

SSC CGL Examination

Grand Test

Questions: 200

Time: 2 hours

Max marks: 200

Directions (Q.1-3): In each of the following questions, select the related letters/ word/ number from the given alternatives.

- 5 : 36 :: 6 : ?
a) 48 b) 49 c) 50 d) 56
- Mountain : Hill :: Tree : ?
a) Ground b) Leaf
c) Forest d) Shrub
- EGIK : FILO :: FHJL : ?
a) GJMP b) GMJP
c) JGMP d) JGPM

Directions (Q.4-5): In each of the following questions, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

- _ bc _ ca _ aba _ c _ ca
a) abcbb b) bbbcb
c) bacba d) abbcc
- abca _ bcaab _ ca _ bbc _ a
a) ccaa b) bbaa c) abac d) abba

Directions (Q.6-10): In each of the following questions, a series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.

- 28, 33, 31, 36, ?, 39
a) 32 b) 34 c) 38 d) 40
- C4X, F9U, I16R, ?
a) K25P b) L25P c) L25O d) L27P
- Y, B, T, G, O, ?
a) N b) M c) L d) K
- BMX, DNW, FOU, ?
a) GHO b) GPS c) HPS d) HPT
- ADVENTURE, DVENTURE, DVENTUR, ?, VENTU
a) DVENT b) VENTURE

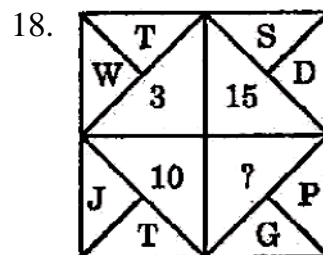
- c) VENTUR d) DVENTU

Directions (Q.11-15): In each of the following questions, find the odd word/ number-pair from the given alternatives.

- a) Tsangpo b) Hazaribagh
c) Kanha d) Bandipur
- a) Brass b) Bronze
c) Steel d) German silver
- a) 12-72 b) 24-48
c) 60-74 d) 84-96
- a) Polyester b) Cotton
c) Terylene d) Nylon
- 2, 5, 10, 50, 500, 5000
a) 5 b) 10 c) 50 d) 5000

Directions (Q.16-19): In each of the following questions, select the missing number from the given responses.

- 3, 7, 15, ?, 63, 127
a) 30 b) 31 c) 47 d) 52
- 563, 647, 479, 815, ?
a) 672 b) 386 c) 279 d) 143



- a) 5 b) 9 c) 11 d) 13

19.

4	5	6
2	3	7
1	8	3
21	98	?

- a) 94 b) 76 c) 73 d) 16

20. I am facing South. I turn right and walk 20m. Then I turn right again and walk 10m. Then I turn left and walk 10m and then turning right walk 20m. Then I turn right again and walk 60m. In which direction am I from the starting point?

- a) North b) North-west
c) East d) North-east

21. If \times means $+$, $+$ means \div , $-$ means \times and \div means $-$, then $8 \times 7 - 8 + 40 \div 2 = ?$

- a) 1 b) $7\frac{2}{5}$ c) $8\frac{3}{5}$ d) 44

22. On a shelf are placed six volumes side-by-side labelled A, B, C, D, E and F. B, C, E, F have green covers while others have yellow covers. A, D, B are new volumes while the rest are old volumes. A, C, B are law reports while the rest are medical extracts. Which two volumes are old medical extracts and have green covers?

- a) B, C b) C, D c) C, E d) E, F

Directions (Q.23-25): In each of the following questions, from the given alternatives select the word which cannot be formed using the letters of the given word.

23. DETERMINATION

- a) MINT b) TEAM
c) TAMED d) NORTH

24. ADMINISTRATION

- a) RATION b) MINISTER
c) TRADITION d) STATION

25. ENVIRONMENT

- a) EMINENT b) ENTER
c) MOVEMENT d) MENTOR

26. If ' $-$ ' stands for 'division', ' $+$ ' for 'multiplication,' ' \div ' for 'subtraction' and ' \times ' for 'addition', which one of the following equations is correct?

- a) $6 + 20 - 12 \div 7 - 1 = 38$
b) $6 - 20 \div 12 \times 7 + 1 = 57$
c) $60 + 20 - 12 \div 7 \times 1 = 62$
d) $6 \div 20 \times 12 + 7 - 1 = 70$

27. If L denotes \div , M denotes \times , P denotes $+$ and Q denotes $-$, then which of the following statements is true?

a) $11 M 34 L 17 Q 8 L 3 = \frac{38}{3}$

b) $6 M 18 Q 26 L 13 P 7 = \frac{173}{13}$

c) $32 P 8 L 16 Q 4 = -\frac{3}{2}$

d) $9 P 9 L 9 Q 9 M 9 = 71$

28. $5 + 6 \div 3 - 12 \times 2 = 17$

- a) \div and \times b) $+$ and \times
c) $+$ and \div d) $+$ and $-$

29. If ' \times ' stands for 'addition', ' $<$ ' for 'subtraction', ' $+$ ' for 'division', ' $>$ ' for 'multiplication', ' $-$ ' for 'equal to', ' \div ' for 'greater than' and ' $=$ ' for 'less than', then state which of the following is true?

- a) $3 \times 4 > 2 - 9 + 3 < 3$
b) $5 \times 3 < 7 \div 8 + 4 \times 1$
c) $5 > 2 + 2 = 10 < 4 \times 8$
d) $3 \times 2 < 4 \div 16 > 2 + 4$

30. In a code language, TUTORIAL is written as DODNGLCF and DANCE is written as YCJMZ, how can EDUCATION be written in that code?

