PART-I

GENERAL INTELLIGENCE

Directions (1-9): In each of the following questions select the related letter / word / number / figure from the given alternatives.

1. 83 : 25 : : 29 : ?
   (a) 25 (b) 16
   (c) 49 (d) 36

2. VXZ : JLN : : GIK : ?
   (a) QSO (b) QRS
   (c) OQS (d) LMO

3. ABZY : CDXW : : EFVU : ?
   (a) IJRQ (b) KLPO
   (c) MNST (d) GHTS

   (a) Crew (b) Host
   (c) Airport (d) Aircraft

5. NUMBER : UNBMRE : : GHOST : ?
   (a) HOGST (b) HOGTS
   (c) HGOTS (d) HGSOT

6. 6 : 35 : : 7 : ?
   (a) 48 (b) 42
   (c) 34 (d) 13

   (a) Plague (b) Death
   (c) Malaria (d) Sting

8. 4 : 24 : : 17 : ?
   (a) 37 (b) 47
   (c) 57 (d) 67

   (a) Heat (b) Radiation
   (c) Energy (d) Temperature

Directions (10-18): In each of the following questions select the one which is different from the other three responses.

10. (a) BGNI (b) CHOJ
    (c) DIPL (d) EJQL

11. (a) 20 – 36 (b) 30 – 46
    (c) 50 – 56 (d) 60 – 65

12. (a) September (b) April
    (c) November (d) January

13. (a) MKO (b) QSO
    (c) VTX (d) DBF

14. (a) (48, 6) (b) (21, 7)
    (c) (24, 3) (d) 56, 7)
15. (a) Carbon  (b) Graphite  
    (c) Diamond  (d) Gold  
16. (a) 49  (b) 140  
    (c) 112  (d) 97  
17. (a) XRMKL  (b) XRMIF  
    (c) XRNLJ  (d) XSNLJ  
18. (a) Iron  (b) Mercury  
    (c) Silver  (d) Gold  
19. Which one set of letters when sequentially 
    placed at the gaps in the given letter series 
    shall complete it? 
    a _ b _ b _ a _ b _ _ b a 
    (a) b b a a b  
    (b) b b a b b  
    (c) a a b a b  
    (d) a a b b a  

Directions (20-24): A series is given with one term 
missing. Choose the correct alternative from the given 
one that will complete the series.  
20. 15, 17, 20, 22, 29, ?, ?  
    (a) 31, 38  (b) 36, 38  
    (c) 36, 43  (d) 38, 45  
21. 6, ?, 15, 27, 51, 99  
    (a) 10  (b) 9  
    (c) 11  (d) 12  
22. 2, 5, 8, 11, 14, ?  
    (a) 17  (b) 16  
    (c) 15  (d) 18  
23. BDF, KMO, TVX, ?  
    (a) CEG  (b) UVW  
    (c) XYZ  (d) ACE  
24. ZUXQL ?  
    (a) F  (b) E  
    (c) G  (d) H  

Directions: From the given alternatives words, select 
the word which can be formed using the letters of the 
given word.  
25. EXAMINATION  
    (a) EXAMINE  (b) NAME  
    (c) MINOR  (d) GAME  
26. Mohini went to movies nine days ago. She 
goels to the movies only on Thursday. What 
day of the week is today?  
    (a) Saturday  (b) Thursday  
    (c) Sunday  (d) Tuesday  
27. The age of a father is twice that of his son’s 
at present age. After 5 years the sun of their 
ages will be 85. How old are they now?  
    (a) 40, 20  (b) 46, 23  
    (c) 60, 30  (d) 50, 25  
28. Ramesh drives his car 4 km to east, then takes 
left turn and drives 6 km. He again turns to 
his left hand side and travels 4 km. How many 
km is Ramesh away from his starting place?  
    (a) 6km  (b) 10km  
    (c) 4km  (d) 14km  
29. Ravi’s father has a son Rohit who has an 
aunt Laxmi who has a husband Rao whose 
father-in-law is Mohan. What is the relation 
of Mohan to Ravi?  
    (a) Nephew  (b) Grandfather  
    (c) Son  (d) Uncle  
30. If your 9th person in a square starting from 
one end and 11th from another end, what is 
the number of persons in the queue?  
    (a) 20  (b) 19  
    (c) 21  (d) 18  
31. If BEAUTIFUL is written as CDOGHJKMN, 
how LEAF can be written in that code?  
    (a) NDOK  (b) KNND  
    (c) ODNK  (d) DKON  
32. If A = 1, CAT = 24, then POLICE = ?  
    (a) 57  (b) 60  
    (c) 62  (d) 59
33. Five students are sitting in a row. ‘T’ is on the right of ‘Z’. ‘M’ is one the left of ‘Z’ but is one the right of ‘L’. ‘T’ is on the left of ‘Q’. Who is sitting first from the left?
(a) Z  (b) Q  (c) T  (d) L

