>
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<td>16</td>
<td>?</td>
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38. 50  110  84
(a) 11  (b) 12  
(c) 14  (d) 18

39. 144 (132) 121
64  (?)  100
(a) 70  (b) 80  
(c) 85  (d) 90

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(a) MANDYA  (b) MANDAL  (c) MYSORE (d) MYSOER

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20 + 4 × 6 − 5 = ?
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Directions (38-40): Select the missing number from the given responses.

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38. 50  110  84
(a) 11  (b) 12  (c) 14  (d) 18

39. 144 (132) 121
64  (?)  100
(a) 70  (b) 80  (c) 85  (d) 90
45. The diagram gives the number of candidates who failed in Chemistry, Electronics and English in different tests. The total number of candidates appeared was 600. What is the percentage of candidates who failed in at least two subjects?

Chemistry  
Electronics  
English

- (a) 12.5  
- (b) 1.25  
- (c) 12.05  
- (d) 12

46. Find out which of the diagrams as given in the alternatives correctly represents the relationship among Employers, Doctors and Women

47. In this question, a statement is given followed by four alternative inferences. Select the one which is most appropriate.

Statement: A large number of language specialists write novels.

Inferences:

- (A) Some language specialists do not write novels  
- (B) A novelist need not be a language specialist  
- (C) Language specialty is highly helpful to write novels  
- (D) All novelists are language specialists

48. In this question, a statement is given followed by two conclusions I and II. You have to consider the statement to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow(s) from the given statement.

Statement: Industries destroy the natural resources.

Conclusions:

I. All natural resources are destroyed by industries.
II. No industries, no environmental pollution.

- (a) Only I follows  
- (b) Only II follows  
- (c) Neither I nor II follows  
- (d) Both I and II follow

49. Which answer figure will complete the pattern in the question figure?

Question Figure:

Answer Figures:
50. From the given answer figures, select the one in which the question figure is hidden/embedded?

Question Figure:

Answer Figures:

(a) (b) (c) (d)
54. A fall in demand or rise in supply of a commodity-
   (a) increase the price of that commodity
   (b) decrease the price of that commodity
   (c) neutralises the changes in the price
   (d) determines the price elasticity

55. Planning Commission of India was established in
   (a) 1947  (b) 1950
   (c) 1951  (d) 1949

56. How many types of emergencies are envisaged by the Constitution?
   (a) 1  (b) 2
   (c) 3  (d) 4

57. Who calls the Joint Session of the two Houses of the Parliament?
   (a) The President  (b) The Prime Minister
   (c) The Lok Sabha Speaker  (d) The Vice-President

58. In which year, Gandhiji established Sabarmati Ashram in Gujarat?
   (a) 1916  (b) 1917
   (c) 1918  (d) 1929

59. No confidence Motion against the Union Council of Minister can be initiated
   (a) in the Rajya Sabha only
   (b) in the Lok Sabha only
   (c) in the Lok Sabha and Rajya Sabha
   (d) in the State Assemblies