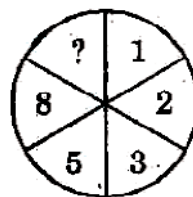
- a) ZYMODCLNJ b) ZYOMCDLNJ
c) ZYOMDCLNJ d) ZYOTNLCMD

31. If the word PORTER can be coded as MBNZQN, how can REPORT be written?

- a) NQMNBZ b) NQMBNZ
c) NBQMNZ d) NQBMNZ

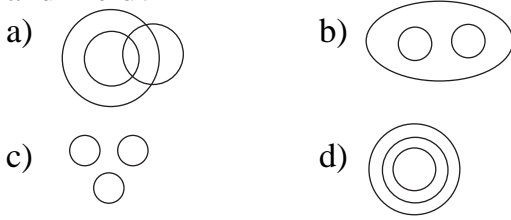
Directions (Q.32-33): In each of the following questions, select the missing number from the given responses.

32.



- a) 10 b) 12 c) 13 d) 15

33. Which of the following diagrams indicates the best relation between Football, Player and Field?



34. If 'paper' is called 'wood', 'wood' is called 'straw', 'straw' is called 'grass', 'grass' is called 'rubber' and 'rubber' is called 'cloth', what is the furniture made up of ?

- a) Paper
- b) Wood
- c) Straw
- d) Grass

35. In a group of cows and hens, the number of legs are 14 more than twice the number of heads. The number of cows is

- a) 5
- b) 7
- c) 10
- d) 12

36. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

$$4 * 9 * 72 * 2 = 0$$

- a) $\div \times -$
- b) $\times \div -$
- c) $\div - \times$
- d) $\times - \div$

37. Find the correct set of numbers from the given alternatives.

- (3, 1, 2) (10, 2, 5) (101, 5, 26) (10202, ?, ?)
- a) 9, 65
 - b) 26, 65
 - c) 9, 677
 - d) 26, 677

Directions (Q.38-40): 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.

38. **Statements:**

No women teacher can play.
Some women teachers are athletes.

Conclusions:

- I. Male athletes can play
- II. Some athletes can play
- a) If only conclusion I follows
- b) If only conclusion II follows

- c) If either conclusion I or II follows
- d) If neither conclusion I nor II follows.

39. **Statements:**

Some pictures are frames.
Some frames are idols.
All idols are curtains.

Conclusions:

- I. Some curtains are pictures
- II. Some curtains are frames
- III. Some idols are frames.
- a) Only I and II follow
- b) Only II and III follow
- c) Only I and III follow
- d) All follow

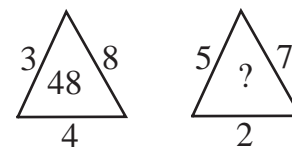
40. **Statements:**

No box is toy.
All toys are blocks.

Conclusions:

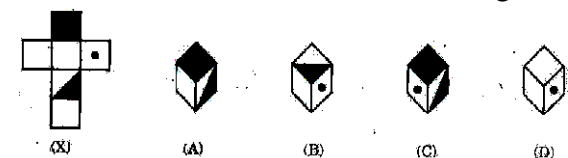
- I. Some blocks are toys
- II. Some blocks are boxes.
- III. No block is box.
- a) Only I follows
- b) Only either II and III follows
- c) Only either II or III, and I follows
- d) None follows

41. Insert the missing number from the given responses



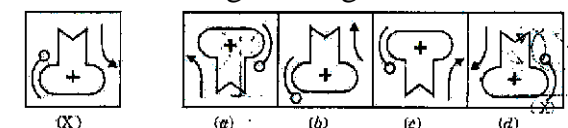
- a) 27
- b) 35
- c) 54
- d) 64

42. Choose from amongst the alternatives (a), (b), (c) and (d), the boxes that are similar to the box that can be formed from figure X

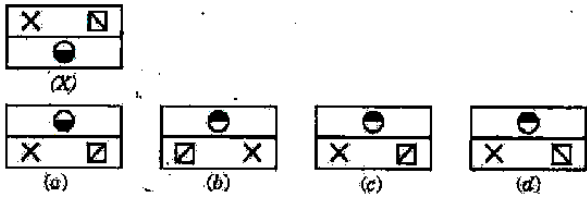


- a) A and C only
- b) B, C and D only
- c) B and D only
- d) C and D only

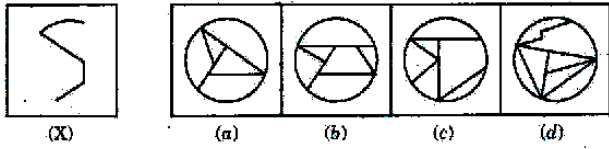
43. The mirror image of X given below is



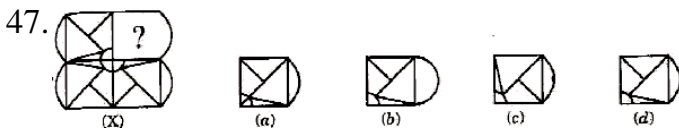
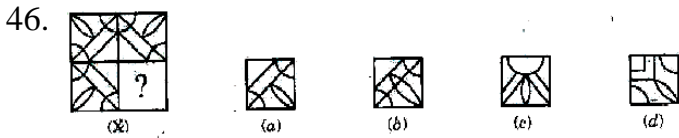
44. The water image of X given below is



