SSC CGL Examination

Grand Test

Questions: 200   Time: 2 hours   Max marks: 200

Directions (Q.1-6): In each of the following questions, select the related letters/word/ number from the given alternatives.

1. 16 : 56 : : 32 : ?
    a) 96   b)112   c)118   d) 128

2. Cattle : Fodder : : Fish : ?
    a) Feed   b) Hay
    c) Insects   d) Plankton

3. MUMBAI : LTLAZH : : DELHI : ?
    a) CDKGG   b) IHLED
    c) CDKGH   d) BCKGH

4. CAT : DDY : : BIG : ?
    a) CLL   b) CLM
    c) CML   d) CEP

5. 26 : 5 : : 65 : ?
    a) 6   b) 7   c) 8   d) 9

6. State : Exile : :
    a) Church : Excommunicate
    b) Police : Arrest
    c) Constitution : Amendment
    d) Judge : Convict

7. Arrange the following words as per order in the dictionary:
    1. Diagnose   2. Dacoit
    3. Drafter   4. Doctor
    5. Dripple
    a) 1,4,3,2,5   b) 2,1,3,4,5
    c) 2,1,4,3,5   d) 2,4,3,5,1

Directions (Q.8-11): In each of the following questions, find the odd word/ number/ letters/ number pair from the given alternatives.

8. a) Wood   b) Cork
    c) Stone   d) Paper

9. a) 27   b) 64
    c) 125   d) 144

10. a) H   b) Q   c) T   d) Z

11. a) RNJ   b) XTP   c) MIE   d) ZWR

12. Which one of the given responses would be a meaningful order of the following
    1. Income   2. Status
    3. Education   4. Well-being
    5. Job
    a) 1,2,5, 3, 4   b) 1, 3, 2, 5, 4
    c) 3, 1, 5, 2, 4   d) 3, 5, 1, 2, 4

13. Which one of the given responses would be a meaningful order of the following in english language
    1. Phrase   2. Letter
    3. Word   4. Sentence
    a) 1, 2, 3, 4   b) 1, 3, 2, 4
    c) 2, 3, 1, 4   d) 2, 3, 4, 1

Directions (Q.14-21): In each of the following questions, series is given with one term missing. Choose the correct alternative from the given ones.

14. 125, 80, 45, 20, ?
    a) 5   b) 8   c) 10   d) 12

15. 13, 32, 24, 43, 35, ?, 46, 65, 57, 76
    a) 45   b) 52   c) 54   d) 55

16. 4, 7, 12, 19, 28, ?
    a) 30   b) 36   c) 39   d) 49

17. R, U, X, A, D, ?
    a) F   b) G   c) H   d) I

18. A, CD, GHI, ?, UVWXY
    a) LMNO   b) MNO
    c) MNOP   d) NOPQ

19.

1	2	3
4	5	6
7	8	9
27	38	?

a) 49   b) 50   c) 51   d) 52

20.

3C	2B	4A
27A	?	64B
9C	4A	16B

a) 8C   b) 12B   c) 16C   d) 18C

21.

5	9	8	7
8	6	9	10
7	13	?	19
5	7	8	9

a) 9   b) 10   c) 12   d) 15

22. Kailash faces towards north. Turning to his right, he walks 25 metres. He then turns to his left and walks 30 metres. Next, he moves 25 metres to his right. He then turns to his right again and walks 55 metres. Finally, he turns to the right and moves 40 metres. In which direction is he now from his starting point?
a) South-west   b) South
c) North-west   d) South- east

23. In a code language, SOLID is written as WPSLPIMFHA. What does the code-word ATEXXQIBVO refer to?
a) WATER   b) WAGER
c) EAGER   d) WAFER

24. A man leaves for his office from his house. He walks towards East. After moving a distance of 20m, he turns South and walks 10m. Then he walks 35m towards the West and further 5m towards the North. He then turns towards East and walks 15m. What is the straight distance (in metres) between his initial and final positions?
a) 0   b) 5
c) 10   d) Cannot be determined

25. Which one will replace the question mark ?

A_2	C_4	E_6
G_3	I_5	?
M_5	O_9	Q_{14}

a) L_{10} b) K_{15} c) I_{15} d) K_8

Directions (Q.26-27): In each of the following questions, from the given alternatives select the word which cannot be formed using the letters of the given word.

26. INFRASTRUCTURE
a) RESTRAIN   b) FRACTURE
c) CHARTER   d) NATURE

27. AUTOGRAPHS
a) GREAT   b) PATHOS
c) GRAPH   d) TROUGH

28. If TEACHER is coded as LMKJNMP, then how will HEART be coded?
a) NMAPL   b) NMPKL
c) NPKML   d) NMKPL

29. If L stands for +, M stands for –, N stands for ×, P stands for ÷, then
14 N 10 L 4 2 P 2 M 8=?
a) 153   b) 216   c) 248   d) 251

30. If '–' stands for 'division', '+' for 'multiplication', '÷' for 'subtraction' and '×' for 'addition', then which one of the following equations is correct?
a) 45+9–34=15   b) 459+34=11
c) 4–593–4=17   d) 45+9–3+4=18

31. Lokesh's school bus is facing North when it reaches his school. After starting from Lokesh's house, it turns right twice and then left before reaching the school. What direction was the bus facing when it left the bus stop in front of Lokesh's house?
a) North b) South c) East d) West

32. A boy rode his bicycle northwards, then turned left and rode one km and again turned left and rode 2km. he found himself exactly one km west of his starting point. How far did he ride northwards initially?
a) 1km   b) 2 km   c) 3 km   d) 5 km

33. David gets on the elevator at the 11th floor of a building and rides up at the rate of 57 floors per minute. At the same time, Albert gets on an elevator at the 51st floor of the

same building and rides down at the rate of 63 floors per minute. If they continue travelling at these rates, then at which floor will their paths cross ?

a) 19   b) 28   c) 30   d) 37

34. Which of the following interchange of signs would make the given equation correct?

$9 + 5 \div 4 \times 3 - 6 = 12$

a) + and ×   b) ÷ and ×
c) ÷ and –   d) + and –

35. Which of the following interchange of signs would make the given equation correct?

$10 + 10 \div 10 - 10 \times 10 = 10$

a) + and –   b) + and ÷
c) + and ×   d) ÷ and +

36. If the word EARTH be written as QPMZS in coded form, how can HEART be written following the same coding?

a) SQPZM   b) SQMPZ
c) SPQZM   d) SQPMZ

Directions (Q.37-38): In each of the following questions, one/two statements are given followed by two/three conclusions I, II and III. You have to consider the 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.