34. From the given alternative words, select the word which cannot be formed using the letters of the given word:
SUPERIORITY
(a) PURSE  (b) PURSUIT  (c) PRIORITY  (d) PURITY

35. Question Missing
(a) East  (b) West  (c) North  (d) South

36. Select the alternative which is related to the given set.
Given set is: (12, 18, 24)
(a) (6, 12, 30)  (b) (5, 15, 10)  (c) (10, 16, 18)  (d) (8, 12, 16)

37. In a solid cube which is made up of 27 small cubes, two opposite sides are painted red, two painted yellow and the other two painted white. How many cubes have two colours?
(a) 8  (b) 12  (c) 16  (d) 24

38. Directions (38-40): In each of the following questions one / two statements are given followed by two conclusions (I) and (II). You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

38. Statements:
Some books are Magazines.
Some Magazines are Novels.

Conclusions:
(I) Some books are Novels.
(II) Some Novels are Magazines.
(a) Only (I) follows  (b) Only (II) follows  (c) Either (I) or (II) follows  (d) Neither (I) nor (II) follows

39. Statements:
“Bats do not lay eggs and therefore, bats are not birds.

Conclusions
(I) All birds lay eggs.
(II) Only birds lay eggs.
(a) Only (I) follows  (b) Only (II) follows  (c) Both (I) and (II) follows  (d) Neither (I) nor (II) follows

40. Statements:
(I) All students like excursions.
(II) Some students like Laboratory experiments.
(a) Only (I) follows  (b) Only (II) follows  (c) Conclusion (I) and (II) follows  (d) Neither (I) nor (II) follows

41. If ‘+’ stands for ‘÷’, ‘×’ stands ‘+’, ‘−’ stands for ‘×’, and ‘÷’ stands for ‘−’, then which of the following statements is correct?
(a) $36 \times 6 + 7 ÷ 2 − 6 = 20$
(b) $36 ÷ 6 + 3 \times 5 − 3 = 45$
(c) $36 + 6 – 3 \times 5 \times 3 = 24$
(d) $36 – 6 + 3 \times 5 ÷ 3 = 74$

42. If $4 – 4 = 17$, $6 – 6 = 37$ and $2 – 2 = 5$ then what is $5 – 5 = ?$
(a) 27  (b) 26  (c) 19  (d) 20
43. In the following equation, select correct combination of mathematical signs to replace * signs and to balance the equation

\[16 \ast 4 \ast 5 \ast 9 \ast 1\]

(a) \(+ \div = \times\)  
(b) \(\div + = \times\)

(c) \(\times = + -\)  
(d) \(+ \times = \div\)

**Directions (44-45):** Select the missing number from the given responses.

44. 

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\[\text{62} \quad \text{79} \quad \text{47}\]

(a) 4  
(b) 7  
(c) 8  
(d) 9

45. 

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(a) 125  
(b) 75  
(c) 20  
(d) 25

**Directions:** Select the related figure from the answer figures.

46. Question Figures

Answer Figures

47. Among the four answer figures, which figure can be formed from the cut-pieces given below in the question figure?

Answer Figures

48. Question Figure

Answer Figures

49. If a mirror is placed on the line MN, then which of the answer figures is the right image of the given question figure?
50. Find out which of the diagrams as given in the alternatives correctly represents the relationship stated in the question.

Mountains, Forest, Earth

**Answer Figures**

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

1. (c)  2. (c)  3. (d)  4. (d)  5. (c)  6. (a)  7. (c)  8. (a)  9. (d)  10. (c)  11. (a)  12. (d)  13. (b)  14. (b)  15. (d)  16. (a)  17. (d)  18. (d)  19. (d)  20. (d)  21. (b)  22. (a)  23. (a)  24. (a)  25. (b)  26. (a)  27. (d)  28. (a)  29. (b)  30. (b)  31. (a)  32. (b)  33. (d)  34. (b)  35. (b)  36. (d)  37. (b)  38. (b)  39. (a)  40. (c)  41. (d)  42. (b)  43. (b)  44. (b)  45. (b)  46. (c)  47. (a)  48. (d)  49. (c)  50. (a)
PART-II
ENGLISH LANGUAGE

Directions (51-55): In the following questions some of the sentences have errors and some have none. Find out which part of a sentence has an error. If there is no error, your answer is (4) i.e. No error.

