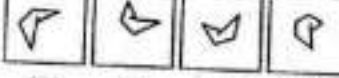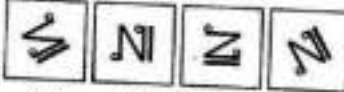## PART – I
GENERAL INTELLIGENCE

Directions : In Question Nos. **1** to **7**, find the odd number / letters / figure / number pair from the given alternatives.

1. (A) Respiration
    (B) Digestion
    (C) Disease
    (D) Blood pressure

2. (A) A Z B Y
    (B) C X D W
    (C) G T H R
    (D) E V F U

3. (A) B C D F
    (B) A E I O
    (C) G H T K
    (D) R N W X

4. (A) 9   (B) 28
    (C) 126   (D) 64

5. (A) 24 – 81
    (B) 33 – 91
    (C) 28 – 44
    (D) 20 – 11

6.
    (A)   (B)   (C)   (D)

7.
    (A)   (B)   (C)   (D)

Directions : (Question Nos. **8-9**) Which one of the given responses can be added to all the given letters to make meaningful words ?

8. (1) Character
    (2) Story
    (3) Editing
    (4) Plot
    (5) Publishing
    (A) 1, 2, 3, 4, 5
    (B) 4, 1, 2, 5, 3
    (C) 1, 4, 3, 2, 5
    (D) 4, 1, 2, 3, 5

9. (1) Yarn
    (2) Plant
    (3) Saree
    (4) Cotton
    (5) Cloth
    (A) 2, 1, 4, 5, 3
    (B) 2, 4, 5, 1, 3
    (C) 2, 4, 1, 5, 3
    (D) 1, 2, 3, 5, 4

SPACE FOR ROUGH WORK

Directions : (Question No. **10**) Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

10. _ a b _ a _ b a b _ _ b b a b b _
   (A) b b b b a a
   (B) a b a b b b
   (C) a a b a a b
   (D) b b a a b a

11. A series of figures is given which can be grouped into classes. From the responses, select the groups into which the figures can be classified :
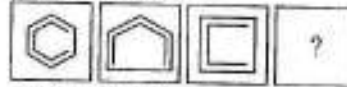

   (A) 124 | 369 | 578
   (B) 157 | 248 | 369
   (C) 136 | 257 | 149
   (D) 369 | 257 | 142

Directions : (Question Nos. **12** to **15**). A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.

12. N O M, O P N, P Q O, ?
   (A) R Q P
   (B) O Q P
   (C) Q R P
   (D) R P O

13. 62, 57, 68, 52, 74, 47, 80, _?_ , _?_
   (A) 41, 83
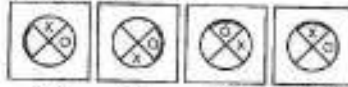   (B) 42, 86
   (C) 43, 85
   (D) 46, 88

14. Question Figures

Answer Figures

   (A)   (B)   (C)   (D)

15. Question Figures :

Answer Figures :

   (A)   (B)   (C)   (D)

Directions : In Question Nos. **16** to **23**, select the related letters / word / number / figure from the given alternatives.

16. den : lion : : coop : ?
   (A) duck
   (B) swan
   (C) hen
   (D) deer

SPACE FOR ROUGH WORK

17. Anarchy : Lawlessness : : Anaemia : ?

   (A) Fearlessness

   (B) Colourlessness

   (C) Shapelessness

   (D) Bloodlessness

18. Optician : Eyes : : Geriatric : ?

   (A) Young

   (B) Needy

   (C) Old Age

   (D) New Born

19. BYDW : FUHS : : AZCX : ?

   (A) EVGT

   (B) FVGT

   (C) FVHT

   (D) EVHT

20. BOQD : ERTG : : ANPC : ?

   (A) DQSF

   (B) FSHU

   (C) SHFU

   (D) DSQF

21. 3 : 28 : : 5 : ?

   (A) 179   (B) 126

   (C) 124   (D) 125

22. (2 3 6) : 121 : : (4 3 8) : ?

   (A) 89

   (B) 96

   (C) 225

   (D) 209

23. Question Figure

Answer Figures

   (A)   (B)   (C)   (D)

24. In a row of boys, Sachin is 21st from the left and Rahul is 12th from right. On interchanging their places, Rahul becomes 17th from right. How many boys are there in a row ?

   (A) 36

   (B) 38

   (C) 37

   (D) 35

SPACE FOR ROUGH WORK

25. A after arriving at a place of appointment on Sunday, found that he was 3 days earlier than 'B' who was 2 days late. If A had reached there on the following Thursday, how many days early or late would A have been ?