37. **Statements:**
All branches are flowers.
All flowers are leaves.
Conclusiosns:
I. All branches are leaves.
II. All leaves are branches.
III. All flowers are branches.
IV. Some leaves are branches.
a) None follows
b) Only I and IV follow
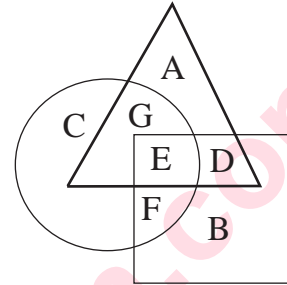c) Only II and III follow
d) All follow

38. **Statements:**
Some books are pens.
No pen is pencil
Conclusiosns:
I. Some pens are books.

II. Some pencils are books.
III. Some books are not pencils.
IV. All pencils are books
a) Only I follows
b) Only II and III follow
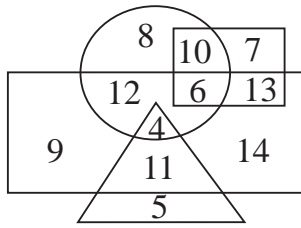c) Only I and III follow
d) Only I and II follow

Directions (Q.39-42): Study the diagram given below to answer these questions:

The triangle in the above figure depicts women in villages, the square depicts the unemployed women and the circle depicts the educated women.

39. Educated employed women in villages are represented by
a) D   b) E   c) F   d) G

40. What does letter D represent?
a) Uneducated women in villages
b) Unemployed women in villages who are not educated
c) Educated unemploued women
d) Educated employed women.

41. Educated unemployed women in villages are represented by
a) A   b) B   c) D   d) E

42. Educated unemployed women are represented by
a) B and C   b) D and E
c) E and F   d) G and E

Directions (Q.43-44): In the following diagram rectangle represents men, Triangle represents educated, Circle represents urban and square represents government employees.
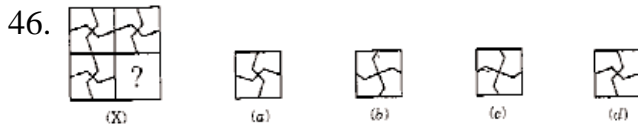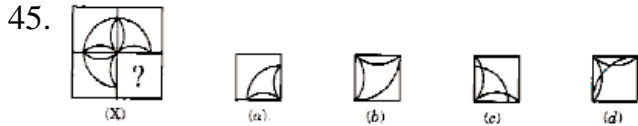
43. Which one of the following represents the educated men but not urban ?
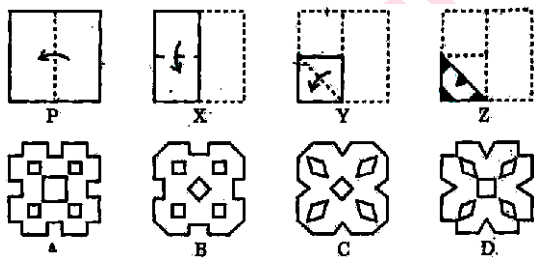a) 9   b) 5   c) 4   d) 11

44. Which one of the following represents a woman who is urban as well as government employee?
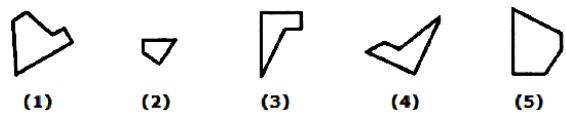a) 7   b) 13   c) 10   d) 6

Directions (Q.45-46): In each of the following questions, which answer figure will complete the pattern in the question figure?

45.

46.

47. A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.
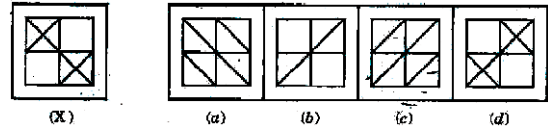

48. Select the alternative which represents three out of the five alternative figures which when fitted into each other would form a complete square.
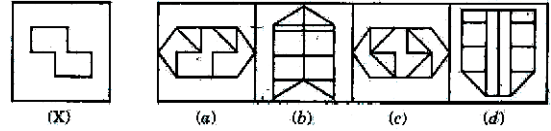

a) 145   b) 245   c) 123   d) 234

49. The mirror image of X given below is

50. From the given answer figures, select the one in which the question figure (X) is hidden/embedded.

51. Match List-I of rulers with List-II of travellers and choose your answer from the code below:

List-I	List-II
(A) Devaraya I	(i) Domingo Paes
(B) Devaraya II	(ii) Abdul Razak
(C) Krishna Devaraya	(iii) Nichlo-De-Conti
(D) Achyuta Devarayalu	(iv) Ferno Nuniz

Code:

	A	B	C	D
a)	(iii)	(ii)	(i)	(iv)
b)	(ii)	(iv)	(iii)	(i)
c)	(iii)	(i)	(ii)	(iv)
d)	(i)	(iii)	(ii)	(iv)

52. Match List-I with List -II and choose your answer from the code below:

List-I (Battles)	List II (Year of the Battles)
(A) Battle of Rajmahal	(i) 1527 A.D.
(B) Second Battle of Panipat	(ii) 1529 A.D.
(C) Battle of Khanwa	(iii) 1556 A.D.
(D) Battle of Ghagara	(iv) 1576 A.D.