51. The Principal and staff (1) / are awaiting for (2) / the chief guest (3) / No error (4).
52. He thinks (1) / himself (2) as a great scholar. (3) / No Error (4).
53. Unless (1) you will study hard (2) / you cannot pass. (3) / No error (4).
54. I like (1) / the poetries (2) / of Byron and Shelley. (3) / No error (4).
55. On last Sunday (1) / I met my friend (2) / accidentally. (3) / No error (4).

Directions (56-60): In the following questions, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternatives out of the four.

56. You may bring your dog where ______ .
   (a) you have to pay
   (b) there is no water
   (c) pets are allowed
   (d) pets can sleep

57. The chief was wondering ______ .
   (a) when to brush his teeth
   (b) what to prepare for the important dinner
   (c) how to wash the dishes
   (d) when to take the dog for a walk

58. I have brought some books ______. you to examine.
   (a) to (b) for
   (c) with (d) over

59. The speaker did not properly space out his speech, but went on ____ one point only.
   (a) stressing (b) avoiding
   (c) devoting (d) decrying

60. The usher showed us _____
   (a) how to take photographs
   (b) where to sit
   (c) when to comb out hair
   (d) how to dance

Directions (61-65): In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

61. Autocratic
   (a) Cooperative (b) Dictatorial
   (c) Inspirational (d) Charitable

62. Daring
   (a) Brilliant (b) Energetic
   (c) Enthusiastic (d) Courageous

63. Demonstrate
   (a) Remonstrate (b) Show
   (c) Witness (d) Complain
64. Deliberate
   (a) Purposeless (b) Perpetrate
   (c) Intentional (d) Intervention

65. Defer
   (a) Postpone (b) Different
   (c) Accept (d) Disagree

Directions (66-70): In the following questions, choose the word opposite in meaning to the given word.

66. Abundance
   (a) Scanty (b) Tiny
   (c) Scarcity (d) Deficient

67. Unanimity
   (a) Amity (b) Enmity
   (c) Disagreement (d) Dissatisfaction

68. Vice
   (a) Fame (b) Virtue
   (c) Fortune (d) Fate

69. Renowned
   (a) Famous (b) Owned
   (c) Unowned (d) Unknown

70. Provoke
   (a) Soothe (b) Incite
   (c) Smoothen (d) Entice

Directions (66-70): In the following questions, choose the word opposite in meaning to the given word.

71. Abundance
   (a) Scanty (b) Tiny
   (c) Scarcity (d) Deficient

72. Unanimity
   (a) Amity (b) Enmity
   (c) Disagreement (d) Dissatisfaction

73. Vice
   (a) Fame (b) Virtue
   (c) Fortune (d) Fate

74. Renowned
   (a) Famous (b) Owned
   (c) Unowned (d) Unknown

75. Provoke
   (a) Soothe (b) Incite
   (c) Smoothen (d) Entice

Directions (71-75): In the following questions, choose the word opposite in meaning to the given word.

76. She has read Oliver Twist when she had been fourteen years old.
   (a) had become (b) has become
   (c) was (d) No improvement

77. Children like to eat sweets. isn’t it?
   (a) do they? (b) Is it?
   (c) Don’t they? (d) No improvement
78. He took **disadvantage** of the situation and cheated many people.
   (a) chance  (b) advantage  
   (c) disapproval  (d) No improvement

79. He was so afraid that his knees knocked **on another**.
   (a) one against  (b) each other  
   (c) both  (d) No improvement

80. All the candidates will give a test on Friday.
   (a) appear  (b) take  
   (c) accept  (d) No improvement

**Directions (81-85):** In the following questions, out of the four alternatives, choose the one which can be substituted for the given words / sentences.

81. A person who is physically dependent on a substance.
   (a) Criminal  (b) Martyr  
   (c) Gladiator  (d) Addict

82. A child born after the death of its father is called
   (a) An orphan  (b) A deprived child  
   (c) A waif  (d) A posthumous child

83. A movement of part of the body to express an idea or feeling
   (a) Jibe  (b) Gesture  
   (c) Pose  (d) Mimicry

84. A legal agreement by which a person borrows money from a bank usually to buy a house
   (a) Document  (b) Mortgage  
   (c) Lease  (d) Invoice

85. Failing to discharge one’s duty
   (a) Debacle  (b) Dereliction  
   (c) Determination  (d) Deterrent

**Directions (86-95):** 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. Then fill in the blanks with the help of the alternatives given.

A seminar is generally a form of (86) interaction, either at an academy (87) or a commercial or (88) organisation. It has the function of (89). Small groups for (90) meetings, focusing each time on some (91) subject, in which everyone present in (92) to participate. This is often (93) through and ongoing dialogue with a seminar (94) or instructor. Normally participants must not be (95) in the field under discussion.