60. Which constitutional Amendment deleted the Right to Property from the list of Fundamental Rights?
   (a) 42nd Amendment
   (b) 62nd Amendment
   (c) 44th Amendment
   (d) 43rd Amendment
<table>
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<tr>
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</tr>
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<tbody>
<tr>
<td>61. Most of the Chola temples were dedicated to</td>
<td>(a) Vishnu (b) Shiva (c) Brahma (d) Durga</td>
</tr>
<tr>
<td>62. Where was the First Session of Indian National Congress held?</td>
<td>(a) Bombay (b) Madras (c) Calcutta (d) Delhi</td>
</tr>
<tr>
<td>63. In the Gupta period, the largest number of coins were issued in</td>
<td>(a) gold (b) silver (c) copper (d) iron</td>
</tr>
<tr>
<td>64. The tax which the kings used to collect from the people in the Vedic period was called -</td>
<td>(a) Bali (b) Vidatha (c) Varman (d) Kara</td>
</tr>
<tr>
<td>65. Buddha preached his first sermon at -</td>
<td>(a) Gaya (b) Sarnath (c) Pataliputra (d) Vaishali</td>
</tr>
<tr>
<td>66. Which one of the following is not the result of underground water action?</td>
<td>(a) Stalactites (b) Stalagnmites (c) Sinkholes (d) Fiords</td>
</tr>
<tr>
<td>67. Grassland is called “pampas” in</td>
<td>(a) Africa (b) South America (c) the United Kingdom (d) the USA</td>
</tr>
<tr>
<td>68. The coastal part of water bodies of the oceans which is structurally part of the mainland of the continents is called</td>
<td>(a) isthumus (b) oceanic ridge (c) continental shelf (d) continental slope</td>
</tr>
<tr>
<td>69. Anemometer is used to measure</td>
<td>(a) wind direction (b) wind velocity (c) pressure gradient (d) wind speed and time</td>
</tr>
<tr>
<td>70. Marina Trench is found in</td>
<td>(a) Atlantic Ocean (b) Pacific Ocean (c) Indian Ocean (d) Arctic Ocean</td>
</tr>
<tr>
<td>71. Which cells in our body have the least regenerative power?</td>
<td>(a) Brain cells (b) Muscle cells (c) Bone cells (d) Liver cells</td>
</tr>
<tr>
<td>72. A potato tuber has been cut into two halves. A few drops of iodine solution are placed on the cut surface of one of the halves. What colour change will be noticed?</td>
<td>(a) From brow to blue-black (b) From brown to orange-red (c) From blue to pink (d) From pink to blue-green</td>
</tr>
<tr>
<td>73. How many values does a human heart have?</td>
<td>(a) Four (b) Three (c) Two (d) One</td>
</tr>
<tr>
<td>74. The cells which are responsible for the production of antibodies are</td>
<td>(a) red blood cells (b) neutrophils (c) lymphocytes (d) platelets</td>
</tr>
</tbody>
</table>
75. The source of the enzyme, diastase is
   (a) salivary gland
   (b) stomach
   (c) liver
   (d) pancreas

76. Mycoplasma is associated with a disease that affects the organs of
   (a) respiration  (b) excretion
   (c) reproduction  (d) digestion

77. Which one of the following has the highest value of specific heat?
   (a) Glass  (b) Copper
   (c) Lead  (d) Water

78. The device used for locating submerged objects under sea is.
   (a) sonar  (b) radar
   (c) laser  (d) maser

79. The metal whose electrical conductivity is more, is
   (a) copper  (b) aluminum
   (c) silver  (d) lead

80. What happens to a liquid, when the vapour pressure equals the atmospheric pressure?
   (a) The liquid cools
   (b) The liquid boils
   (c) No change
   (d) The liquid evaporates

81. Seaweeds are important source of
   (a) fluorine  (b) chlorine
   (c) bromine  (d) iodine

82. In nuclear reactor, heavy water is used as
   (a) coolant  (b) fuel
   (c) moderator  (d) atomic smasher

83. Which one of the following pairs is correctly matched?
   (a) Tetanus-BCG
   (b) Tuberculosis-ATS
   (c) Malaria-Chloroquin
   (d) Scurvy-Thiamin

84. Tear gas used by the police to disperse the mob contains
   (a) carbon dioxide
   (b) chlorine
   (c) ammonia
   (d) hydrogen sulphide

85. Correct expansion of the term ‘http’ in Internet address is
   (a) higher text transfer protocol
   (b) higher transfer text protocol
   (c) hybrid text transfer protocol
   (d) hypertext transfer protocol

86. Which of the following is a Navaratna PSE?
   (a) Steel Authority of India Ltd.
   (b) MMTC Ltd.
   (c) National Aluminum Company Ltd.
   (d) Oil India Ltd.