(A) 2 days early

(B) 2 days late

(C) 3 days late

(D) 4 days early

26. In a group of 26 persons, 15 like tea, while 18 like coffee, there is none who dislikes both. The number of persons who like both tea and coffee is

(A) 9

(B) 7

(C) 5

(D) 3

Directions : In Question No. 27 from the given alternatives, select the word which cannot be formed using the letters of the given word.

27. ENGINEERING

(A) GINGER

(B) ENGINE

(C) NEARER

(D) RING

Directions : In Question Nos. 28 to 30, select the missing number from the given alternatives.

28.
7	8	4
5	6	2
35	48	?
47	62	14

(A) 5

(B) 6

(C) 7

(D) 8

29.

(A) 26

(B) 24

(C) 42

(D) 36

30.
32	(40)	12
51	(36)	33
67	(?)	55

(A) 24

(B) 20

(C) 18

(D) 12

SPACE FOR ROUGH WORK

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31. If $3 * 5 * 4 = 6, 2 * 7 * 5 = 7, 1 * 3 * 8 = 6$. then what will be the value of $1 * 3 * 6$?

   (A) 1
   (B) 5
   (C) 0
   (D) 8

32. If − stands for addition, + for division, ÷ for multiplication and × for subtraction, then which of the following is correct?

   (A) $6 \times 3 + 9 + 4 - 2 = 15$
   (B) $6 + 3 - 9 \times 4 + 2 = 10$
   (C) $6 + 3 + 9 - 4 \times 2 = 20$
   (D) $6 - 3 \times 9 + 4 \div 2 = 17$

33. Among the four answer figures, which one can be formed from the cut out pieces given below in the question figure?
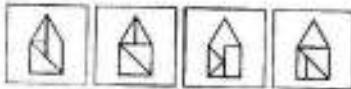
   (A)   (B)   (C)   (D)

34. **Directions** : Four views of a cube are given below. Study each view and answer the question given below them.
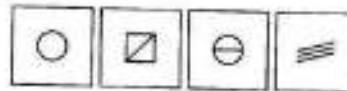
   Question Figures

   1   2   3   4

   Question : In Figure 1, which symbol is below the square ☐ ?

   Answer Figures

   (A)   (B)   (C)   (D)

35. How many triangles are there in the given question figure ?

   (A) 10
   (B) 8
   (C) 12
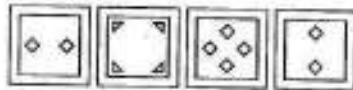   (D) 14

SPACE FOR ROUGH WORK

Directions : (Question No. 36) A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.
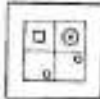
36. Question Figures

Answer Figures

(A) (B) (C) (D)

37. A transparent sheet with a pattern is given. How the pattern would appear when the sheet is folded at the dotted lines ?

Question Figure

Answer Figures
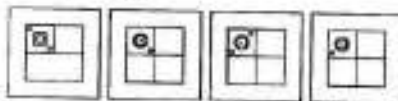
(A) (B) (C) (D)

Directions : (Question No. 38) In the following diagram, rectangle represents Hindi Announcers, circle English Announcers, Square French Announcers and triangle represents German Announcers. Study the diagram.
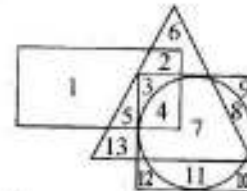
38. Which area represents those announcers who can present programmes in Hindi, French and German only ?

(A) 1

(B) 2

(C) 3

(D) 4

39. Which of the following correctly illustrate the relationship among the classes :

Carrot, Food, Vegetable

(A)

(B)

(C)

(D)

SPACE FOR ROUGH WORK

Directions : In Question Nos. **40** to **41,** which answer figure will complete the pattern in the question figure ?