86. (a) academic  (b) social  
   (c) informal  (d) artificial

87. (a) institution  (b) intermission  
   (c) intervention  (d) interference

88. (a) provincial  (b) proverbial  
   (c) professional  (d) progressive

89. (a) bringing out  
   (b) bringing together  
   (c) bringing among  
   (d) bringing off

90. (a) recurring  (b) repeating  
   (c) reverting  (d) reforming

91. (a) particular  (b) partial  
   (c) previous  (d) prevented

92. (a) entrusted  (b) encouraged  
   (c) enlarged  (d) endured

93. (a) accomplished  (b) acknowledged  
   (c) acquainted  (d) acquired

94. (a) follower  (b) member  
   (c) leader  (d) associate

95. (a) professional  (b) teacher  
   (c) starter  (d) beginners
Directions (96-100): In the following questions, you have one brief passage with 5 questions following the passage. Read the passage carefully and choose the best answer to each question out of the four alternatives.

PASSAGE

India records the world’s highest per-capita incidence of water-borne diseases such as diarrhea, typhoid and hepatitis, in spite of which concern for safe drinking water is still abysmally low even among educated Indians. This alarming indifference was borne out in a survey conducted by market research agency Research International Ltd. Based on a study of 3,000 households spread across all major cities in India. The survey found that over 73 per cent of all households in the highest income categories (SEC A & B) drink tap water without boiling it and as many as 55 per cent of the same group drink tap water after filtration through a cloth, but without boiling.

Though every school child knows that unboiled tap water contains unseen disease causing germs, and is unsafe to drink, the high level of indifference to boiling water will come as a surprise to many. Comments Dr. S.S. Narvekar, Deputy Director, Directorate of Health Services, Government of Maharashtra. “We regularly monitor water quality in all major urban centres in this State. During 1995-96, we found that 9,730 out of 159,233 samples of water were contaminated with disease causing organisms, representing a high 6.11 per cent of the total number of samples collected and analysed. This is an alarmingly high level of contamination considering that Maharashtra is one of the more developed states in India and it may be higher in other states. Also during late summer months when there is water scarcity, and during these months it is doubly important to ensure drinking water is adequately sanitised.”

96. In India the concern of safe drinking water is:
   (a) very low (b) good (c) enough (d) more than expected

97. In the highest number of categories the number of people drink tap water without boiling it is:
   (a) about half of the house holds (b) all the house holds (c) nearly three fourths of the households (d) one fourth of the households

98. During rainy season, drinking water should be:
   (a) cleaned (b) sanitised (c) stored (d) used

99. There is a high level of _____ to boiling water.
   (a) interest (b) indifference (c) care (d) curiosity

100. According to the passage, un-boiled tap water contains _____.
    (a) impurities (b) chemicals (c) germs (d) waste matter
ANSWER SHEET

51. (a) 52. (c) 53. (b) 54. (b) 55. (a) 56. (c) 57. (b) 58. (b) 59. (a) 60. (b)
61. (b) 62. (d) 63. (b) 64. (c) 65. (a) 66. (c) 67. (c) 68. (b) 69. (d) 70. (a)
71. (d) 72. (b) 73. (b) 74. (c) 75. (a) 76. (c) 77. (c) 78. (b) 79. (d) 80. (b)
81. (d) 82. (d) 83. (b) 84. (b) 85. (b) 86. (c) 87. (a) 88. (c) 89. (b) 90. (a)
91. (a) 92. (b) 93. (a) 94. (c) 95. (d) 96. (a) 97. (c) 98. (b) 99. (b) 100. (c)
101. (a) 102. (b) 103. (c) 104. (a) 105. (a) 106. (c) 107. (b) 108. (c) 109. (b) 110. (c)
PART-III

NUMERICAL APTITUDE

101. A sailor goes 12 km downstream in 48 minutes and returns in 1 hour 20 minutes. The speed of the sailor in still water is:
(a) 12 km/hr  
(b) 12.5 km/hr  
(c) 13 km/hr  
(d) 15 km/hr

102. If 24-carat gold is considered to be hundred per cent pure gold, then the percentage of pure gold in 22-carat gold is:
(a) \(91\frac{3}{4}\)  
(b) \(91\frac{2}{3}\)  
(c) \(91\frac{1}{3}\)  
(d) \(90\frac{2}{3}\)

103. If \(x + \frac{1}{x} = 3\), then the value of \(\frac{x^3 + \frac{1}{x^3}}{x^2 - x + 1}\) is
(a) \(\frac{3}{2}\)  
(b) \(\frac{5}{2}\)  
(c) \(\frac{7}{2}\)  
(d) \(\frac{11}{2}\)

104. \(\left(\frac{\frac{1}{2}}{2}\right)^2 \cdot -2\) is equal to:
(a) \(\frac{1}{16}\)  
(b) \(16\)  
(c) \(-\frac{1}{16}\)  
(d) \(-16\)