87. ‘World AIDS Day’ is observed on
   (a) 1st January  (b) 1st April
   (c) 1st September (d) 1st December

88. Who was (is) the first lady recipient of Dada Saheb Phalke Award?
   (a) Nargis Dutt
   (b) Uma Devi
   (c) Devika Rani
   (d) Sulochana

89. Out of the following artists, who has written the book, *Meandering pastures of Memories?*
   (a) Shovana Narayan
   (b) Saroja Vaidyanathan
90. Out of the following Indian States, which State does not have any maritime boundary? (a) Gujarat (b) Goa (c) Rajasthan (d) Maharashtra

91. With which brand of product, is the slogan ‘Just do it’ associated? (a) Bata (b) Power (c) Woodland (d) Nike

92. With which of the following books, is Dr. S. Radhakrishnan associated? (A) An Idealist View of Life (B) Bhagavad Gita (C) Conquest of self (D) Hindu View of Life (a) A, B, and C only (b) B, C and D only (c) A, C and D only (d) A, B and D only

93. The Headquarters of International Court of Justice is located in (a) Paris (France) (b) Geneva (Switzerland) (c) New York (USA) (d) The Hague (Netherlands)

94. ‘Subroto Cup’ is associated with which game/sports? (a) Hockey (b) Football (c) Basketball (d) Badminton

95. The first talkie film in India was (a) Raja Harishchandra (b) Alam Ara (c) Chandida (d) Jhansi Ki Rani

96. Who holds the record for scoring the highest number of runs (individuals) in One-day Cricket World Cup Tournaments? (a) S. Gavugly (b) S. Tendulkar (c) B. Lara (d) G. Kirsten

97. Which is the field in which Ustad Bismillah Khan has distinguished himself? (a) Sitar (b) Guitar (c) Shahnai (d) Hindustani Music (Classical-Vocal)

98. Where is the Baba Imambara located? (a) Agra (b) Lucknow (c) Patna (d) Allahabad

99. What does the open market operation of the RBI mean? (a) Buying and selling shares (b) Auctioning of foreign exchange (c) Trading in securities (d) Transaction in gold

100. ‘Consumer Day’ is celebrated every year on (a) 1st April (b) 23rd April (c) 15th March (d) 5th December
ANSWER SHEET

51. (c)  52. (a)  53. (c)  54. (b)  55. (b)  56. (c)  57. (a)  58. (b)  59. (b)  60. (c)
61. (b)  62. (a)  63. (a)  64. (a)  65. (b)  66. (d)  67. (b)  68. (c)  69. (b)  70. (b)
71. (a)  72. (a)  73. (c)  74. (c)  75. (a)  76. (a)  77. (d)  78. (a)  79. (c)  80. (b)
81. (d)  82. (c)  83. (c)  84. (b)  85. (d)  86. (d)  87. (d)  88. (c)  89. (a)  90. (c)
91. (d)  92. (d)  93. (d)  94. (b)  95. (b)  96. (c)  97. (c)  98. (b)  99. (c)  100. (c)
PART-III

ENGLISH LANGUAGE

Directions (101-105): In the following questions, some of the sentences have errors and some have none. Find out which part of a sentence has an error. The number of that part is your answer. If there is no error, your answer (4) i.e. No error.

101. (a) They agreed
    (b) to repair the damage
    (c) freely of charge
    (d) No error

102. (a) When Darun heard the news that his father had been hospitalised
    (b) he cancelled his trip
    (c) and returned back to his village
    (d) No error

103. (a) The Governing Board
    (b) comprises of
    (c) several distinguished personalities
    (d) No error

104. (a) My uncle does not spend
    (b) so much money on that house
    (c) unless he thinks of moving in soon
    (d) No error

105. (a) Neither my sister nor my brother
    (b) are interested
    (c) in moving to another house
    (d) No error

Directions (106-110): In the following sentences are given with blanks to be filled in with the appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four.