40. Question Figure

Answer Figures

(A)   (B)   (C)   (D)
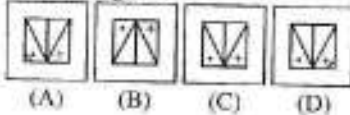
41. Question Figure

Answer Figures

(A)   (B)   (C)   (D)
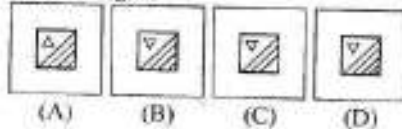
Directions : In Question Nos. **42 to 43** from the given answer figures, select the one in which the question figure is hidden / embedded.
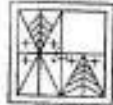
42. Question Figure

Answer Figures

(A)   (B)   (C)   (D)
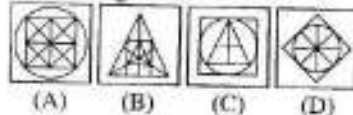
43. Question Figure

Answer Figures

(A)   (B)   (C)   (D)
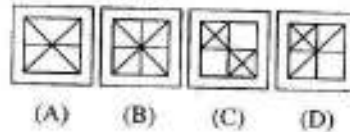
44. If the letters given below are arranged to form a sensible word, what will be the last letter of the word ?

L I B N A R J

(A) R

(B) L

(C) N

(D) J

45. Sanjay is standing facing south. He walks 10 km straight, turns right and walks another 10 km straight, turns left and walks 10 km straight and, finally turns left and walks 5 km to reach a hotel. Which direction is he facing now ?

(A) North

(B) South

(C) East

(D) West

SPACE FOR ROUGH WORK

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46. A and B start together from one point. They walk 10 km towards north. A turns left and covers 5 km whereas B turns right and covers 3 km. A turns left again and covers 15 km whereas B turns right and covers 15 km. How far is A from B ?

   (A) 18 km

   (B) 10 km

   (C) 5 km

   (D) 8 km

47. If "PRICE" is coded as 11 9 18 24 22, then HIGH is coded as

   (A) 19 20 18 19

   (B) 17 18 20 17

   (C) 8 9 7 8

   (D) 19 18 20 19

48. If 'EDUCATION' is coded as 2 D 5 C 1 T 3 4 N, how can 'AUTOMOBILE' be coded ?

   (A) 1 5 T 4 M 4 B 3 L 2

   (B) 1 4 T 3 M 3 B 2 L 5

   (C) 2 U 5 O 1 O 3 I 4 E

   (D) 3 I T 2 M 2 B 4 L 5

Directions : In Question Nos. **49** and **50**, one / two statements are given followed by two conclusions / Assumptions 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 / Assumptions, if any, follow from the given statements.

49. **Statements :** 1. All players are educated.
   2. All educated are cultured So

   Conclusions : I. All players are cultured.
   II. All cultured persons are players.

   (A) Only I follows.
   (B) Only II follows.
   (C) Both I and II follows.
   (D) Neither I nor II follows.

50. **Statement :** Education of the masses leads to a steady loss of the hold of caste in the society.

   Assumptions : I. There is a direct relation between educational progress and decline of casteism.
   II. Casteism can make considerable contribution to society.

   (A) Only assumption I is implicit.
   (B) Only assumption II is implicit.
   (C) Both assumptions I & II are implicit.
   (D) Neither assumption I nor II is implicit.

SPACE FOR ROUGH WORK

PART – II
ENGLISH LANGUAGE

Directions : In Question Nos. **51** to **55**, some of the sentences have errors and some have none. Find out which part of a sentence has an error and blacken the rectangle [■] corresponding to the appropriate letter (A, B, C). If there is no error, blacken the rectangle [■] corresponding to (D) in the Answer Sheet.

Directions : In Question Nos. **56** to **60**, sentences are given with blanks to be filled in with appropriate words. Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate rectangle [■] in the Answer Sheet.

51. The Secretary and the Manager
    (A)
    goes to London next week. No error.
    (B)   (C)   (D)

52. I suggest you to become an engineer.
    (A)   (B)   (C)
    No error.
    (D)

53. The courses in an autonomous college
    (A)
    are different from a non-autonomous college
    (B)
    because of the freedom allowed to
    an autonomous college.
    (C)
    No error.
    (D)

54. The jury was unanimous
    (A)   (B)
    in the Verdict. No error.
    (C)   (D)

55. You will be suspended   unless you
    (A)   (B)
    do not pay your fees. No error.
    (C)   (D)

56. He sat _____ the table, writing a letter.

    (A) across

    (B) over

    (C) by

    (D) at

57. My sister _____ me when I was ill.

    (A) called on

    (B) called out

    (C) called off

    (D) called in

58. The patient was so _____ by the soft music that he cooperated with the doctor in spite of acute pain.

    (A) carried over

    (B) carried away

    (C) carried on

    (D) carried out

PART – II
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No error.
(D)

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(A)
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(B)
because of the freedom allowed to
an autonomous college.
(C)
No error.
(D)

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(A)   (B)
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(D) called in