105. The price of sugar is increased by 25%. If a family wants to keep its expenses on sugar unaltered, then the family will have to reduce the consumption of sugar by:
(a) 20%  
(b) 21%  
(c) 22%  
(d) 25%

106. A sum of money amount to Rs. 850 in 3 years and to Rs. 925 in 4 years at some rate of simple interest. The sum is:
(a) Rs. 550  
(b) Rs. 600  
(c) Rs. 625  
(d) Rs. 700

107. Pipe A can fill a cistern in 6 hours and pipe B can fill it in 8 hours. Both the pipes are opened simultaneously, but after two hours, pipe A is closed. How many hours will B take to fill the remaining part of the cistern?
(a) 2  
(b) \(3\frac{1}{3}\)  
(c) \(2\frac{2}{3}\)  
(d) 4

108. The sides of a triangle are in the ratio \(1:1:1\) and its perimeter is 94 cm. The length of the smallest side of the triangle is:
(a) 18 cm  
(b) 22.5 cm  
(c) 24 cm  
(d) 27 cm

109. The average of seven consecutive positive integers is 26. The smallest of these integers is:
(a) 21  
(b) 23  
(c) 25  
(d) 26

110. Due to an increase of 50% in the price of eggs, 4 eggs less are available for Rs. 24. The present rate of eggs per dozen is:
(a) Rs. 24  
(b) Rs. 27  
(c) Rs. 36  
(d) Rs. 42

111. Next number of the sequence 2, 9, 28, 65, 126, ______ is :
(a) 195  
(b) 199  
(c) 208  
(d) 217
112. If A’s income is 20% more than that of B, by how much percent is B’s income less than that of A?

(a) $16\frac{4}{5}$  (b) $16\frac{1}{3}$  
(c) $16\frac{2}{3}$  (d) $16\frac{2}{7}$

113. X alone can complete a piece of work in 40 days. He worked for 8 days and left. Y alone completed the remaining work in 16 days. How long would X and Y together take to complete the work?

(a) $13\frac{1}{3}$ days  (b) 14 days
(c) 15 days  (d) $16\frac{2}{3}$

114. Which of the following successive discount series is the best of all for a customer?

(a) 30%, 20%, 10%
(b) 25%, 20%, 15%
(c) 30%, 10%, 15%
(d) 25%, 15%, 10%

115. What price should a shopkeeper mark on an article costing him Rs. 200 to gain 35% after allowing a discount of 25%?

(a) Rs. 270  (b) Rs. 300  
(c) Rs. 330  (d) Rs. 360

116. Total weekly emoluments of the workers of a factory is Rs. 1534. Average weekly emolument of a worker is Rs. 118. The number of workers in the factory is:

(a) 16  (b) 14
(c) 13  (d) 12

117. The length and breadth of a rectangle are increased by 20% and 25% respectively. The increase in the area of the resulting rectangle will be:

(a) 60%  (b) 50%
(c) 40%  (d) 30%

118. A train travelling with uniform speed crosses two bridges of length 300 m and 240 m in 21 seconds and 18 seconds respectively. The speed of the train is:

(a) 72 km/hr  (b) 68 km/hr
(c) 65 km/hr  (d) 60 km/hr

119. Question Missing

(a) 395  (b) 135
(c) 45  (d) 5

120. If $A = \frac{1}{4}B$ and $B = \frac{1}{2}C$, then $A : B : C$ is:

(a) 8 : 4 : 1
(b) 4 : 2 : 1
(c) 1 : 4 : 8  (d) 1 : 2 : 4

121. A 7 m wide road runs outside around a circular park, whose circumference is 176m. The area of the road is:

(use $\pi = \frac{22}{7}$)

(a) 1386 m$^2$  (b) 1472 m$^2$
(c) 1512 m$^2$  (d) 1760 m$^2$

122. If the cost price and selling price of an article are in the ratio 10 : 11, then the percentage of profit is:

(a) 10  (b) 9
(c) 3  (d) 1

123. A shopkeeper sells his goods at 15% discount. The marked price of an article whose selling price is Rs. 629 is:

(a) Rs. 740  (b) Rs. 704
(c) Rs. 700  (d) Rs. 614
124. Present population of a village is 67600. It has been increasing annually at the rate of 4%. What was the population of the village two years ago?
(a) 62500  (b) 63000  (c) 64756  (d) 65200

125. The average age of A and B is 30 years and that of B and C is 26 years. The difference of the age of A and B is:
(a) 2 years  (b) 4 years  (c) 6 years  (d) 8 years