106. If I ____ a doctor, I would serve the poor.
    (a) am
    (b) had been
    (c) were
    (d) was

107. He is weak ____ he does a lot of work.
    (a) and
    (b) yet
    (c) because
    (d) so

108. Mahesh showed an ____ for sports at a very early stage.
    (a) attitude
    (b) aptitude
    (c) imagination
    (d) intuition

109. For ____ sake don’t tell it to others.
    (a) haven
    (b) heaven
    (c) heavens
    (d) heven’s

110. Napoleon’s army ____ to the Russian soldiers without any flight.
    (a) evaded
    (b) decimated
    (c) capitulated
    (d) cordoned

Directions (111-115): In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

111. Supersede
    (a) suspend
    (b) enforce
    (c) repeal
    (d) set aside

112. Perilous
    (a) monstrous
    (b) dangerous
    (c) cautious
    (d) dubious

113. Affluence
    (a) richness
    (b) difficulty
    (c) influence
    (d) awkwardness

114. Bifurcated
    (a) dissected into pieces
    (b) divided into two
    (c) thoroughly evaluate
    (d) verbally abused

115. Consensus
    (a) unanimity
    (b) equanimity
    (c) magnanimity
    (d) proximity

Directions (116-120): In the following questions, choose the word opposite in meaning to the given word.

116. Salient
    (a) correct
    (b) insignificant
    (c) central
    (d) convenient

117. Dormant
    (a) strong
    (b) reveal
    (c) disguise
    (d) pretended
118. Camouflage
(a) hide (b) reveal
(c) disguise (d) pretended

119. Latent
(a) primitive (b) evident
(c) potent (d) talented

120. Ample
(a) meagre (b) quantitative
(c) sufficient (d) tasty

Directions (121-125): In the following questions, four alternative are given for the idiom/phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the idiom/phrase.

121. He is always praised for his gift of the gab.
(a) being lucky
(b) getting something free
(c) talent for speaking
(d) great skill

122. The teacher’s extra hours of coaching went a long way in improving the student’s performance.
(a) took great effort
(b) spent a lot of time
(c) extended widely
(d) helped considerably

123. The administration found it difficult to cope with the striking employees.
(a) move (b) compromise
(c) handle (d) subdue

124. The criminal was pardoned at the eleventh hour just as the was about to be hanged.
(a) at eleven o’clock
(b) suddenly
(c) at the very last moment
(d) at midnight

125. He spoke well though it was his maiden speech.
(a) long speech (b) brief speech
(c) first speech (d) emotional speech

Directions (126-130): In the following questions, apart of the sentences is underlined. Below are given alternatives to the underlined part at (1), (2) and (3), which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (4).

126. He was released from the hospital yesterday
(a) let out (b) discharged
(c) dismissed (d) No improvement

127. The colours softened as the sum went down.
(a) brightened (b) deepened
(c) mellowed (d) No improvement

128. The new manager is soft – spoken and is considerable to all.
(a) conceited (b) considerate
(c) constricted (d) No improvement

129. He hanged his portrait is the main hall.
(a) hang (b) hung
(c) had hanged (d) No improvement

130. We were unable to call on you because of the rains.
(a) help (b) invite
(c) visit (d) No improvement

Directions (131-135): In the following questions, a group of four alternatives is given. Choose the one which can be substituted for the given words/sentences.

131. To feel or express disapproval of something or someone.
(a) declare (b) deprive
(c) depreciate (d) deprecate
132. Handwriting that cannot be read
   (a) ineligible  (b) decipher
   (c) ugly  (d) illegible
133. Animals that can live on land and in water
   (a) anthropoids  (b) aquatics
   (c) amphibia  (d) aquarians
134. Easily duped or fooled
   (a) insensible  (b) perceptible
   (c) gullible  (d) indefensible
135. Fear of water
   (a) claustrophobia  (b) hydrophobia
   (c) insomnia  (d) obsession

Directions (136-140): In the following question, groups of four words are given. In each group, one word is correctly spelt. Find the correctly spelt word.

136. (a) despondant  (b) detrimental
   (c) diaphanous  (d) dilapidated
137. (a) separate  (b) confidance
   (c) reference  (d) prosperous
138. (a) reprimand  (b) resplendent
   (c) respository  (d) requisite
139. (a) nectar  (b) necassary
   (c) punctuation  (d) punjent
140. (a) irrelevance  (b) maintence
   (c) exuberance  (d) acquaintance

Directions (141-150): In the following passage, some of the words have been left out. First read the passage over and try to understand what it is about. The fill in the blanks with the help of the alternatives given.