58. The patient was so _____ by the soft music that he cooperated with the doctor in spite of acute pain.

(A) carried over

(B) carried away

(C) carried on

(D) carried out

84. जब तक साहब नहीं आ जाते आप _____ ग्रहण करें ।

   (A) आसन

   (B) आसन्न

   (C) शासन

   (D) राशन

85. भविष्य के प्रति जागरूक विद्यार्थी रात-भर _____ रहते हैं ।

   (A) जागते

   (B) पढ़ते

   (C) पड़ते

   (D) लिखते

निर्देश : प्रश्न संख्या 86 से 90 में दिये हुए प्रत्येक शब्द का विलोम चुनने के लिए चार विकल्प प्रस्तावित हैं । उचित विकल्प का चयन कीजिए तथा उत्तर-पुस्तिका में तदनुसार काला कीजिए ।

86. उत्थान

   (A) स्थान

   (B) प्रस्थान

   (C) जितान

   (D) पतन

87. ह्रस्व

   (A) दीर्घ

   (B) स्थूल

   (C) लघु

   (D) महत्तम

88. यश

   (A) सुयश

   (B) अपमान

   (C) अपयश

   (D) दुर्यश

89. कृतज्ञ

   (A) कृपालु

   (B) कठोर

   (C) क्रोधी

   (D) कृतघ्न

90. प्रत्यक्ष

   (A) पीछे

   (B) परोक्ष

   (C) परीक्ष्य

   (D) सूक्ष्म

निर्देश : प्रश्न संख्या 91 से 95 में दिये हुए प्रत्येक शब्द की वर्तनी के लिए चार विकल्प दिये गए हैं । इनमें से केवल एक विकल्प में शब्द की शुद्ध वर्तनी है । उसे चुनिए तथा उत्तर-पुस्तिका में तदनुसार काला कीजिए ।

91. आदरनीय

   (A) आदरनीय

   (B) आदरणीव

   (C) आदर्नीव

   (D) आदर्णीय

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PART – III
GENERAL AWARENESS

101. SQL in Computer Science stands for
- (A) Sorted Query Language
- (B) Structured Quick Language
- (C) Structured Query Language
- (D) Structured Quick Launch

102. Which of the following is not a part of the processor of a computer ?
- (A) ALU
- (B) CU
- (C) Registers
- (D) RAM

103. Rotation of crop is essential
- (A) for increasing the quantity of minerals.
- (B) for increasing the quantity of proteins.
- (C) for getting different kinds of crops.
- (D) for increasing the fertility of the soil.

104. The major component in CNG is
- (A) ethane
- (B) propane
- (C) butane
- (D) methane

105. World Environment Day is celebrated on
- (A) June 5
- (B) February 28
- (C) November 14
- (D) July 15

106. Earth is protected from ultra–violet radiation by means of
- (A) Oxygen layer
- (B) Ozone layer
- (C) Nitrogen layer
- (D) Carbon dioxide layer

107. The highest policy-making body in national planning in India is
- (A) Administrative Reforms Commission
- (B) Finance Commission
- (C) Inter-State Council
- (D) National Development Council

108. Which one of the following is an example of fixed cost ?
- (A) Price of raw material
- (B) Fuel and power charges
- (C) Rent for building
- (D) Wage for casual labour

109. The principle of population was propounded by _____
- (A) Gardener
- (B) Odum
- (C) Darwin
- (D) Malthus

110. The public, private, cooperative and joint sectors exist in a
- (A) Mixed economy
- (B) Socialist economy
- (C) Communist economy
- (D) Capitalistic economy

111. The State which stands first in software exports from India is
    (A) Maharashtra
    (B) Tamil Nadu
    (C) Karnataka
    (D) Andhra Pradesh

112. Panchayats were given constitutional status by the _____ amendment to the Constitution.
    (A) 75th
    (B) 74th
    (C) 73rd
    (D) 72nd

113. The President can declare a national emergency on
    (A) his own
    (B) the written recommendation of the Prime Minister
    (C) the basis of the report of the Governor of a State.
    (D) the written recommendation of the Union Cabinet.