126. Twenty women together can complete a work in 16 days. 16 men together can complete the same work in 15 days. The ratio of the working capacity of a man to that of a woman is:
(a) 3 : 4  (b) 4 : 3  (c) 5 : 3  (d) 4 : 5

127. If \( a^4 + 1 \) = 0 (a 0) then the value of \( (a^4 - a) \) is:
(a) \( \frac{1}{a} \)  (b) \( \frac{1}{a} \)  (c) 2  (d) -1

128. If the height of a cone is increased by 100% then its volume is increased by:
(a) 100%  (b) 200%  (c) 300%  (d) 400%

129. If \( x \) is a perfect square integer such that \( 7 < (2x - 3) < 17 \), then the value of \( x \) is:
(a) 25  (b) 16  (c) 9  (d) 4

130. The difference between the simple interest received from two different banks on Rs. 500 for 2 years is Rs. 2.50. The difference between their per annum rates of interest is:
(a) 0.10%  (b) 0.25%  (c) 0.50%  (d) 1.00%

131. \( \frac{999 \times 999}{999} \) is equal to:
(a) 998999  (b) 999899  (c) 989999  (d) 999989

132. The cost price of 24 apples is the same as the selling price of 18 apples. The percentage of gain is:
(a) \( 12 \frac{1}{2} \)  (b) \( 14 \frac{2}{3} \)  (c) \( 16 \frac{2}{3} \)  (d) \( 33 \frac{1}{3} \)

133. A merchant sold an article for Rs. 75 at a profit percent equal to his cost price. The cost price of the article was:
(a) Rs. 45  (b) Rs. 50  (c) Rs. 54  (d) Rs. 60

134. The largest among the numbers 0.9, \((0.9)^2\), \(\sqrt{0.9 \cdot 0.9}\) is:
(a) 0.9  (b) \((0.9)^2\)  (c) \(\sqrt{0.9}\)  (d) \(\sqrt{0.9}\)

135. The rain water from a roof of 22 m × 20 m drains into a cylindrical vessel having a diameter of 2 m and height 3.5 m. If the vessel is just full, then the rainfall in cm is:
(a) 2  (b) 2.5  (c) 3  (d) 4.5

136. Question Missing
(a) Rs. 100  (b) Rs. 150  (c) Rs. 175  (d) Rs. 200

137. If \( n \) is an integer, then \( (n^3 - n) \) is always divisible by:
(a) 4  (b) 5  (c) 6  (d) 7
138. A sum of money was lent at simple interest at a certain rate for 3 years. Had it been lent at 2.5% per annum higher rate, it would have fetched Rs. 540 more. The money lent was:
(a) Rs. 6400  (b) Rs. 6472  (c) Rs. 6840  (d) Rs. 7200

139. What number should be added to each of 6, 14, 18 and 38 so that the resulting numbers make a proportion?
(a) 1  (b) 2  (c) 3  (d) 4

140. \( \frac{0.8 \times 0.08 \times 0.08 + 0.02 \times 0.02 \times 0.02}{0.8 \times 0.08 - 0.0016 + 0.02 \times 0.02} \) is simplified to:
(a) 0.001  (b) 0.1  (c) 0.0016  (d) 0.016

141. If \( x = \sqrt{3} + \sqrt{3} \), then the value of \( x^2 + \frac{1}{x^2} \) is:
(a) 4  (b) 6  (c) 9  (d) 10

142. The ratio of the number of boys and girls in a school 3 : 2. If 20% of the boys and 25% of the girls are scholarship holders, then the percentage of the students, who do not get the scholarships, is:
(a) 78  (b) 75  (c) 60  (d) 55

143. The HCF to two numbers is 15 and their LCM is 255. If one of the numbers is 75, then the others is:
(a) 105  (b) 90  (c) 60  (d) 45

144. A pipe of diameter \( d \) can drain a certain water tank in 40 minutes. The time taken by a pipe of diameter 2\( d \) for doing the same job is
(a) 5 minutes  (b) 10 minutes  (c) 20 minutes  (d) 80 minutes

145. In a mixture of 60 litres, the ratio of milk and water is 2 : 1. How much more water must be added to make its ratio 1 : 2?
(a) 40 liters  (b) 52 liters  (c) 54 liters  (d) 60 liters

146. The area of an equilateral triangle is \( 4\sqrt{3} \) cm\(^2\). The length of each side of the triangle is:
(a) 3 cm  (b) \( 2\sqrt{2} \) cm  (c) \( 2\sqrt{3} \) cm  (d) 4 cm

Directions (147-150): The pie-chart, given here, shows various expenses of a publisher in the production and sale of a book. Study the chart and answer questions based on it.