Code:

	A	B	C	D
a)	(i)	(iii)	(i)	(iv)
b)	(iv)	(i)	(ii)	(iii)
c)	(iii)	(iv)	(i)	(ii)
d)	(iv)	(iii)	(i)	(ii)

53. Match List-I with List-II and choose your answer from the code below:

List-I (writter)	List II (works)
(A) Nizamuddin Ahmad	(i) Humayun Nama

(B) Ali Muhammad Khan   (ii) Mirat-i-Ahmadi

(C) Gul Badan Begam   (iii) Tabqat-i-Akbari

(D) Ibn Batuta   (iv) Kitab-i-rahela

Code:

	A	B	C	D
a)	(iii)	(ii)	(i)	(iv)
b)	(iv)	(i)	(ii)	(iii)
c)	(i)	(iv)	(iii)	(ii)
d)	(iii)	(ii)	(iv)	(i)

54. What is the correct chronologival sequence of the following Peshwas?

(i) Bajirao I

(ii) Balaji Vishwanath

(iii) Balaji Bajirao

(iv) Madhavarao

Code:

	A	B	C	D
(a)	(i)	(iii)	(ii)	(iv)
(b)	(iv)	(ii)	(i)	(iii)
(c)	(ii)	(i)	(iii)	(iv)
(d)	(iii)	(iv)	(i)	(ii)

55. Who gave the call - "One religion, one caste and one God for mankind"?

a) Jyotiba Phule

b) Swami Vivekanand

c) Shri Narayana Guru

d) Periyar Ramaswami Naikar

56. Who was the greatest Parsi Social Reformer of the 19th century?

a) Jamsetji Tata

b) Rustom Behramji

c) Behramji M. Malabari

d) Pheroz Shah Mehta

57. Chittagong Armoury Raid was Organized under the leadership of:

a) Jatin Das   b) Surya Sen

c) Ganesh Ghosh   d) Khudiram Bose

58. Adyar was the famous centre and headquarter of the:

a) Aurobindo Ashram

b) Madras Mahajan Sabha

c) Theosophical Society

d) Ramakrishna Mission

59. The Santhanam committee on prevention of corruption was oppointed in this year:

a) 1961   b) 1962   c) 1963   d) 1964

60. The election to the office of the president is conducted by:

a) Speaker of the Lok Sabha

b) Ministry of Parliamentary affairs

c) Chief Justice of India

d) The Election Commission of India

61. **Assertion(A):** Lord Ripon's Resolution is the Magna carta of Local Government in India.

Reason (R): Lord Ripon's is regarded as the father of local-self government in India.

Codes:

a) Both (A) and (R) are correct and (R) is the correct explanation of (A)

b) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

c) (A) is ture but (R) is false

d) (A) is false but (R) is true

62. Arrange correct sequence of the following Presidents of India in descending order:

(i) Shri V.V. Giri

(ii) Shri R. Venkataraman

(iii) Dr. Zakir Hussain

(iv) Shri N. Sanjeeva Reddy

Code:

a)	(i)	(iii)	(ii)	(iv)
b)	(ii)	(iv)	(iii)	(i)
c)	(iii)	(i)	(iv)	(ii)
d)	(iv)	(ii)	(i)	(iii)

63. Women's Day is celebrated on:

a) 8th March   b) 1st June

c) 11th July   d) 1st December

64. Which combination of states in descending order of their population size.

a) Andhra Pradesh, Tamil Nadu, Madhya Pradesh, Rajasthan

b) Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Rajasthan

c) Rajasthan, Tamil Nadu, Andhra Pradesh, Madhya Pradesh

d) Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Rajasthan

65. The correct sequence of the stages of Demographic Transition is :
    (i) Low birth rate with low death rate
    (ii) High birth rate with high death rate
    (iii) High birth rate with low death rate
    (a)   (i)   (ii)   (iii)
    (b)   (ii)   (i)   (iii)
    (c)   (ii)   (iii)   (i)
    (d)   (iii)   (ii)   (i)

66. Which one of the following is not correctly matched:
    a) World Environment Day - 5th June
    b) World Health Day   - 7th April
    c) World AIDS Day   - 1st December
    d) World Population day - 15th July

67. Which one of the following is not matched correctly:
    a) Highest IMR - Madhya Pradesh
    b) Highest Density of Population - Andhra Pradesh
    c) Lowest sex-ratio - Haryana
    d) Highest share of urban population - Maharashtra

68. The International committee of Red Cross was founded by:
    a) Henry Dunant   b) Gustave Moyner
    c) Hugo Grotius   d) Hars Peter Gasser

69. Photovoltaics (solar cells) work on the principle of:
    a) Raman effect
    b) Zeeman effect
    c) Photoelectric effect
    d) Faraday effect

70. pH of human blood is:
    a) 7   b)7.4   c) 8   d) 10

71. Hardness of water is due to:
    a) Na and K   b) Ca, Mg and CO_3
    c) Na, K, Ca, Mg   d) Ca, Mg CO_3, SO_4

72. A man weighing 70kg on the surface of the earth, will weigh on the surface of moon:
    a) Same as that on the surface of earth

b) $\frac{1}{6}$ as that on the surface of earth

c) $\frac{1}{8}$ as that on the surface of earth

d) $\frac{1}{10}$ as that on the surface of earth

73. Deficit financing implies
    a) printing new currency notes
    b) replacing new currency with worn out currency
    c) public expenditure in excess of public revenue
    d) public revenue in excess of public expenditure