114. Sarkaria Commission was set up for reviewing the relations between
    (A) Centre and States
    (B) Legislature and Executive
    (C) Executive and Judiciary
    (D) The Prime Minister and the President

115. To raise a discussion in the House on a matter of urgent public importance, which motion is used ?
    (A) Censure
    (B) Adjournment
    (C) Calling attention
    (D) Cut motions

116. Who spoke in Hindi for the first time in the UNO General Assembly ?
    (A) Indira Gandhi
    (B) P. V. Narasimha Rao
    (C) Atal Bihari Vajpayee
    (D) Rajiv Gandhi

117. How many expeditions did Babur lead to occupy Delhi ?
    (A) Three
    (B) Four
    (C) Five
    (D) Six

118. Which one of the following monuments has the second largest dome in the world ?
    (A) Quwat-ul-Islam Masjid
    (B) Gol Gumbaz
    (C) Jamat Khana Masjid
    (D) Alai Darwaza

119. During whose reign Fa-Hien visited India ?
    (A) Sri Gupta
    (B) Samudragupta
    (C) Chandragupta I
    (D) Chandragupta II

120. The slave king who got the title 'Lakh Baksh' was
    (A) Iltutmish
    (B) Razia
    (C) Qutbudin Aibak
    (D) Balban

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121. Who was the first Indian soldier to refuse to use the greased cartridge ?

    (A) Nana Saheb
    (B) Bahadur Shah
    (C) Mangal Pandey
    (D) Tantia Tope

122. Vasco da Gama discovered sea route to _____

    (A) N. America
    (B) S. America
    (C) India
    (D) Australia

123. Tapti river rises in _____ mountains.

    (A) Eastern Ghat
    (B) Western Ghat
    (C) Satpura
    (D) Vindhya

124. The major goal of the Green Revolution has been to

    (A) Decrease the use of modern farm machinery.
    (B) Decrease Population growth.
    (C) Increase agricultural output.
    (D) Increase the number of traditional farms.

125. The world's most important renewable energy resource is

    (A) Natural vegetation
    (B) Water
    (C) Solar radiation
    (D) Tidal waves

126. The largest number of Cotton Weaving mills are located in _____

    (A) Tamil Nadu
    (B) Uttar Pradesh
    (C) Maharashtra
    (D) Gujarat

127. Hibernation phenomenon is noticed in

    (A) Cosmonauts
    (B) Avians
    (C) Mammalians
    (D) Amphibians

128. Dengue is a

    (A) viral infection
    (B) fungal infection
    (C) bacterial infection
    (D) protozoan infection

129. Cockroaches, prawns and crabs possess

    (A) Simple eyes
    (B) Compound eyes
    (C) Parietal eyes
    (D) No eyes

130. Bio-diesel, a kind of non-conventional source of energy, which is obtained from

    (A) Sugarcane
    (B) Jatropha
    (C) Castor plant
    (D) Mustard plant

131. Photosynthesis occurs
    - (A) only in leaves
    - (B) only in stems
    - (C) in all green parts of plants
    - (D) in the roots

132. Banana leaves on maturity tear into ribbons to avoid
    - (A) desiccation
    - (B) air resistance
    - (C) scorching sunlight
    - (D) mutual shading

133. The substance which changes from solid to vapour state at normal atmospheric pressure without being liquefied is
    - (A) Ice
    - (B) Mercury
    - (C) Camphor
    - (D) Bismuth

134. Which energy comes from Sun ?
    - (A) Wind energy
    - (B) Thermal energy
    - (C) Tidal energy
    - (D) Hydel energy

135. The tungsten wire in coiled form in electric bulb has
    - (A) lower melting point and lower resistance
    - (B) lower melting point and higher resistance
    - (C) higher melting point and lower resistance
    - (D) higher melting point and higher resistance

136. The tides in the ocean are due to
    - (A) Wind over the Oceans
    - (B) Gravitational pull of the Moon
    - (C) Rotation of the Earth
    - (D) Revolution of the Earth

137. Oil-fires are extinguished by
    - (A) Soda-acid fire extinguisher
    - (B) Foam-type fire extinguisher
    - (C) Carbon-tetrachloride fire extinguisher
    - (D) Simply by water

138. The apparatus used for measuring the heat change is called
    - (A) Thermometer
    - (B) Voltameter
    - (C) Voltmeter
    - (D) Calorimeter

139. Plaster of Paris hardens by
    - (A) combining with water
    - (B) giving out water
    - (C) giving out CO_2
    - (D) combining with CO_2

140. German Silver is an alloy of
    - (A) Silver and Copper
    - (B) Silver and Aluminium
    - (C) Copper, Zinc and Nickel
    - (D) Nickel and Aluminium

141. What was the name accorded to the Military Operation in Kargil in 1999 ?
    - (A) Operation Pawan
    - (B) Operation Poomalai
    - (C) Operation Vijay
    - (D) Operation Brasstacks

142. The film 'Slumdog Millionaire' is based on the book 'Question & Answer' written by
    (A) Bhisham Swarup
    (B) Vikas Swarup
    (C) Vimal Swarup
    (D) Vinay Swarup

143. The International Hockey Tournament in which only the top six nations (judged by their rankings) are invited to take part is
    (A) Champions Trophy
    (B) Azlan Shah Cup
    (C) World Cup
    (D) Champions Challenge Trophy.