PASSAGE

141. the common 142. the ostrich does not bury its head in the sand to 143. danger. A ostrich can run 144. a speed of forty–five miles 145. hour, kick powerfully and 146. aggressively 147. its break. As the 148. and fastest bird in the world, it 149. need to 150. its head.

141. (a) In keeping with  (b) As per  (c) According to  (d) Contrary to
142. (a) fact  (b) view
   (c) expectation  (d) belief
143. (a) resist  (b) avoid
   (c) face  (d) encounter
144. (a) with  (b) for
   (c) at  (d) to
145. (a) one  (b) per
   (c) a  (d) every
146. (a) peck  (b) play
   (c) push  (d) poke
147. (a) on  (b) through
   (c) with  (d) by
148. (a) larger  (b) largest
   (c) more large  (d) largest
149. (a) doesn’t  (b) did
   (c) does  (d) didn’t
150. (a) put  (b) cover
   (c) shield  (d) bury
ANSWER SHEET

101. (c) 102. (c) 103. (b) 104. (a) 105. (d) 106. (c) 107. (b) 108. (b) 109. (d) 110. (c)
111. (c) 112. (b) 113. (a) 114. (b) 115. (a) 116. (a) 117. (d) 118. (b) 119. (d) 120. (a)
121. (c) 122. (d) 123. (c) 124. (c) 125. (c) 126. (b) 127. (b) 128. (b) 129. (b) 130. (b)
131. (d) 132. (d) 133. (c) 134. (c) 135. (b) 136. (d) 137. (d) 138. (b) 139. (d) 140. (c)
141. (d) 142. (d) 143. (d) 144. (c) 145. (b) 146. (a) 147. (c) 148. (b) 149. (a) 150. (d)
151. If $\sqrt[3]{3} = 1.732$, is given, then the value of $\frac{2\sqrt{3}}{2\sqrt[3]{3}}$ is
(a) 11.732 (b) 13.928 (c) 12.928 (d) 13.925

152. $\left(\sqrt{2} + \sqrt[3]{2\sqrt[3]{10}}\right)$ is equal to
(a) $\sqrt{2}$ (b) $\sqrt{7}$ (c) $\sqrt[5]{5}$ (d) $\sqrt[5]{2}$

153. The number, which is to be added to 0.01 to get 1.1, is
(a) 1.11 (b) 1.09 (c) 1 (d) 0.10

154. If $n + \sqrt{n + 2} + \sqrt{n} = 97$ then the value of $n$ is
(a) 40 (b) 42 (c) 44 (d) 46

155. 25, 50, 30, 45, 35, 40, ?
(a) 30 (b) 35 (c) 40 (d) 45

156. $[1 \times 2 + 2 \times 3 + 3 \times 4 + 4 \times 5 + 5 \times 6 + 6 \times 7 + 7 \times 8 + 8 \times 9 + 9 \times 10 + 10 \times 11]$ is equal to
(a) 770 (b) 660 (c) 440 (d) 330

157. $\left[(7^1 - 8^1)^{-1} - (3^1 - 4^1)^{-1}\right]$ is equal to
(a) 56 (b) 44 (c) 50 (d) 48

158. If $x, y$ and $z$ are real numbers such that $(x-3)^2 + (y-4)^2 + (z-5)^2 = 0$ then $(x + y + z)$ is equal to
(a) -12 (b) 0 (c) 8 (d) 12

159. $[2^2 + 3^2 + 4^2 + 5^2 + 6^2 + 7^2 + 8^2 + 9^2 + 10^2]$ is equal to
(a) 385 (b) 2916 (c) 540 (d) 384

160. The value of
\[
\frac{137 \times 137 + 137 \times 122 + 133 \times 133}{137 \times 137 - 133 \times 133}
\]
166. If the lengths of the three sides of a triangle are 6 cm, 8 cm and 10 cm, then the length of the median to its greatest side is
(a) 8 cm  (b) 6 cm  (c) 5 cm  (d) 4.8 cm