74. Match the following List-I with List-II and select the correct answer from the codes given below:
	List-I		List-II
(A)	Yakuts	(i)	North Africa
(B)	Berbers	(ii)	Russia
(C)	Khirgiz	(iii)	North America
(D)	Red Indians	(iv)	Central Asia

    Code:
	A	B	C	D
(a)	(ii)	(iv)	(i)	(iii)
(b)	(ii)	(i)	(iv)	(iii)
(c)	(i)	(iv)	(ii)	(iii)
(d)	(iii)	(i)	(iv)	(ii)

75. Which of the following cities is situated on the mouth of river Tapi (Tapti)?
    a) Ankleshwar   b) Vadodara
    c) Ahmedabad   d) Surat

76. Arrange the following Indian States in descending order of their geographical area.
    I. Maharashtra   II. Karnataka
    III. Rajasthan   IV. Tamil Nadu
    Code:
	A	B	C	D
(a)	(III)	(II)	(IV)	(II)
(b)	(I)	(III)	(IV)	(II)
(c)	(IV)	(III)	(I)	(II)
(d)	(III)	(I)	(II)	(IV)

77. Match the following List-I with List-II and select the correct answer from the codes

given below:

List-I	List-II
(A) Iron Ore	(i) Assam
(B) Petroleum	(ii) Chhattisgarh
(C) Mica	(iii) Rajasthan
(D) Rock Phosphate	(iv) Jharkhand

Code:

	A	B	C	D
(a)	(iv)	(iii)	(i)	(ii)
(b)	(ii)	(i)	(iv)	(iii)
(c)	(ii)	(i)	(iii)	(iv)
(d)	(ii)	(iii)	(i)	(iv)

78. Which one of the following is in the rain shadow of the Western Ghats?
    a) Mahabaleshwar   b) Baramati
    c) Panchghani   d) Ratnagiri

79. The idealised global pattern of surface wind from the equator to pole is?
    a) doldrums - trade winds - westerlies - easterlies
    b) doldrums - westerlies - trade winds - easterlies
    c) doldrums - easterlies - trade winds - westerlies
    d) doldrums - trade winds - easterlies - westerlies

80. Casein is present in?
    a) Saliva   b) Semen   c) Milk   d) Sweat

81. Intake of lead may primarily cause the damage of -
    a) Brain   b) Lung   c) Liver   d) Kidney

82. One of the following is not an In-situ conservation for biological resources.
    a) Biosphere reserve
    b) National Parks
    c) Protected areas
    d) Breeding under confined areas

83. Solar ponds are used for?
    a) Salt production   b) Aquaculture
    c) Power generation   d) All of the above

84. Biodiesel is produced in India presently from?
    a) Calotropis   b) Catharanthus

    c) Jatropha   d) Delonix

85. Ozone depletion is caused by the increase in the level of?
    a) Water vapour   b) Chlorofluoro carbon
    c) Oxygen   d) Carbon monoxide

86. To generate environmental awareness Paryavarn Vahini Scheme was launched in?
    a) 1998   b) 1968
    c) 1992   d) 1994

87. Following initiative under International efforts made to have househodl eco-friendly refrigerators:
    a) Kyoto Protocol   b) Basel Convention
    c) Montreal Protocol   d) CITES

88. The study of Birds is called:
    a) Ornithology   b) Agrestology
    c) Phynology   d) Polinology

89. The virus is:
    a) protein and lipid
    b) nucleic acid and protein
    c) lipid and carbohydrate
    d) carbohydrate

90. Lymphocyte cells form in which organ of the human body?
    a) Liver   b) Bone Marrow
    c) Pancreas   d) Spleen

91. The anti-malarial drug Quinine is made from a plant. The plant is?
    a) Neem   b) Eucalyptus
    c) Cinnamon   d) Cinchona

92. Which one among the following produces seeds but not flowers?
    a) Cashew nut   b) Coffee
    c) Groundnut   d) Pine

93. The rate of heartbeat for a normal human body is:
    a) 82   b) 92   c) 72   d) 98

94. The father of the theory of mutation is:
    a) Mendel   b) Aristole
    c) De Vries   d) Darwin

95. Which one among the following nontoxic gases helps in formation of enzymes which ripen fruit?
   a) Acetylene
   b) Ethane
   c) Methane
   d) Carbon dioxide

96. Which of the following acid is pesentin the human abdomen?
   a) sulphuric acid
   b) hydrochloric acid
   c) nitric acid
   d) picric acid

97. SONAR is frequently used by:
   a) Astronauts
   b) Doctors
   c) Engineers
   d) Navigators

98. Garments keep us warm in the winter season because they:
   a) provide heat
   b) do not radiate heat
   c) prevent air from coming in the contact of the body
   d) prevent heat of the body from going exterior

99. Cooking gas is a mixture of:
   a) carbon monoxide and carbon dioxide
   b) butane and propane
   c) methane and ethylene
   d) carbondioxide and oxygen

100. Age of fossil may be found out by determining the rtio of two isotopes of carbon. The isotopes are-
   a) C-12and C-13
   b) C-12 and Carbon black
   c) C-12 and C-14
   d) C-13 and C-14

101. In a triangle A, B, C, D, E are points on AC and BC respectively such that DE is parallel to AB and DE = 3. If AB = 8 and AE bisects ∠DEB, then the length of CE is
   a) 2.4   b) 3.2   c) 4.8   d) 5.6

102. The value of K for which the system of equations x + 2y = 4 and 2x + (K – 2)y + 8 = 0 has no solution is
   a) 2   b) 4   c) 6   d) 8

103. By increasing 200 of each angle of a triangle the ratios of angles are 3:4:5, the measure of greatest angle is-
   a) 40° b) 90° c) 60° d) 80°