144. Pankaj Advani has won the World Professional Billiard Championship, 2009 defeating in the final
    (A) Geet Sethi
    (B) Robert Frost
    (C) Om Agarwal
    (D) Mike Russel

145. To whom did India beat to lift the ONGC Nehru Cup, 2009 ?
    (A) Japan
    (B) Somalia
    (C) Syria
    (D) Afghanistan

146. The recipient of the 42nd Jnan Peeth Award this year is
    (A) Manohar Shashtri
    (B) Satya Vrat Shashtri
    (C) K. Kaushal Panda
    (D) Mahavir Shashtri

147. Who has won the 100 metres sprints at the British Grand Prix recently ?
    (A) Tyson Gray
    (B) Usain Bolt
    (C) Kim Collins
    (D) Mario Burns

148. The World Badminton Federation declared the Indian Shuttler, Saina Nehwal, as
    (A) The most promising player of 2008
    (B) The leading player of 2008
    (C) The most popular player of 2008
    (D) The emerging player of 2008

149. The first sister from India to be conferred the Sainthood by Pope Benedict XVI is
    (A) Sister Desouza
    (B) Sister Nirmala
    (C) Sister Alphensa
    (D) Sister Madorana

150. The three countries in serial order which won the highest number of Gold Medals in the Beijing Olympics are
    (A) China, U.S.A, Russia
    (B) China, U.S.A, Germany
    (C) China, Germany, Australia
    (D) China, Australia, Canada

PART – IV
NUMERICAL APTITUDE

151. The boys of a class are made to stand in a queue. Amit is standing at 15th place from both ends. How many boys are there in the queue ?

    (A) 31

    (B) 30

    (C) 29

    (D) 28

152. If the sum of a rational number and its reciprocal is 13/6, then the number is

    (A) $\frac{1}{2}$

    (B) $\frac{1}{6}$

    (C) $\frac{2}{3}$

    (D) $\frac{5}{6}$

153. In a group of students; 30 students play Cricket, 20 play Tennis and in all 35 play either Cricket or Tennis. How many students play both Cricket and Tennis ?

    (A) 10

    (B) 12

    (C) 15

    (D) 18

154. Simplified value of $\frac{(15.4)^2 - (35.4)^2}{25}$ is

    (A) –40.64

    (B) – 10.16

    (C) 40.64

    (D) 50.80

155. Simplified value of

    $\frac{(0.361)^3 + (0.639)^3}{(0.361)^2 - 0.361 \times 0.639 + (0.639)^2}$ is

    (A) 1

    (B) 361

    (C) 639

    (D) 1000

156. If the sum of one-half, one-third and one-fourth of a number exceeds the number by 12, then the number is

    (A) 90

    (B) 144

    (C) 154

    (D) 174

157. $32^{\frac{4}{5}} + 32^{-\frac{4}{5}}$ is equal to

    (A) 32

    (B) $16\frac{1}{16}$

    (C) $15\frac{15}{16}$

    (D) 1

SPACE FOR ROUGH WORK

158. If $\frac{a}{b} = \frac{5}{3}$ and $8a + 5b = 22$, then a is equal to

   (A) 2
   (B) 4
   (C) 5
   (D) 6

159. $\dfrac{(698 + 198)^2 - (698 - 198)^2}{698 \times 198}$ is equal to

   (A) 2
   (B) 4
   (C) 9854
   (D) 9874

160. The cube root of

   $0.027 + 0.064 + 3 \times 0.12 \times 0.7$ is

   (A) 0.30
   (B) 0.40
   (C) 0.12
   (D) 0.70

161. $\dfrac{\sqrt{3} + \sqrt{2}}{\sqrt{3} - \sqrt{2}} + \dfrac{\sqrt{3} - \sqrt{2}}{\sqrt{3} + \sqrt{2}}$ is equal to

   (A) 3.464
   (B) 2.828
   (C) 1
   (D) 10

162. $\sqrt{3\sqrt{3\sqrt{3\sqrt{3\sqrt{3}}}}}$ is equal to

   (A) $3^{\frac{33}{32}}$
   (B) $3^{\frac{27}{32}}$
   (C) $3^{\frac{31}{32}}$
   (D) $3^{\frac{4}{32}}$