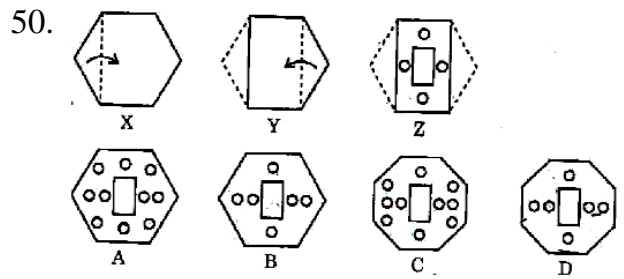
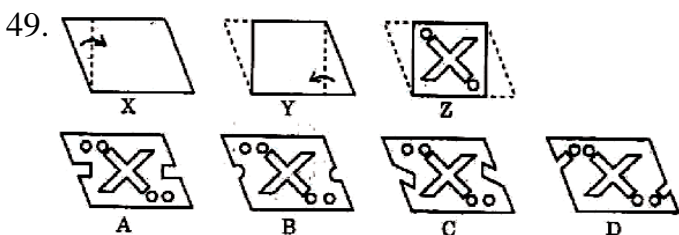
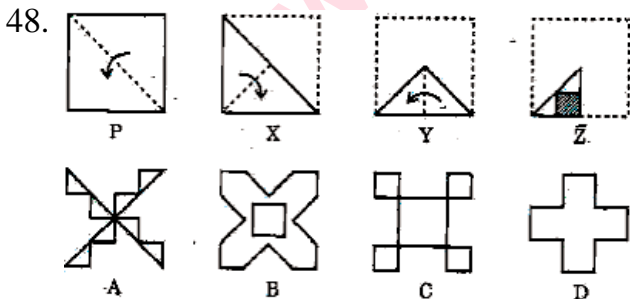
45. Mark the correct response which has the fig X embedded



Directions (Q.46-47): In each of the following questions, which answer figure will complete the pattern in the question figure?



Directions (Q.48-50): In each of the following questions, consists of a set of three figures X, Y and Z showing a sequence of folding a piece of paper. Fig (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of fig.(Z).



51. Match List-I with List-II and choose your answer from the codes given below:

- | | |
|---------------------|-------------------|
| List-I | List-II |
| (A) Indika | (i) Banabhatta |
| (B) Harshacharita | (ii) Chand bardai |
| (C) Prithviraj Raso | (iii) Megasthenes |
| (D) Rajatarangini | (iv) Kalhana |

Codes:

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

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

- | | |
|-----------------------------|-----------------------|
| List-I | List-II |
| (A) Junagarh Inscription | (i) Harshavardhana |
| (B) Iron pillar Inscription | (ii) Pushya gupta |
| (C) Banskhera Inscription | (iii) Samudragupta-II |
| (D) Aihole Inscription | (iv) Pulkeshin- II |

Codes:

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

Given below are two statements, one labelled as **Assertion (A)** and the other labelled as **Reason (R)**

53. **Assertion (A):** Sangam literature is a 'Sanskrit Kavya.'

Reason (R): It offers information on the social

Conditions:

In view of the above two statements which of the following is correct?

- (a) (A) is true but (R) is false
 (b) (A) is false but (R) is true
 (c) Both (A) and (R) are false
 (d) Both (A) and (R) are true
54. The post of Diwan-i-Mustakharaj was created by which of the following Sultans?
 a) Alauddin Khilji b) Ghiyasuddin Balban
 c) Razia d) Ibrahim Lodi
55. In 1920 the All India Trade Union Congress was organized by:
 a) B.P. Wadia b) Mahatma Gandhi
 c) N.M. Joshi d) Jawaharlal Nehru
56. Who stated in 1834 that "The bones of the cotton weavers are bleaching the plains of India"?
 a) Lord Macaulay
 b) Lord William Bentinck
 c) Dadabhai Naoroji
 d) Raja Ram Mohan Roy
57. The Ryotwari settlement was made with the :
 a) Zamindars b) Cultivators
 c) Village communities
 d) Muqaddams
58. The value of Special Drawing Right (SDR) at present is determined in the international market by:
 a) The price of gold
 b) The value of US \$
 c) The average value of the basket of a set of convertible currencies
 d) Euro
59. Which of the following is not a full-fledged member of the ASEAN group at present (2006)?
 a) Indonesia and Myanmar
 b) Philippines and Thailand
 c) India and Pakistan
 d) South Vietnam and Singapore
60. Minimum support price in the agricultural sector is undertaken to:
 a) Prevent fall in the price in case of a glut in any given year
 b) Protect the interests of the farmers
 c) Provide incentive to farmers
 d) All of the above
61. Which one of the following is called the Mother of Parliaments?
 a) The Indian parliament
 b) The US congress
 c) The British Parliament
 d) The Swiss Federal Assembly
62. Who presides over the joint session of the Parliament in India?
 a) President of India
 b) Vice- President of India
 c) Speaker of the Lok Sabha
 d) Chief Justice of India
63. Who of the following was not associated with Swaraj Party?
 a) Motilal Nehru
 b) C R Das
 c) Vallabh Bhai Patel
 d) Vittal Bhai Patel
64. Which Indian state first established the office of the Lokayukta in India?
 a) Maharashtra b) Rajasthan
 c) Bihar d) Orissa
65. Match List-I with List-II and select the correct answer from the codes given below:
- | | List-I | List-II |
|-----|----------------------------------|----------------|
| (A) | Goa's Liberation | (i) 1975 |
| (B) | Imposition of Internal Emergency | (ii) 1974 |
| (C) | Death of Indira Gandhi | (iii) 1961 |
| (D) | Pokhran Explosion-I | (iv) 1984 |
- Codes:**
- | | A | B | C | D |
|----|-------|------|------|-------|
| a) | (ii) | (iv) | (i) | (iii) |
| b) | (iii) | (i) | (iv) | (ii) |
| c) | (i) | (ii) | (iv) | (iii) |
| d) | (iii) | (ii) | (iv) | (i) |
66. Arrange the following Secretary Generals of UNO in order of their appointments:
 (i) U Thant (ii) Kurt Waldheim
 (iii) Trygve Lie (iv) Dag Hammarskjold

Codes:

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

67. Which of the following is not an instrument of monetary policy?

- Deficit financing
- Statutory Liquidity Ratio
- Cash Reserve Ratio
- Open Market Operations

68. Match the following legislations with the year of their enactment:

- | | |
|--|------------|
| (A) Industries Development and Regulation Act | (i) 1969 |
| (B) Foreign Exchange Management Act | (ii) 1951 |
| (C) Securities Exchange Board of India Act | (iii) 1999 |
| (D) Monopolies and Restrictive Trade Practices Act | (iv) 1992 |

Codes:

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

69. "Repo Rate" refers to the rate at which:

- The rate at which banks borrow from RBI
- Banks keep the money with RBI
- Bills are discounted by RBI
- Forex is purchased by RBI

70. 'Retail Banking' means:

- Credit facilities extended to retail traders
- Providing personal banking services directly to the consumers
- Collection of large number of dividend/interest warrants
- Providing services to the employees of large organisations

71. Which of the following bacterium is used in the recovery of otherwise unprofitable grades of Uranium and Copper ores?