147. If the printing cost is Rs. 17,500, the ‘Royalty’ paid is:
(a) Rs. 8,750  (b) Rs. 7,500  (c) Rs. 6,300  (d) Rs. 3,130

148. The measure of central angle for the section ‘printing cost’ is:
(a) 126°  (b) 70°  (c) 63°  (d) 35°
149. Miscellaneous expenses are what percent of paper cost?
(a) 4  (b) 10
(c) 40 (d) 44

150. The difference between the measures of central angles of sectors for bidding charges and advertisement charges is:
(a) 180° (b) 90°
(c) 18° (d) 0°
PART-IV

GENERAL AWARENESS

151. The unit of ionic product of water (Kw) is:
(a) Mol\(^2\) \text{let}^{-1} (b) Mol\(^2\) \text{let}^{-2}
(c) Mol\(^{-1}\) \text{let}^{-2} (d) Mol\(^{-1}\) \text{let}^{-1}

152. What is the name of the Fort build by the English in Calcutta?
(a) Fort St. David (b) Fort St. Andrew
(c) Fort William (d) Fort Victoria

153. National Income include:
(a) Financial help to earthquake victims
(b) Pocket money of a child
(c) Winning of a lottery prize
(d) Construction of a new house

154. There is a need to keep larger area under forests for:
(a) absorption of carbon dioxide
(b) protecting wildlife
(c) raising precipitation
(d) geological balance

155. The Shipra path Police Station that has been adjudged the best in the word is in:
(a) New Delhi (b) Jaipur
(c) Chandigarh (d) Mumbai

156. Who amongst the following was the Last Guru of the Sikhs?
(a) Guru Arjun Dev’ (b) Guru Teg Bahadur
(c) Guru Gobind Singh (d) Guru Angad Dav

157. C.R. Das and Motilal Nehru formed the ‘Swaraj Party’ after,
(a) Swadeshi Movement (b) Non Cooperation Movement
(c) Civil Disobedience Movement (d) Quit India Movement

158. The situation on which total Revenues equals total cost, is known as:
(a) Monopolistic competition (b) Equilibrium level of output
(c) Break even point (d) Perfect competition

159. When two cubes of ice are pressed on each other, what is the cause of their being one ?
(a) Van Der Waals Force (b) Dipole moment
(c) Hydrogen bond formation (d) Covalent attraction

160. When milk is churned, the cream separates from it due to:
(a) Frictional force (b) Centrifugal force
(c) Gravitational force (d) Viscous forces

161. Moving electric charge produces:
(a) magnetic field (b) sound waves
(c) light rays (d) heat waves
162. The crop which occupies maximum cultivated area in India is:
   (a) Rice (b) Wheat (c) Gram (d) Linseed

163. The S.I. unit of electric charge is:
   (a) ampere (b) coulomb (c) e.s.u (d) Kelvin

164. Demand curve of a firm under perfect competition is:
   (a) horizontal to ox-axis (b) negatively sloped (c) positively sloped (d) U-shaped

165. Who was the Chola king who brought Ganga from North to South?
   (a) Raja Raja Chola (b) Mahendra (c) Rajendra Chola (d) Parantaka

166. The writ of ‘Habeas Corpus’ is issued in the event of:
   (a) Loss of Property (b) Refund of Excess Taxes (c) Wrongful Police detention (d) Violation of the freedom of speech

167. Light beam which is highly directional is called:
   (a) eraser (b) grazer (c) maser (d) laser

168. The most abundant constituent of atmospheric are is:
   (a) carbon (b) hydrogen (c) oxygen (d) nitrogen

169. Which is the administrative capital of Malaysia?
   (a) Putrajaya (b) Seremban (c) Taiping (d) Ipoh

170. Fiber diet in includes:
   (a) glycogen (b) proteins (c) cellulose (d) fats

171. Tuberculosis infection is by means of:
   (a) Mycobacterium avonin (b) Staphylococcus (c) Mycobacterium tuberculosis (d) Streptococcus

172. How many ago-climatic zones are there in India as far as the official categorization of the Ministry of Agriculture is concerned?
   (a) 123 (b) 126 (c) 127 (d) 122

173. The word’s wettest continent is:
   (a) Asia (b) Europe (c) North America (d) South America

174. Dumping of solid waste in lowlying areas earth cover is called as:
   (a) Sanitary landfilling (b) Open dumping (c) Compositing (d) Incineration

175. Permissible noise level at Residential area during night time is:
   (a) 45 dB (A) (b) 55 dB (A) (c) 75 dB (A) (d) 80 dB (A)

176. The author of the Book Title ‘The Future of India’, is:
   (a) Bimal Jalan (b) Depak Chopra (c) Amitav Ghosh (d) N.K. Singh
177. The expenditure made on which of the following does not require budgetary approval every year in India?
(a) Defence
(b) Natural calamities
(c) Consolidated fund
(d) Contingency fund