163. $35 \times 35 \times 35 - 25 \times 25 \times 25 - 10 \times 10 \times 10$ is equal to

   (A) 26,250
   (B) 17,500
   (C) 8,750
   (D) 0

164. $\sqrt[3]{\dfrac{7}{2401}}$ is equal to

   (A) $\frac{1}{9}$
   (B) $\frac{1}{7}$
   (C) $\frac{1}{21}$
   (D) $\frac{1}{13}$

SPACE FOR ROUGH WORK

165. $\sqrt{7 + 2\sqrt{12}} + \sqrt{7 - 2\sqrt{12}}$ is equal to
(A) 4
(B) $4\sqrt{3}$
(C) 6
(D) $6\sqrt{2}$

166. The smallest perfect square number, which is divisible by each of 2, 3, 4, 5 and 6, is
(A) 600
(B) 840
(C) 900
(D) 1600

167. $\left(1 - \frac{1}{2}\right) \left(1 - \frac{1}{3}\right) \left(1 - \frac{1}{4}\right) \left(1 - \frac{1}{5}\right) \ldots \left(1 - \frac{1}{100}\right)$ is equal to
(A) $\frac{1}{120}$
(B) $\frac{1}{108}$
(C) $\frac{1}{100}$
(D) $\frac{1}{50}$

168. The sum of the first 51 terms of the arithmetic progression, whose 26th term is 300, is
(A) 15,100
(B) 15,300
(C) 15,500
(D) 15,700

169. The sum of all even numbers upto 100 is
(A) 1000
(B) 2000
(C) 2500
(D) 2550

170. $\frac{1}{1 \times 4} + \frac{1}{4 \times 7} + \frac{1}{7 \times 10} + \frac{1}{10 \times 13}$ is equal to
(A) $\frac{2}{7}$
(B) $\frac{3}{13}$
(C) $\frac{3}{7}$
(D) $\frac{4}{13}$

171. The average of all odd numbers less than 100 is
(A) 49
(B) 50
(C) 51
(D) 52

172. A batsman has a certain average of runs for 11 innings played by him. In his 12th innings he scored 90 runs, thereby decreased his average of runs by 5. His average of runs for 12 innings is
(A) 217
(B) 150
(C) 145
(D) 127

SPACE FOR ROUGH WORK

173. The average of monthly salaries of A, B and C is Rs. 40,000 and that of B, C and D is Rs. 50,000. If D's monthly salary is Rs. 60,000, then A's monthly salary is

(A) Rs. 30,000

(B) Rs. 40,000

(C) Rs. 50,000

(D) Rs. 60,000

174. The selling price of a commodity is reduced by 25%. As a result its daily sale is increased by 30%. Due to this effect the revenue collected, compared to the previous daily sale, will be

(A) 5% more

(B) 5% less

(C) 2.5% more

(D) 2.5% less

175. In an examination, a student got 30% marks out of 180 in the first paper of a subject. How much must he get in the second paper out of 150 so that he gets 50% marks in the subject ?

(A) 70%

(B) 74%

(C) 76%

(D) 80%

176. Let us suppose that when water freezes in the form of ice, its volume is increased by 10%. What percent decrease will there be when ice melts in the form of water ?

(A) 10

(B) 9

(C) $11\frac{1}{9}$

(D) $9\frac{1}{11}$

177. If A : B = 2 : 3 and B : C = 4 : 5, then 5A : 3C is

(A) 8 : 9

(B) 5 : 8

(C) 7 : 9

(D) 6 : 7

178. The ratio of two numbers is 5 : 8 and their difference is 69. The smaller of the two numbers is

(A) 184

(B) 140

(C) 115

(D) 108

179. The incomes of A and B are in the ratio 3 : 2 and their expenditures in the ratio 5 : 3. If each saves Rs. 10,000, A's income is

(A) Rs. 30,000

(B) Rs. 40,000

(C) Rs. 60,000

(D) Rs. 90,000

SPACE FOR ROUGH WORK

180. A person took two equal loans for 2 years and 3 years respectively each at 8% simple interest. If at the end of the terms, the difference of interests was Rs. 560, then the amount of each loan was

(A) Rs. 7,000

(B) Rs. 7,200

(C) Rs. 7,500

(D) Rs. 7,800

181. A sum of money at compound interest, compounded half-yearly becomes $\frac{676}{625}$ times of itself in one year. The rate of interest per annum is