104. If $\sin\theta = 2 - \cos\alpha$, where θ and α are non-obtuse and non-negative, then $\sin(\theta-2\alpha)$ is
   a) $\cos\theta$
   b) $\cos\dfrac{\theta}{2}$
   c) $\cos\alpha$
   d) $\cos(\theta-2\alpha)$

105. If $\tan\theta = -\dfrac{4}{3}$, then $\sin\theta$ is
   a) $-\dfrac{4}{5}$ but not $\dfrac{4}{5}$
   b) $-\dfrac{4}{5}$ or $\dfrac{4}{5}$
   c) $\dfrac{4}{5}$ but not $-\dfrac{4}{5}$
   d) none of these

106. Given $A=\sin^2\theta + \cos^4\theta$, then for all real θ?
   a) $1 \le A \le 2$
   b) $\dfrac{3}{4} \le A \le 1$
   c) $\dfrac{13}{16} \le A \le 1$
   d) $\dfrac{3}{4} \le A \le \dfrac{13}{16}$

107. If $\cos\alpha + \cos\beta = 0 = \sin\alpha + \sin\beta$, then $\cos 2\alpha + \cos 2\beta = ?$
   a) $-2\sin(\alpha+\beta)$
   b) $-2\cos(\alpha+\beta)$
   c) $2\sin(\alpha+\beta)$
   d) $2\cos(\alpha+\beta)$

108. The area of the regular polygon of n sides is? (where R is the radius of the circumpolygon).
   a) $\dfrac{1}{2}R^2\sin\left(\dfrac{2\pi}{n}\right)$
   b) $\dfrac{n}{2}R^2\sin\left(\dfrac{\pi}{n}\right)$
   c) $\dfrac{n}{2}R\sin\left(\dfrac{2\pi}{n}\right)$
   d) $\dfrac{nR^2}{2}\sin\left(\dfrac{2\pi}{n}\right)$

109. The two adjacent sides of a cyclic quadrilateral are 2 and 5 and the angle between them is 60°. If the third side is 3, the remaining fourth side is
   a) 2   b) 3   c) 4   d) 5

110. The Minimum value of $(x-1)(x-2)$ is
 a) $-\dfrac{1}{4}$ b) $-\dfrac{1}{2}$ c) 0 d) $\dfrac{1}{2}$

111. Two parallel chords of lengths 6 units and 8 units are drawn on the opposite sides of their parallel diameter of length 10 units. The distance between the chords is
 a) 3 units   b) 5 units
 c) 7 units   d) 9 units

112. If a flag-staff of 6 metres high placed on the top of a tower throws a shadow of $2\sqrt{3}$ metres along the ground, then the angle (in degrees) that the sun makes with the ground is?
 a) 60° b) 30°
 c) 45° d) none of these

113. On the ground level, the angle of elevation of the top of a tower is 300. On moving 20 metres nearer the tower, the angle of elevation is found to be 600. Then the height of the tower is?
 a) 10 metres   b) 20 metres
 c) $10\sqrt{3}$ metres   d) none of these

114. A park square in shape has a 3 metre wide road inside it running along its sides. The area occupied by the road is 1764 square metres. What is the perimeter along the outer edge of the road?
 a) 576 metres   b) 600 metres
 c) 640 metres   d) Data inadequate

115. If an area enclosed by a circle or a square or an equilateral triangle is the same, then the maximum perimeter is possessed by:
 a) circle   b) square
 c) equilateral triangle
 d) cannot be determined

116. The radius of a wire is decreased to one-third and its volume remains the same. The new length is how many times the original length?
 a) 1 time   b) 3 times
 c) 6 times   d) 9 times

117. A cylindrical tub of radius 12 cm contains water upto a depth of 20 cm. A spherical iron ball is dropped into the tub and thus the level of water is raised by 6.75 cm. The radius of the ball is :
 a) 4.5 cm   b) 6 cm
 c) 7.25 cm   d) 9cm

118. A 3 digit number $4a3$ is added to another 3 digit numebr 984 to give a 4 digit number $13b7$, which is divisible by 11. Then, $(a+b)$ = ?
 a) 10   b) 11   c) 12   d) 15

119. The L.C.M of two numbers is 45 times their H.C.F. If one of the numbers is 125 and the sum of H.C.F. and L.C.M. is 1150, the other number is?
 a) 215   b) 220   c) 225   d) 235

120. A certain number of two digits is three times the sum of its digits and if 45 be added to it, the digits are reversed. Then the number is?
 a) 23   b) 27   c) 32   d) 72

121. If $a = \dfrac{\sqrt{5}+1}{\sqrt{5}-1}$ and $b = \dfrac{\sqrt{5}-1}{\sqrt{5}+1}$, then then value of $\left(\dfrac{a^2 + ab + b^2}{a^2 - ab + b^2}\right)$ is?
 a) $\dfrac{3}{4}$ b) $\dfrac{4}{3}$ c) $\dfrac{3}{5}$ d) $\dfrac{5}{3}$

122. If a, b, c are positive integers; $a^2 + b^2 = 45$ and $b^2 + c^2 = 40$, then the value of $a + b + c$ is?
 a) 9   b) 10   c) 11   d) 12

123. If $(a+b)^3 = \left(a\sqrt{a} + b\sqrt{b}\right)^2$, then $\dfrac{\sqrt{a}}{\sqrt{b}} + \dfrac{\sqrt{b}}{\sqrt{a}}$ is?
 a) $\dfrac{1}{3}$ b) $\dfrac{2}{3}$ c) 3 d) $\dfrac{3}{2}$

124. If $x + \dfrac{1}{x} = 3$, then the value of

$\dfrac{x^4 + 2x^3 + 3x^2 + 2x + 1}{x^4 + 1}$ is?