- Escherichia coli
- Azotobacter

- Clostridium
- Thiobacillus ferrooxidans

72. A measure of the amount of oxygen consumed in the biological process that break down organic matter is known as:

- Bioconcentration
- Biochemical Oxygen demand
- Bioaccumulation
- Biomagnification

73. In colloidal chemical substance, the light undergoes:

- Diffraction
- Polarization
- Scattering
- Total internal reflection

74. Global Warming Potential of the gases increases in order of:

- $\text{CH}_4 > \text{CO}_2 > \text{NO}_x$
- $\text{NO}_x > \text{CH}_4 > \text{CO}_2$
- $\text{CO}_2 > \text{CH}_4 > \text{NO}_x$
- $\text{CO}_2 > \text{NO}_x > \text{CH}_4$

75. Photovoltaics (solar cells) work on the principle of:

- Raman effect
- Zeeman effect
- Photoelectric effect
- Faraday effect

76. Electromagnetic pollution is caused by:

- Vehicular traffic
- Mobile phones
- Aircraft noise
- Lightening and thunder storms

77. The greenhouse effect is due to:

- Absorption of ultraviolet radiation by sea water
- Absorption of infrared radiation by carbon dioxide and water vapor in the atmosphere
- Infrared reflection by oceanic surfaces
- Absorption of infrared radiation by plants.

78. Match List-I with List-II and select the correct answer from the codes given below

- | List-I | List-II |
|------------------------|----------------------|
| (A) Ultraviolet | (i) $> 0.8\text{m}$ |
| (B) Atmospheric window | (ii) $< 0.3\text{m}$ |

- (C) Ionised radiation (iii) 8 m to 13m
 (D) Near infrared (iv) X-rays and gamma rays

Codes:

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

79. Arrange the following layers of atmosphere vertically outward from the earth. Select the answer from the codes given below:

- (i) Ozonosphere (ii) Troposphere
 (iii) Mesosphere (iv) Ionosphere

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

80. Which combination of the following tribes is confined to a single state of North East India?

- a) Khasi-Nagas b) Garo-Khasi
 c) Naga-Mizo d) Khasi-Mizo

81. Lakshadweep Islands are of:

- a) Volcanic origin b) Coral origin
 c) Tectonic origin d) Alluvial origin

82. Which of these historic monuments is not associated with Delhi?

- a) Gateway of India b) Appu Ghar
 c) Qutubminar d) Red fort

83. Match the following

List-I

- (A) Amylase
 (B) Keratin
 (C) Choline
 (D) Haemoglobin

List-II

- (i) Saliva
 (ii) Semen
 (iii) Blood
 (iv) Hair

Codes:

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

84. The vitamin(s), which is / are generally excreted in urine, is / are

- a) Vitamin A b) Vitamin K

- c) Vitamin C d) Vitamin D

85. Genetics deals with:

- a) Mendel's laws
 b) Organic evolution
 c) DNA structure
 d) Heredity and Variations

86. Blood is a/an

- a) Connective tissue b) Epithelial tissue
 c) Both of the above d) None of the above

87. Which of the following is a false fruit?

- a) Apple b) Betel-nut
 c) Mango d) Cashew (nut)

88. Cure to spinal injury is likely to emerge from?

- a) Gene therapy b) Stem cell therapy
 c) Xenograft d) Transfusion

89. Which of the following is not the part of vehicle pollution?

- a) H₂ b) CO c) SO₂ d) N₂O

90. Which of the following is not the residual human organs?

- a) Necrotating screen
 b) Ear drum muscles of the tympanic membrane
 c) Fore flattened teeth
 d) Appendix