167. The circumference of a circle is 11 cm and the angle of a sector of the circle is $60^\circ$. The area of the sector is (use $\pi = \frac{22}{7}$)
(a) $\frac{29}{148}$ cm$^2$  (b) $\frac{29}{248}$ cm$^2$
(c) $\frac{27}{148}$ cm$^2$  (d) $\frac{27}{248}$ cm$^2$

168. The perimeter of a rhombus is 100 cm. If one of its diagonals is 14 cm, then the area of the rhombus is
(a) 144 cm$^2$  (b) 225 cm$^2$
(c) 336 cm$^2$  (d) 400 cm$^2$

169. The surface areas of two spheres are in the ratio 4 : 9. Their volumes will be in the ratio
(a) 2 : 3  (b) 4 : 9
(c) 8 : 27  (d) 64 : 729

170. The height of the cone is 30 cm. A small cone is cut off at the top by a plane parallel to its base. If its volume is $\frac{1}{27}$ of the volume of the cone, at what height, above the base, is the section made?
(a) 6 cm  (b) 8 cm
(c) 10 cm  (d) 20 cm

171. The discount series 10%, 20%, 40% is equivalent to a single discount of
(a) 50%  (b) 56.8%
(c) 60%  (d) 62.28%

172. A train is travelling at the rate of 45 km/hr. How many seconds, it will take to cover a distance of $5\frac{4}{5}$ km?
(a) 36  (b) 64
(c) 90  (d) 120

173. A shopkeeper allows 4% discount on his marked price. If the cost price of an article is Rs. 100 and he has to make a profit of 20%, then his marked price must be
(a) Rs. 96  (b) Rs. 120
(c) Rs. 125  (d) Rs. 130

174. If $A : B = 3 : 5$ and $B : C = 4 : 7$, Then $A : B : C$ is
(a) 6 : 9 : 14  (b) 3 : 5 : 7
(c) 12 : 20 : 21  (d) 12 : 20 : 35

175. If $\frac{a}{2} = \frac{b}{3} = \frac{c}{5}$, then $\frac{a+b+c}{c}$ is equal to
(a) 2  (b) 4
(c) 5  (d) 6

176. The ratio of the quantities of sugar, in which sugar costing Rs. 20 per kg. and Rs. 15 per kg. should be mixed so that there will be neither loss nor gain on selling the mixed sugar at the rate of Rs. 16 per kg. is
(a) 2 : 1  (b) 1 : 2
(c) 4 : 1  (d) 1 : 4

177. A sum of Rs 86, 700 is to be divided among A, B and C in such a manner that for every rupee that A gets, B gets 90 paise and for every rupee that B gets, C gets 100 paise. B’s share will be
(a) Rs. 26, 010  (b) Rs. 27, 000
(c) Rs. 28, 000  (d) Rs. 28, 090