a) $\dfrac{16}{7}$ b) $\dfrac{16}{9}$ c) $\dfrac{4}{9}$ d) $\dfrac{4}{7}$

125. For non-zero a and b, if $\dfrac{1}{a+b} = \dfrac{1}{a} + \dfrac{1}{b}$ and $a \neq b$, then $a^3 - b^3$ is?

a) 0   b) 1   c) –1   d) 2

126. The average weight of 3 men A, B and C is 84 kg. Another man D joins the group and the average now becomes 80kg. If another man E, whose weight is 3 kg more than that of D, replaces A, then the average weight of B, C, D and E becomes 79 kg. The weight of A is :

a) 70kg   b) 72kg
c) 75 kg   d) 80kg

127. Ayesha's father was 38 years of age when she was born while her mother was 36 years old when her brother four years younger to her was born. What is the difference between the ages of her parents?

a) 2 years   b) 4 years
c) 6 years   d) 8 years

128. $\left(\dfrac{x^b}{x^c}\right)^{(b+c-a)} \left(\dfrac{x^c}{x^a}\right)^{(c+a-b)} \left(\dfrac{x^a}{x^b}\right)^{(a+b-c)} = ?$

a) x^{abc} b) 1
c) $x^{ab+bc+ca}$ d) x^{a+b+c}

129. Sameer spends 24% of his monthly income on food and 15% on the education of his children. Of the remaining salary, he spends 25% on entertainement and 20% on conveyance. He is now left with Rs. 10,736. What is the monthly salary of Sameer?

a) Rs. 27,600   b) Rs. 28,000
c) Rs. 31,200   d) Rs. 32,000

130. The ratio of the cost price and the selling price is 4:5. Then the profit percent is?

a) 10%   b) 20%   c) 25%   d) 30%

131. A dishonest dealer uses a scale of 90 cm instead of a metre scale and claims to sell at cost price. Then his profit is:

a) 9%   b) 10%
c)12%   d) None of these

132. A sum of Rs. 53 is divided among A, B, C in such a way that A gets Rs.7 more than what B gets and B gets Rs. 8 more than what C gets. Then the ratio of their shares is?

a) 16:9:18   b) 25:18:10
c) 18:25:10   d) 15:8:30

133. A began a business with Rs. 85,000. He was joined afterwards by B with Rs. 42,500. For how much period does B join, if the profits at the end of the year are divided in the ratio of 3:1?

a) 4 months   b) 5months
c) 6 months   d) 8 months

134. A is 30% more efficient than B. How much time will they, working together, take to complete a job which A alone could have done in 23 days?

a) 11days   b) 13days
c) $20\dfrac{3}{17}$ days   d) None of these

135. If A can do $\dfrac{1}{4}$ of a work in 3 days and B can do $\dfrac{1}{6}$ of the same work in 4 days, how much will A get if both work together and are paid Rs. 180 in all?

a) Rs.36   b) Rs.60
c) Rs.108   d) Rs. 120

136. A tank is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the tank in the same time during which the tank is filled by the third pipe alone. The second pipe fills the

tank 5 hours faster than the first pipe and 4 hours slower than the third pipe. The time required by the first pipe is :
a) 6 hrs
b) 10 hrs
c) 15 hrs
d) 30 hrs

137. With a uniform speed a car covers the distance in 8 hours. Had the speed been increased by 4 km/hr, the same distance could have been covered in $7\frac{1}{2}$ hours. What is the distance covered?
a) 420 km
b) 480 km
c) 640 km
d) Cannot be determined

138. A train 125 m long passes a man, running at 5 kmph in the same direction in which the train is going in 10 seconds. Then the speed of the train is:
a) 45 km/hr
b) 50km/hr
c) 54 km/hr
d) 55km/hr

Directions (Q.139-140): Each of the following questions consists a question followed by three statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the questions.

139. What is the speed of the boat in still water?
I. The speed downstream is 12 kmph.
II. The speed upstream is 4kmph.
III. In a to and fro journey between two points, the average speed of the boat was 6 kmph.
a) I and II only
b) All I, II and III
c) III, and either I or II
d) Any two of the three

140. What is the speed of stream?
I. The boat covers 24 km in 6 hours upstream.
II. The boat covers 24 km in 3 hours moving downstream.
III. The ratio between the speed of boat and stream is 3:1 respectively.
a) Any two of the three
b) I and II only
c) II and III only
d) I and III only

141. The simple interest on a sum of money will be Rs. 600 after 10 years. If the principal is trebled after 5 years, what will be the total interest at the end of the tenth year?
a) Rs.600
b) Rs.900
c) Rs. 1200
d) Rs.1500

142. A man invested $\frac{1}{3}$ of his capital at 7%; $\frac{1}{4}$ at 8% and the remainder at 10%. If his annual income is Rs. 561, the capital is:
a) Rs.5400
b) Rs. 6000
c) Rs. 6600
d) Rs. 7200

143. Find the compound interest on Rs. 15,625 for 9 months at 16% per annum compounded quarterly.
a) Rs. 1851
b) Rs. 1941
c) Rs. 1951
d) Rs. 1961

144. On a sum of money, the simple interest for 2 years is Rs.660, while the compound interest is Rs. 696.30, the rate of interest being the same in both the cases. The rate of interest is:
a) 10%
b) 10.5%
c) 12%
d) None of these

145. In a History examination, the average for the entire class was 80 marks. If 10% of the students scored 95 marks and 20% scored 90 marks, what was the average marks of the remaining students of the class?
a) 65.5
b) 72.5
c) 75
d) 85

Directions (Q.146-150): Answer the questions by considering the following information.
A school has four sections A, B, C, D of Class IX students. The results of half yearly and annual examinations are shown in the table given below.