91. The most significant stimulant in the tea leaves is:

- a) Brucine b) Caffeine
 c) Phenylalanine d) Theine

92. The bile is produced through:

- a) Liver b) Stomach
 c) Pancreas d) Receptor

93. Artificial silk is also called:

- a) Rayon b) Dacron
 c) Fibre glass d) Nylon

94. Who was the discoverer of radioactivity?

- a) Madam Curie b) Irene Curie
 c) Henri Becquerel d) Rutherford

95. Light year is the unit of:
 a) Distance b) Time
 c) Intensity of light d) Mass
96. The weight of a human body is :
 a) Same at every places on the earth's surface
 b) Maximum at the poles
 c) Maximum at the equator
 d) More on the mountains than the plains
97. The highest Peace time award in India is:
 a) Ashok Chakra b) Shourya Chakra
 c) Kirti Chakra d) Vir Chakra
98. Who among the following has been appointed the Deputy Governor of RBI
 a) Urjit Patel b) R. Gandhi
 c) HR Khan d) G. Gopala Krishna
99. Which Sports Personality has been Awarded the Padma Sri (2014) recently
 a) P. Kilemsungla
 b) Mohammad Ali Baig
 c) Deepika Pallikal
 d) Vidya Balan
100. With the acquisition of Ranbanxy by Sun pharma. What would be the rank of the combined firm at the global level in Generic drugs production?
 a) 2 b) 4 c) 6 d) 5
101. Two trains, one from Howrah to Patna and the other from Patna to Howrah, start simultaneously. After they meet, the trains reach their destinations after 9 hours and 16 hours respectively. The ratio of their speeds is:
 a) 2 : 3 b) 4 : 3 c) 6 : 7 d) 9 : 16
102. A farmer travelled a distance of 61 km in 9 hours. He travelled partly on foot @ 4 km/hr and partly on bicycle @ 9 km/hr. The distance travelled on foot is:
 a) 14 km b) 15 km
 c) 16 km d) 17 km
103. X can do a piece of work in 40 days. He works at it for 8 days and then Y finished it in 16 days. How long will they together take to complete the work?
 a) $13\frac{1}{3}$ days b) 15 days
 c) 20 days d) 26 days
104. The average of 20 numbers is zero. Of them, how many may be greater than zero?
 a) 0 b) 1 c) 10 d) 19
105. A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned?
 a) Rs. 35 b) Rs. 245
 c) Rs. 350 d) Cannot be determined
106. A flag staff of 5 mtrs high stands on a building of 25 mtrs high. At an observer at a height of 30 mtrs the flag staff and the building subtend equal angles. The distance of the observer from the top of the flag staff is
 a) $\frac{5\sqrt{3}}{2}$ b) $5\sqrt{\frac{3}{2}}$
 c) $5\sqrt{\frac{2}{3}}$ (d) None of these
107. From the top of a light house 60 metres high with its base at the sea level, the angle of depression of a boat is 15° . The distance of the boat from the foot of the light house is
 a) $\frac{\sqrt{3}-1}{\sqrt{3}+1} \cdot 60$ mtrs b) $\frac{\sqrt{3}+1}{\sqrt{3}-1} \cdot 60$ mtrs
 c) $\frac{\sqrt{3}+1}{\sqrt{3}-1}$ mtrs d) None of these
108. In a journey of 54 km, the speed of a bus will be 54 kmph excluding stoppages and the average speed is 45 kmph including stoppages. For how many minutes does the bus stop in its journey?
 a) 9 b) 10 c) 12 d) 20

109. Gaurav spends 30% of his monthly income on food articles, 40% of the remaining on conveyance and clothes and saves 50% of the remaining. If his monthly salary is Rs. 18,400, how much money does he save every month?
- a) Rs. 3624 b) Rs. 3864
c) Rs. 4264 d) Rs. 5888
110. A dairyman pays Rs. 6.40 per litre of milk. He adds water and sells the mixture at Rs.8 per litre, thereby making 37.5% profit. The proportion of water to milk received by the customers is:
- a) 1:10 b) 1:12 c) 1:15 d) 1:20
111. Tarun got 30% concession on the labelled price of an article and sold it for Rs. 8750 with 25% profit on the price he bought. What was the labelled price?
- a) Rs. 10,000 b) Rs. 12,000
c) Rs. 16,000 d) Data inadequate
112. Zinc and Copper are melted together in the ratio 9:11. What is the weight of melted mixture, if 28.8 kg of Zinc has been consumed in it?
- a) 58kg b) 60kg c) 64kg d) 70kg
113. A man can row at 5 kmph in still water. If the velocity of current is 1 kmph and it takes him 1 hour to row to a place and come back, how far is the place?
- a) 2.4 km b) 2.5 km
c) 3 km d) 3.6 km
114. The difference between compound interest and simple interest on an amount of Rs. 15,000 for 2 years is Rs. 96. What is the rate of interest per annum?
- a) 8 b) 10
c) 12 d) Cannot be determined
115. If $2^x = 3^y = 6^{-z}$ then $\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}\right)$ is equal to:
- a) 0 b) 1 c) $\frac{3}{2}$ d) $-\frac{1}{2}$
116. Let a, b, c be the lengths of the sides of a triangle ABC. Let α, β, γ be positive integers and $p = \beta a + \gamma b + \alpha c$, $q = \gamma a + \alpha b + \beta c$ and $r = \alpha a + \beta b + \gamma c$. The p, q, r are lengths of the sides of a triangle
- a) Only if α, β, γ are all distinct
b) Only if $\alpha + \beta > \gamma, \beta + \gamma > \alpha, \gamma + \alpha > \beta$
c) For all values of α, β, γ
d) Only if $\alpha > a, \beta > b, \gamma > c$
117. If $1216451*0408832000$ is equal to $19!$, where * denotes a digit, then the missing digit * can be
- a) 0 b) 4 c) 2 d) 5
118. A lattice point in a plane is one both of whose coordinates are integers. Let O be $(\sqrt{2}, 1)$ and P any given lattice point. Then the number of lattice points Q, distinct from P, such that $OP = OQ$ is
- a) 0 b) 1
c) Not necessarily 0, not necessarily 1, but either 0 or 1
d) Indefinitely many
119. \overline{AB} and \overline{CD} are chords of a circle such that \overline{BA} and \overline{DC} intersect in a point E outside the circle. F is a point on the minor arc BD such that $\angle FAB = 22^\circ$, $\angle FCD = 18^\circ$. Then $\angle AEC + \angle AFC = ?$
- a) 400 b) 500 c) 600 d) 800
120. The length of a rectangle is halved, while its breadth is tripled. What is the percentage change in area?
- a) 25% increase b) 50% increase
c) 50% decrease d) 75% decrease
121. If the perimeters of a square and a rectangle are the same, then the area A and B enclosed by them would satisfy the condition:
- a) $A < B$ b) $A \leq B$
c) $A > B$ d) $A \geq B$
122. Three circles of radius 3.5 cm are placed in such a way that each circle touches the other two. The area of the portion enclosed

by the circles is:

- a) 1.967 cm^2 b) 1.975 cm^2
c) 19.67 cm^2 d) 19.75 cm^2

123. A tank 4 m long, 2.5 m wide and 1.5 m deep is dug in a field 31 m long and 10m wide. If the earth dug out is evenly spread out over the field, the rise in level of the field is:

- a) 3.1 cm b) 4.8 cm
c) 5 cm d) 6.2 cm

124. A cylindrical tube open at both ends is made of metal. The internal diameter of the tube is 11.2 cm and its length is 21 cm. The metal everywhere is 0.4 cm thick. The volume of the metal is:

- a) 280.52 cm^3 b) 306.24 cm^3
c) 310 cm^3 d) 316 cm^3

125. The total surface area of a solid hemisphere of diameter 14 cm, is:

- a) 308 cm^2 b) 462 cm^2
c) 1232 cm^2 d) 1848 cm^2

126. Which of the following numbers always divides the difference between the squares of two consecutive odd integers?

- a) 7 b) 3 c) 8 d) 6

127. An officer was appointed on maximum daily wages on a contract money of Rs. 4956. But on being absent for some days, he was paid Rs. 3894. For how many days was he absent?