178. The Baisakhi Festival of the year 1999 is of great historical significance to Punjab because
(a) it commemorates the tercentenary of the foundation of Khalsa Panth
(b) it being the last such festival of the twentieth century
(c) of participation by a large number of Punjabis who are non-resident Indians
(d) None of the above

179. The abnormal constituent of urine is
(a) urea
(b) creatinine
(c) albumin
(d) sodium

180. Value of output and value added can be distinguished if we know:
(a) the value of intermediate consumption
(b) the value of net indirect taxes
(c) the value of the sales
(d) the value of consumption of fixed capital

181. The disease that is caused by virus is:
(a) Typhoid
(b) Cholera
(c) Common cold
(d) Malaria

182. The 3rd Commonwealth Youth Games were held at:
(a) Pune
(b) Karachi
(c) Dhaka
(d) London

183. The team ‘PC-XT’ refers to—
(a) Personal Computer External Technology
(b) Personal Computer Expanded Technology
(c) Personal Computer Expanded Technology
(d) Personal Computer Embedded Technology

184. Transfer payments include:
(a) Gifts received from a friend
(b) rent free accommodation by the employer
(c) net factor income from abroad
(d) employee’s contribution to social security

185. The marginal revenue of a monopolist is:
(a) more than price
(b) equal to price
(c) less than price
(d) less than marginal cost

186. The most important element of weather affecting agriculture in India is:
(a) Pemperive
(b) Humidity
(c) Wind
(d) Rainfall

187. What was Chandraputa II also known as?
(a) Samudra Gupta
(b) Skanda Gupta
(c) Vikramaditya
(d) Ranaa Gupta

188. October 2nd of every year has been declared by UNO as:
(a) International Non-violence day
(b) International heritage day
(c) International Moral Values day
(d) International anti-terrorism day
189. In plants water is absorbed by the root hairs by a process called:
(a) Transpiration
(b) Respiration
(c) Perspiration
(d) Osmosis

190. The element which is required by the plant in large quantity:
(a) Calcium (b) Nitrogen
(c) Phosphorus (d) Sulphur

191. Which of the following gods are worshipped in the sanctum of Badrinath and Kedarnath temples respectively?
(a) Visnu and Shiva
(b) Shiva and Vishnu
(c) Shiva and Parvati
(d) Vishnu and Brahma

192. Which one of the following ocean currents does not occur in Atlantic Ocean?
(a) Gulf stream
(b) Brazil current
(c) Peru current
(d) Canary current

193. Who was the Chairman of the Drafting Committee of the Constituent Assembly?
(a) Dr. B. R. Ambedkar
(b) C. Rajagopalachari
(c) Dr. Rajendra Prasad
(d) Jawaharlal Nehru

194. Energy in reflected light:
(a) does not depend on the angle of incidence
(b) increases with the increase in angle
(c) decreases with the increase in angle of incidence
(d) becomes maximum for angle of incidence equal to 45°

195. Which gas is used for converting vegetable oils into saturated fats?
(a) H₂ (b) O₂
(c) Cl₂ (d) SO₂

196. Which one of the following gives energy to our body?
(a) Vitamins (b) Water
(c) Carbohydrates (d) Proteins

197. Which of the following pairs has open type of circulatory system?
(a) Earthworm and Leech
(b) Man and Whale
(c) Cockroach and Silverfish
(d) Tadpole larva and Fish

198. Chemical name of bleaching powder is:
(a) Calcium chlorate
(b) Calcium hypochlorite
(c) Calcium chloro hypochlorite
(d) Calcium bi chloride

199. When were the Fundamental Duties of the Indian citizen incorporated in the constitution?
(a) 1952 (b) 1976
(c) 1979 (d) 1981

200. Alcoholic (–OH) group can be identified by:
(a) Tollen’s Reagent Test
(b) Esterification Test
(c) FeCl₃ Test
(d) Ozonolysis Reaction
ANSWER SHEET

151 (b) 152 (c) 153 (d) 154 (a) 155 (b) 156 (c) 157 (b) 158 (c) 159 (d) 160 (b)
161 (a) 162 (a) 163 (b) 164 (a) 165 (c) 166 (c) 167 (d) 168 (d) 169 (a) 170 (c)
171 (c) 172 (b) 173 (b) 174 (a) 175 (a) 176 (a) 177 (b) 178 (a) 179 (c) 180 (b)
181 (c) 182 (a) 183 (c) 184 (c) 185 (c) 186 (d) 187 (c) 188 (a) 189 (d) 190 (b)
191 (a) 192 (c) 193 (a) 194 (a) 195 (a) 196 (c) 197 (c) 198 (d) 199 (b) 200 (c)