Result	No. of Students			
	Section A	Section B	Section C	Section D
Students failed in both Exams	28	23	17	27
Students failed in half-yearly but passed in Annual Exams	14	12	8	13
Students passed in half-yearly but failed in Annual Exams	6	17	9	15
Students passed in both Exams	64	55	46	76

146. If the number of students passing an examination be considered a criteria for comparison of difficulty level of two examinations, which of the following statements is true in this context?
    a) Half yearly examinations were more difficult.
    b) Annual examinations were more difficult.
    c) Both the examinations had almost the same difficulty level.
    d) The two examinations cannot be compared for difficulty level.

147. How many students are there in Class IX in the school?
    a) 336   b) 189   c) 335   d) 430

148. Which section has the maximum pass percentage in at least one of the two examinations?
    a) A Section   b) B Section
    c) C Section   d) D Section

149. Which section has the maximum success rate in annual examination?
    a) A Section   b) B Section
    c) C Section   d) D Section

150. Which section has the minimum failure rate in half yearly examination?
    a) A section   c) B section
    b) C section   d) D section

Directions (151-160): 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 is (d). i.e. No error.

151. The whole country (a)/was suffering by (b)/a financial crisis. (c)/No error (d)

152. I do not know where could he have gone (a)/so early (b)/in the morning. (c)/No error (d)

153. I suggest that (a)/he goes (b)/to the doctor as soon as he returns from taking the examination. (c)/No error (d)

154. The introduction of tea and coffee (a)/and such other beverages (b)/ have not been without some effect. (c)/No error (d)

155. In spite of the roadblock (a)/the guards allowed us (b)/enter the restricted area to search our friends. (c)/No error (d)

156. The newer type of automatic machines (a)/wash (b)/the clothes faster. (c)/No error (d)

157. By the time (a)/we got our tickets and entered the cinema theatre, (b)/ the show was already begun. (c)/No error (d)

158. Each of the students in the computer class (a)/has to type (b)/their own research paper this semester. (c)/No error (d)

159. The fact of me (a)/being a stranger (b)/does not excuse his conduct. (c)/No error (d)

160. The sea looks (a)/as if it has been (b)/agitated by a storm. (c)/No error (d)

Directions (161-165): In the each following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

161. ILLICIT
    a) immoral   b) illegal
    c) ineligible   d) illegible

162. FLAIR
    a) talent   b) tendency
    c) bias   d) need

163. CONSERVATION
    a) preservation   b) respiration
    c) correction   d) confusion

164. ABYSMAL
    a) sickening   b) gloomy
    c) sad   d) bottomless

165. SALIENT
    a) valiant   b) variant
    c) prudent   d) prominent

Directions (166-170): In the following questions, choose the word(s) opposite in meaning to the given word.

166. SUPPRESS
    a) stir up   b) rouse
    c) urge   d) incite

167. LOOSEN
    a) fasten   b) accelerate
    c) delay   d) paste

168. REBELLION
    a) forgiveness   b) retribution
    c) submission   d) domination

169. IDIOSYNCRASY
    a) insanity   b) sanity
    c) generality   d) singularity

170. SANGUINE
    a) diffident   b) hopeless
    c) cynical   d) morose

Directions (171-175): In the following questions, four alternatives are given for the Idiom/Phrase printed in bold in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase.

171. When the servant tried to make the matter clear he got **a flea in his ear.**
    a) to get a rumour
    b) to get a severe scolding
    c) to be oppressed with ear-ache
    d) to be advised in one's ear

172. He was entrusted with some secret plans, but he **let it all hang out.**
    a) to be unsuccessful in one's pursuit
    b) to reveal everything
    c) to mishandle the situation
    d) to release a horrible experience

173. The manager assured me that he would **not breathe a word** about the matter.
    a) not to permit an unceremonious act
    b) not to accept any bribe to reveal a secret
    c) not to make anybody worried about anything
    d) not to reveal the secret matter

174. The news of his father's death **dealt him a severe blow.**
    a) to give support   b) to be in favour of
    c) to hit or strike severely
    d) to support on certain issues

175. He has **hit upon** a new idea of making money within a short period with meagre resources.
    a) to find something by chance
    b) to be surpassed by someone
    c) to be ruined badly
    d) to miss a chance

Directions (176-180): In each of the following questions, a part of the sentence is printed bold. Below are given alternatives to the bold part at (a), (b) and (c), which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (d)

176. In the desert, the sun is the master, all else **resigns** before its merciless rays.
    a) collapses   b) falls
    c) retires   d) No improvement

177. I intend **to learn** French next year.
    a) learning   b) learn
    c) have learnt   d) No improvement

178. The police **needed** him for armed robbery.
    a) liked   b) was after
    c) were looking to d) No improvement

179. He seemed most amenable **for** my idea.
    a) to   b) with
    c) without   d) No improvement

180. The children clambered **with** the steep bank.
    a) within   b) up
    c) along   d) No improvement

Directions (181-190): In the following questions, you have two brief passages with some questions following each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives.

PASSAGE-1

Read not to contradict and confuse, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested. That is some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention. Some books may also be read by deputy, and extracts made of them by others but that would be only in the less important arguments and the meaner sort of books; else distilled books are like common distilled waters, flashy things. Reading maketh a full man, conference a ready man, and writing an exact man.