- a) 1 b) 2 c) 3 d) 4

128. P, Q and R hire a shed for Rs. 2920. P puts 10 cows for 20 days. Q puts 30 cows for 8 days and R puts 16 cows for 9 days. Find the rent paid by R.

- a) Rs. 735 b) Rs. 820
c) Rs. 575 d) Rs. 720

129. A is thrice as good a workman as B and therefore is able to finish a job in 30 days less than B. How many days will they take to finish the job working together?

- a) $10\frac{1}{4}$ b) $11\frac{3}{4}$
c) $11\frac{1}{4}$ d) $11\frac{1}{3}$

130. A and B can complete a work in 12 days and 18 days, respectively. A begins to do the work and they work alternately one at a time for one day each. The whole work will be completed in how many days?

- a) $14\frac{2}{3}$ b) $14\frac{1}{3}$
c) $14\frac{3}{5}$ d) $14\frac{5}{7}$

131. X can do 20% of a work in a day. Y can do 35% of the same work in a day and X, Y and Z together can do 50% of the same work in a day. How much percent of work can be done by Z in a day?

- a) 5% b) 10% c) 15% d) 20%

132. If x, y are rational numbers and $(x-1)\sqrt{2}+2=y\sqrt{2}+x$, then the value of $x+y$ is

- a) 1 b) 2 c) 3 d) 4

133. If $\sec\theta = x + \frac{1}{4x}$ then $\sec\theta + \tan\theta =$

- a) $2x$ b) $\frac{1}{2x}$
c) $2x$ or $\frac{1}{2x}$ d) None of these

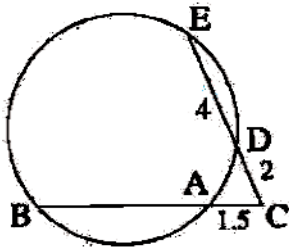
134. If A, B and C are internal angles of $\triangle ABC$ then $\frac{B+C}{2}$ is equal to

- a) $\cot A$ b) $\cot \frac{A}{2}$ c) $\tan A$ d) $\tan \frac{A}{2}$

135. If $\cos A + \cos^2 A = 1$, then $\sin^2 A + \sin^4 A$ is equal to

- a) 1 b) $\frac{1}{2}$ c) 0 d) -1

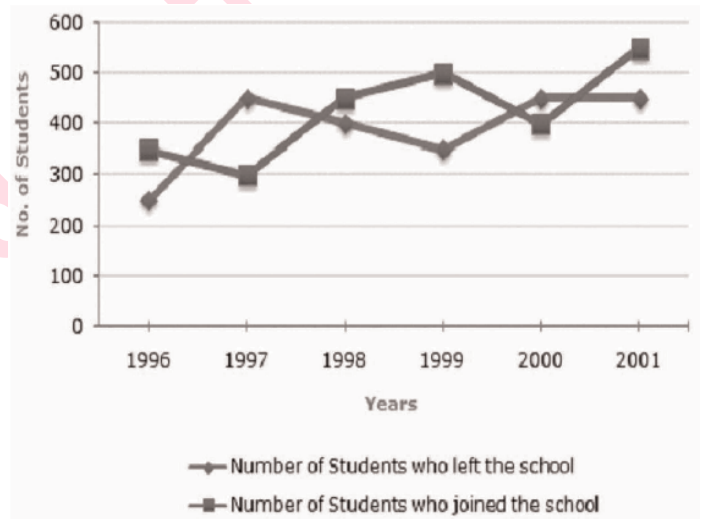
136. If $\sec\theta + \tan\theta = p$, then $\frac{p^2 - 1}{p^2 + 1} =$
 a) $\sin\theta$ b) $\cos\theta$ c) $\sec\theta$ d) $\operatorname{cosec}\theta$
137. $\triangle ABC$ is such that $AB = 3$ cm, $BC = 2$ cm and $AC = 2.5$ cm. $\triangle DEF$ is similar to $\triangle ABC$. If $EF = 4$ cm, then the perimeter of $\triangle DEF$ is
 a) 5 cm b) 7.5 cm
 c) 15 cm d) 18 cm
138. In $\triangle ABC$, $\angle BAC = 90^\circ$ and $AB = \frac{1}{2}BC$. Then the measure of $\angle ACB$ is
 a) 60° b) 30° c) 45° d) 15°
139. ABCD is a quadrilateral inscribed in a circle with centre O. If $\angle COD = 120^\circ$ and $\angle BAC = 30^\circ$, then $\angle BCD$ is
 a) 75° b) 90° c) 120° d) 60°
140. If $DE = 4$ cm, $CD = 2$ cm, $AC = 1.5$ cm, then BC is equal to



- a) 8cm b) 6cm c) 4 cm d) 3 cm
141. ABCD is a parallelogram in which E is the mid point of BC. DE and AB are produced. If they intersect at F, which one of the following statements is correct?
 a) $AF^2 = 2AB^2$ (b) $AF = \frac{3}{2}AB$
 c) $AF = 2AB$ (d) $AF = 3AB$
142. What is the equation of the straight line, whose intercept by the axes is bisected at the point $(3, -2)$?
 a) $3x + 2y = 12$ b) $4x - 3y = 6$
 c) $5x - 2y = 10$ d) $2x - 3y = 12$

143. If $\frac{a}{x-y} = \frac{b}{y-z} = \frac{c}{z-x}$, then $a + b + c$ is equal to
 a) 5 b) 6
 c) 1 d) 0
144. If a circle is drawn to touch another circle and the centres of both circles and the point of contact are in a straight line, how many solutions of it are possible?
 a) Two b) No one
 c) One d) More than two

DIRECTIONS (Q 145-150): Study the following line graph which gives the number of students who joined and left the school in the beginning of year for six years, from 1996 to 2001
 Initial Strength of school in 1995 = 3000.