178. Two types of alloys posses gold and silver in the ratio of 7 : 22 and 21 : 37. In what ratio should these alloys be mixed so as to have a
new alloy in which gold and silver would exist in the ratio 25 : 62?
(a) 13 : 8  (b) 8 : 13  
(c) 13 : 12  (d) 6 : 9
179. The average of consecutive odd numbers is 53. The least odd number is
(a) 22  (b) 27  
(c) 35  (d) 45
180. The average age of group of 20 girls is 15 years and that of another group of 25 boys it is 24 years. The average age of the two groups mixed together is
(a) 19.5 years  (b) 20 years  
(c) 21 years  (d) 21.5 years
181. Five years ago, the average age of P, Q and R was 25 years and seven years ago, the average age of Q and R was 20 years. The present age of P is
(a) 36 years  (b) 29 years  
(c) 24 years  (d) 21 years
182. The average per day income of A, B and C is Rs. 450. If the average per day income of A and B be Rs. 400 and that of B and C be Rs. 430, the per day income of B is
(a) Rs. 300  (b) Rs. 310  
(c) Rs. 415  (d) Rs. 425
183. A man sold an article at a loss of 20%. If he had sold it for Rs. 50 more, he would have gained 5%. The cost price of the article was
(a) Rs. 250  (b) Rs. 300  
(c) Rs. 180  (d) Rs. 200
184. By selling 14 watches of equal cost price at the rate of Rs. 450 each, there is a profit equal to the cost price of 4 watches. The cost price of a watch is
(a) Rs. 350  (b) Rs. 360  
(c) Rs. 375  (d) Rs. 400
185. A person bought two articles A and B for Rs 5,500. He sold A at 20% profit and B at 10% loss. He thus gained 2% on his outlay. The cost price of A was
(a) Rs. 3,000  (b) Rs. 2,500  
(c) Rs. 2,000  (d) Rs. 3,500
186. If the total cost of 73 articles having equal cost is Rs. 5,110 and the total selling price of 89 such articles is Rs. 5,607, then in the transaction, there will be
(a) a loss of 15%  (b) a gain of 10%  
(c) a loss of 10%  (d) a gain of 15%
187. What was the percentage increase of disbursement of loans of all banks together from 1997 to 1998 ?
(a) 6%  (b) \( \frac{22}{113} \% \)  
(c) \( \frac{611}{113} \% \)  (d) \( \frac{11}{113} \% \)
188. Nitin’s salary was reduced by 10% and then the reduced salary was increased by 10%. His new salary in comparison with his original salary is
(a) the same  (b) 1% more  
(c) 1% less  (d) 5% less
189. The number of seats in a cinema hall is increased by 25%. The cost of each ticket is also increased by 10%. The effect of these changes on the revenue collection will be an increase of
(a) 37.5%  (b) 45.5%  
(c) 47.5%  (d) 29.5%
190. A man spends 40% of his monthly salary on food and one-third of the remaining on transport. If he saves Rs. 4,500 per month,
which is equal to half the balance after spending on food and transport, his monthly salary is

(a) Rs. 11,250  (b) Rs. 22,500
(c) Rs. 25,000  (d) Rs. 45,000

191. If 80% of a number added to 80 gives the result as the number itself, then the number is

(a) 200  (b) 320
(c) 400  (d) 480

192. A bus moving as a speed of 45 km/hr overtakes a truck 150 meters ahead going in the same direction in 30 seconds. The speed of the truck is

(a) 27 km/hr  (b) 24 km/hr
(c) 25 km/hr  (d) 28 km/hr

193. A train crosses a pole in 15 seconds and a 100 meters long platform in 25 seconds. The length of the trains is

(a) 125 m  (b) 130 m
(c) 150 m  (d) 175 m

194. In how much time, will a sum of money become double of itself at 15% per annum simple interest?

(a) \( 6 \frac{1}{4} \) years  (b) \( 6 \frac{1}{4} \) years
(c) \( 6 \frac{1}{3} \) years  (d) \( 6 \frac{2}{3} \) years

195. The difference between compound and simple interest on a sum of money for 2 years at 8% per annum is Rs 768. The sum is

(a) Rs. 1,00,200  (b) Rs. 1,30,000
(c) Rs. 1,20,000  (d) Rs. 1,02,000

196. The difference between compound interest on Rs. 5,000 for \( \frac{1}{4} \) years at 8% per annum, according as the interest in payable half-yearly or yearly is

(a) Rs. 8.16  (b) Rs. 8
(c) Rs. 4.08  (d) Rs. 4

Directions (197-200): The pie-chart given below shows the marks obtained by a student in an examination. If the total marks obtained by him in the examination were 540, answer the questions given below based on this pie chart.

197. In which subject, did the student obtain 105 marks?
   (a) Maths  (b) Social studies
   (c) Science  (d) Hindi

198. What is the central angle corresponding of Science?
   (a) 40°  (b) 80°
   (c) 75°  (d) 60°

199. How many more marks were obtained by the student in Maths than those in Hindi?
   (a) 30  (b) 20
   (c) 10  (d) 40

200. How many marks were obtained by the student in Science?
   (a) 130  (b) 120
   (c) 125  (d) 140
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