181. What should be the purpose of reading a book?
   a) To contradict
   b) To weight and consider
   c) To take it for granted
   d) To understand the contents

182. Why are some books to be tasted?
   a) To be read with great care
   b) To be read with great attention
   c) To be read only in parts
   d) To be read for fun

183. How is man's character influenced by the art of writing?
   a) It makes him a great writer
   b) It makes him a ready man
   c) It makes him a full man
   d) It makes him an exact man

184. What kind of books is to be read by the deputy?
   a) Extraordinary books
   b) Ordinary books
   c) Interesting books
   d) Meaner sort of books

185. What is meant by 'chewed and digested'?
   a) Thoroughly read and understood
   b) Partly read and understood
   c) Understood without any effort
   d) None of the above

PASSAGE-2

To analyse industrial opportunities, developing countries should regard industry as based either on natural raw materials or on partly or fully finished materials. Most of the industries based on raw materials could be classified as heavy industries. Most of the inustries that use materials that are processed to various degrees could be classified as light industries. But another name, basic industries more accurately describes the operations that depend on raw natural resources; they are basic in the sense that they are the starting point in the process; they convert natural resources into materials used for making mother product. Manufacturing must start with raw materials. Deriving from animal vegetable or mineral origin. Without manufacturing the uses of the natural raw materials in their original form are few. Industrial products can be divided according to the three stages of manufacturing; basic, intermediate, and final. In some cases these stages occur in different factories at separate locations. The samples industries combine two or even all phases in one factory, process. For example, the sugar industry often starts by crushing the sugarcane and ends with processed sugar packaged for the individual customer. Most industries produce a partially finished, or intermediate product that goes to other factories to be made into final products. A basic metal factory 'for instance, will make steel from iron ore, the steel will then be sent to a metal assembling factory, which may take either a final product or parts for an assembly industry.

Raw material industries, unlike industries in the advanced phase of manufacturing, usually require large operation to reduce product costs per unit, called "economics of scale". Steel factories, cement operations. Pulp paper mills and oil processing facorihes are examples of such raw material industries. However, some raw material industries such as those involved in food processing, do not have great

economics of scale. The large/heavy industries usually require extensive capital investement, but create relativity little employment. In heavy industries, the trend is clearly toward more automatic machine process that steadily reduce employment opportunities. These industries produce more than can be absorbed by the markets that exist in many developing countries. Consequently, they often manufacture their products for the international export market.

186. Big operations of raw material industry help in?
   a) bringing down per unit cost.
   b) producing for the need of other industry
   c) exporting the products
   d) improving the quality of products.

187. Which of the following is the main reason of heavy industry exporting its products?
   a) They produce quality goods at cheaper prices
   b) They achieve 'economics of scale'.
   c) They require huge capital investment.
   d) They produce more than the local requirement.

188. Which of the following is true about the three stages of manufacturing?
   a) All the three always take place in different factories.
   b) All the three always take place in same factories.
   c) The three stages proceed in a particular order.
   d) Most of the industries deal in the first stage

189. Why is the processing of raw materials required?
   a) to convert it into usable form
   b) to achieve industrial growth
   c) to meet the needs of industries
   d) to generate employment

190. "Economics of Scale" is mainly adopted by
   a) Basic Industries
   b) Light Industries
   c) Intermediate Industries
   d) All the Industries

Directions (191-195): In each of the following questions, groups of four words are given. In each group, one word is wrongly spelt. Find the misspelt word.

191. a) stationery   b) dictionery
    c) revolutionary   d) voluntary

192. a) temperature   b) temperament
    c) tempastuous   d) temptation

193. a) whether   b) weathere
    c) whither   d) wither

194. a) legible   b) communiceble
    c) incorrigible   d) eligible

195. a) audacious   b) auspicious
    c) caprisious   d) credulous

Directions (196-200): In each of the following questions, out of the four alternatives, choose the one which can be substituted for the given words/sentence.

196. Belief that God is in everything and that everything is God
    a) Atheism   b) Pantheism
    c) Scepticism   d) Animism

197. A picture of a person or a thing drawn in such a highly exaggerated manner as to cause laughter
    a) Cartoon   b) Cacography
    c) Cartography   d) Caricature

198. One who journeys from place to place
    a) Quack   b) Cannibal
    c) Itinerant   d) Courier

199. Reproducing or memorizing word for word
    a) Verbatim   b) Verbose
    c) Verbiage   d) Verbalism

200. One who breaks the law
    a) Aggressor   b) Politician
    c) Transgressor   d) Pedestrian

KEY

1. B	2. D	3. C	4. A	5. C
6. A	7. C	8. C	9. D	10. B
11. D	12. D	13. C	14. A	15. C
16. C	17. B	18. C	19. C	20. A
21. D	22. D	23. A	24. B	25. D
26. C	27. A	28. D	29. A	30. A
31. D	32. B	33. C	34. C	35. C
36. D	37. B	38. C	39. D	40. B
41. D	42. C	43. D	44. C	45. A
46. D	47. C	48. B	49. D	50. C
51. A	52. D	53. A	54. C	55. C
56. C	57. B	58. C	59. B	60. D
61. B	62. C	63. A	64. A	65. C
66. D	67. B	68. A	69. C	70. B
71. D	72. B	73. C	74. A	75. D
76. D	77. B	78. B	79. A	80. C
81. A	82. D	83. D	84. C	85. B
86. C	87. C	88. A	89. B	90. B
91. D	92. B	93. C	94. C	95. A
96. B	97. D	98. D	99. B	100. C

101. C	102. C	103. D	104. C	105. B
106. B	107. B	108. D	109. A	110. A
111. C	112. A	113. C	114. B	115. C
116. D	117. D	118. A	119. C	120. B
121. B	122. C	123. B	124. A	125. A
126. C	127. C	128. B	129. D	130. C
131. D	132. B	133. D	134. B	135. D
136. C	137. B	138. B	139. D	140. A
141. C	142. C	143. C	144. D	145. C
146. C	147. D	148. D	149. A	150. D
151. B	152. A	153. B	154. C	155. C
156. C	157. C	158. D	159. A	160. B
161. B	162. A	163. A	164. D	165. D
166. D	167. A	168. C	169. C	170. A
171. B	172. B	173. D	174. C	175. A
176. D	177. D	178. C	179. A	180. B
181. B	182. C	183. D	184. D	185. A
186. A	187. D	188. D	189. A	190. A
191. B	192. C	193. B	194. B	195. C
196. B	197. D	198. C	199. A	200. C

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