145. The number of students studying in the school during 1999 was?
 a) 2950 b) 3000 c) 3100 d) 3150
146. For which year, the percentage rise/fall in the number of students who left the school compared to the previous year is maximum?
 a) 1997 b) 1998 c) 1999 d) 2000
147. The strength of school increased/decreased from 1997 to 1998 by approximately what percent?
 a) 1.2% b) 1.7% c) 2.1% d) 2.4%

148. The number of students studying in the school in 1998 was what percent of the number of students studying in the school in 2001?
- a) 92.13% b) 93.75%
c) 96.88% d) 97.25%
149. The ratio of the least number of students who joined the school to the maximum number of students who left the school in any of the years during the given period is?
- a) 7 : 9 b) 4 : 5 c) 3 : 4 d) 2 : 3
150. During which of the following pairs of years, the strength of the school was same?
- a) 1999 and 2001 b) 1998 and 2000
c) 1997 and 1998 d) 1996 and 2000

Directions (151-160): Based on the following passage five questions are given. Read the passages carefully and choose the best answer to each question out of the four alternatives.

PASSAGE-I

The black-and-white dog made off as I went through the fence. But the red dog whimpered and hesitated, and moved on hot bricks as he was fat and in good condition. He waited while I went up to him, wagging his tail and whimpering, and ducking his head and dancing. He didn't rub his nose with his paws any more; it hurt too much. I patted his head and looked at his nose, and he whimpered loudly. He must have had thirty quills, or more, sticking out of his nose; the white, ugly ends of the quills protruding from his already swollen, bloodpuffed muzzle.

151. The black-and-white dog ran away because:
- a) He was being chased
b) He had been hit with stones
c) The red dog chased him
d) He heard his master's whistle
152. The red dog moved gingerly and restlessly because:
- a) The sun was hot
b) He was in great pain

- c) He was frightened
d) He was fat

153. The dog whimpered loudly when:
- a) The author examined his nose
b) He ducked his head
c) The author touched him
d) He moved on hot bricks
154. Wagging his tail the dog pleaded with the author to:
- a) Remove the quills
b) Take him to the vet
c) Give him food
d) Take him back to his master
155. The word 'ugly' means:
- a) Sharp b) Cruel
c) Black d) Repulsive

PASSAGE-II

To sum up the whole, we should say that the aim of the Platonic philosophy was to exalt man into a God. The aim of the Baconian philosophy was to provide man with what he requires while he continues to be a man. The aim of Platonic philosophy was to raise us far above the vulgar wants. The aim of Baconian philosophy was to supply our vulgar wants. The former aim was noble; but the latter was attainable. Plato drew a good bow; he aimed at the stars; and therefore, though there was no want of strength or skill, the shot was thrown away. His arrow was indeed followed by a track of dazzling radiance; but it struck nothing. Bacon fixed his eye on a mark which was placed on earth and hit it in the white. The philosophy of Plato began with words and ended in words, noble words indeed, words such as were to be expected from the finest of human intellects exercising boundless dominion over the finest of languages.

156. The above passage presents Platonic philosophy as:
- a) Giving rise to vulgar wants
b) Too idealistic in terms of a realistic assessment of a man
c) No more than more words

d) Being pragmatic

157. The author in the above passage:

- a) Praises Platonic philosophy
- b) Explains the drawbacks of Baconian philosophy
- c) Balances opposite views in order to arrive at a just definition of each
- d) Compares and contrasts two systems towards which he is impartial

158. Which one of the following best reflects the underlying tone of the passage?

- a) All ideas regarding man are couched in noble words
- b) Man when exalted into a god comes to nothing
- c) It is better for man to continue to be a man
- d) It is the image of man conceived differently that makes the basic distinction between different systems

159. Which of the following words in the passage confirm the exalted notions of man according to Plato?

- a) 'Exercising boundless dominion'
- b) 'He aimed at the stars'
- c) 'Fixed his eye on the mark and hit in the white'
- d) 'There was no want of strength or skill, the shot was thrown away'

160. The reference to a bow and an arrow in the passage:

- a) Serves as an example of Plato's strength
- b) Teaches us to stay focused on target
- c) Shows us a track of dazzling brilliance in man's history
- d) Shows us the comparative strengths and weaknesses of Platonic and Baconian systems.

Directions (161-165): In the following questions, sentences are given with blanks to be filled in with appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four.

161. The little girl was knocked down by a speeding car and she lost her _____

immediately.

- a) Conscience
- b) Conscientious
- c) Conscious
- d) Consciousness

162. They have had to put _____ the football match because of snow

- a) of
- b) off
- c) up
- d) on

163. Ten miles _____ a long way to walk.

- a) are
- b) is
- c) are being
- d) are not

164. Mounting his horse, the bandit rode _____

- a) on
- b) by
- c) about
- d) off

165. Having come _____ age, his son entered into partnership with him.

- a) off
- b) by
- c) to
- d) of

Directions (166-170): In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

166. BARGE

- a) interpret
- b) shout
- c) restrain
- d) push

167. SCINTILLATING

- a) warming
- b) touching
- c) glittering
- d) smouldering

168. SURFEIT

- a) excess
- b) passing
- c) confiscation
- d) delegation

169. DOGMA

- a) possibility
- b) feeling
- c) tenet
- d) doubt

170. PETTIFOGGING

- a) lenient
- b) unimportant
- c) stable
- d) strong

Directions (171-175): In the following questions, choose the word opposite in meaning to the given word.