(A) 10%

(B) 8%

(C) 6%

(D) 5%

182. A sum of money at compound interest amounts to Rs. 10,648 in 3 years and to Rs. 9,680 in 2 years. The rate of interest per annum is

(A) 20%

(B) 16%

(C) 15%

(D) 10%

183. Two successive discounts of 10% and 5% are equivalent to a single discount of

(A) 15%

(B) $7\frac{1}{2}$ %

(C) $12\frac{1}{2}$ %

(D) $14\frac{1}{2}$ %

184. The marked price of an article is 20% above its cost price. If the trader allows 20% discount on its marked price, he will get

(A) 4% profit

(B) 4% loss

(C) 5% profit

(D) 5% loss

185. A man can complete one-third of a work in 18 days. How many days will he need to complete 0.5 part of the work ?

(A) 36

(B) 27

(C) 24

(D) 21

SPACE FOR ROUGH WORK

186. A and B together can do a piece of work in 12 days, B and C together in 15 days and C and A together in 20 days. In how many days can A alone do the same work ?

(A) 22

(B) 25

(C) 30

(D) 40

187. A is twice as good a workman as B and together they complete a piece of work in 14 days. In how many days can A alone complete the work ?

(A) 21

(B) 28

(C) 30

(D) 35

188. If 1 man or 2 women or 3 boys can do a piece of work in 55 days, in how many days, will 1 man, 1 woman and 1 boy together do the same work ?

(A) 40

(B) 36

(C) 33

(D) 30

189. A car completes a certain journey in 8 hours. It covers half the distance at 40 km/hr and the rest at 60 km/hr. The length of the journey is

(A) 420 km

(B) 400 km

(C) 384 km

(D) 350 km

190. In going from station A to station B, a distance of 100 km, a train moves with speed 40 km/hr and in returning back from B to A, it runs with speed 60 km/hr. The average speed (in km/hr) of the train for the entire journey is

(A) 45

(B) 48

(C) 50

(D) 55

191. A man walking at 3 km/hr crosses a square field diagonally in 2 minutes. The area (in m^2) of the field is

(A) 2500

(B) 3000

(C) 5000

(D) 6000

192. A runs twice as fast as B and B runs thrice as fast as C. In how many minutes, will the journey, covered by C in 42 minutes, be covered by A ?

(A) 36

(B) 28

(C) 14

(D) 7

193. The total surface area of a solid hemisphere is 1848 cm^2. Its diameter is $\left(\text{use } \pi = \frac{22}{7} \right)$

(A) 28 cm

(B) $14\sqrt{6}$ cm

(C) $7\sqrt{6}$ cm

(D) 14 cm

SPACE FOR ROUGH WORK

194. Each of the radius of a sphere and that of the base of a right circular cylinder is 3 cm. If their volumes are equal, the height (in cm) of the cylinder is

(A) 4

(B) 9

(C) 12

(D) 22

195. The ratio of the area of an equilateral triangle and that of a square is $\sqrt{3} : 2$. If the length of a diagonal of the square is 60 cm, then the perimeter of the triangle is

(A) 150 cm

(B) 180 cm

(C) 210 cm

(D) 240 cm

196. The difference between the circumference and the diameter of a circle is 15 cm. The radius (in cm) of the circle is $\left(\text{Take } \pi = \frac{22}{7} \right)$

(A) 7

(B) 4.5

(C) 3.5

(D) 2.25

197. 6% more is gained by selling a radio for Rs. 475, than by selling it for Rs. 451. The cost price of the radio is

(A) Rs. 434

(B) Rs. 400

(C) Rs. 446.50

(D) Rs. 427.50

198. By selling an article for Rs. 255, a man incurs a loss of 15%. For what price should he sell it so that he makes a profit of 20% ?

(A) Rs. 275   (B) Rs. 300

(C) Rs. 375   (D) Rs. 360

199. A production-house sells their items at 20% profit. If the production cost is increased by 10%, but the selling price remains unaltered, the profit is

(A) $9\frac{1}{11}\%$ (B) 10%

(C) 11%   (D) $11\frac{1}{9}\%$

200. A shop-keeper had to sell an article at 20% loss. He could gain 5%, if he had sold the article for Rs. 200 more. The cost price of the article was

(A) Rs. 700

(B) Rs. 800

(C) Rs. 900

(D) Rs. 1,000

SPACE FOR ROUGH WORK