171. FECUND

- a) barren
- b) solid
- c) unploughed
- d) hard

172. GOBLIN
 a) angel b) hermit
 c) traveller d) pilot
173. AMBIGUOUS
 a) obscure b) secular
 c) explicit d) equivocate
174. STRIDENT
 a) stable b) pleasant
 c) musical d) melodious
175. DREARY
 a) plenty b) monotonous
 c) unhappy d) cheerful

Directions (176-180): In the following questions, some idioms, phrases and sayings have been given in bold at the question places. Each of them is followed by four options of its meaning or sense. Choose the one from the four as the right meaning or sense of each idiom or phrase or saying.

176. To tread on someone's toes
 a) to be in power
 b) to commence to fight
 c) to sacrifice one's life
 d) to give offence to someone
177. To be well-off
 a) to dispute about a thing
 b) to bring one to the position of disadvantage
 c) to be in comfortable condition
 d) to be scolded severely
178. To bother one's head about
 a) to learn something merely by memory
 b) to give attention to something
 c) to apply harsh treatment to someone
 d) to be deprived of something
179. To serve the turn
 a) to suit one's purpose
 b) to make something look foolish
 c) to select from among the worst
 d) to confess one's guilt
180. To die in one's shoes
 a) to be in miserable condition

- b) to speak without permission
 c) to bring a person into ridicule
 d) to die by hanging

Directions (181-190): 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 the answer. If there is no error, your answer is (d). i.e., No error.

181. The interviewer asked the candidates (a)/to what district (b)/he came from.(c)/No error (d)
182. The ruling party stood(a)/ for implementation of the bill (b)/and was ready to stake their political existence.(c)/No error (d)
183. Wherever they go (a)/Indians easily adapt to (b)/local circumstances.(c)/No error (d)
184. He is (a)/taller (b)/than me.(c)/No error (d)
185. My friends insisted (a)/that I should see the movies (b)/from beginning to the end. (c)/No error (d)
186. We all (a)/must respect (b)/a honest person.(c)/No error (d)
187. One of the most (a)/widely spread bad habit (b)/is the use of tobacco.(c)/No error (d)
188. He says that (a)/he has a car(b)/beside a scooter.(c)/No error (d)
189. I found it difficult (a)/to remove the chewing gum that (b)/stuck with my cap. (c)/No error (d)
190. My answer (a)/is different (b)/than yours. (c)/No error (d)

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

191. a) emulsify b) emulsion
 c) empres d) encompass

192. a) horify b) horendous
 c) haroscope d) horrendous
193. a) liquor b) linitype
 c) lineement d) linguistic
194. a) sinusitis b) siox
 c) sistertly d) sisyphen
195. a) talkattive b) tumultuous
 c) tution d) tenacios

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

196. The worship of idols or images
 a) Atheism b) Theism
 c) Idolatry d) Iconoclasm
197. Something that is poisonous or unhealthy
 a) Trivial b) Toxic
 c) Torpid d) Tragic
198. A remedy for all diseases
 a) Amnesia b) Panacea
 c) Intelligentsia d) Parasol
199. A hater of mankind
 a) Misanthrope b) Misogynist
 c) Philanthropist d) Misogamist
200. Irresistible craving for alcoholic drinks
 a) Megalomania b) Dipsomania
 c) Kleptomania d) Pyromania

Key

1. B 2. D 3. A 4. A 5. C
 6. B 7. C 8. C 9. D 10. C
 11. A 12. C 13. C 14. B 15. D
 16. B 17. D 18. B 19. A 20. D
 21. B 22. D 23. D 24. B 25. C
 26. D 27. D 28. A 29. C 30. B
 31. B 32. C 33. C 34. C 35. B
 36. D 37. D 38. D 39. B 40. C
 41. B 42. C 43. D 44. C 45. B

46. A 47. D 48. C 49. D 50. D
 51. B 52. A 53. B 54. B 55. C
 56. B 57. B 58. C 59. C 60. D
 61. C 62. C 63. C 64. D 65. B
 66. C 67. A 68. C 69. A 70. B
 71. D 72. B 73. C 74. B 75. C
 76. B 77. B 78. D 79. B 80. B
 81. B 82. A 83. D 84. C 85. C
 86. C 87. B 88. B 89. A 90. C
 91. B 92. A 93. A 94. C 95. A
 96. B 97. A 98. B 99. C 100. D
 101. B 102. C 103. A 104. D 105. D
 106. B 107. B 108. C 109. B 110. A
 111. A 112. C 113. A 114. A 115. A
 116. C 117. A 118. C 119. A 120. B
 121. C 122. A 123. C 124. B 125. B
 126. C 127. C 128. D 129. C 130. B
 131. A 132. C 133. C 134. B 135. A
 136. A 137. C 138. B 139. B 140. A
 141. C 142. D 143. D 144. A 145. D
 146. A 147. B 148. B 149. D 150. D
 151. A 152. B 153. C 154. A 155. D
 156. B 157. D 158. D 159. B 160. D
 161. D 162. B 163. B 164. D 165. D
 166. D 167. A 168. A 169. C 170. B
 171. A 172. A 173. C 174. B 175. D
 176. D 177. C 178. B 179. A 180. D
 181. B 182. C 183. B 184. C 185. C
 186. C 187. B 188. C 189. C 190. C
 191. A 192. D 193. A 194. A 195. B
 196. C 197. B 198. B 199. A 200. B

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