

SSC Combined Graduate Level (CGL) Paper (2014)

PART-A: GENERAL INTELLIGENCE & REASONING

Directions: (Qs. 1-6): Select the related word/letter/number from the given alternatives.

1. Voyage : Sea sickness :: Heights : ?
(a) Ship (b) Travel (c) Giddiness (d) Motion
2. Waitress : Restaurant :: ?
(a) Doctor : Nurse (b) Driver : Truck
(c) Teacher : School (d) Actor : Role
3. AROUND : RAUODN :: GROUND : ?
(a) RGUODN (b) NDOOGR (c) OUNDGR (d) DNUURG
4. APPROACHED : ROACHEDAPP :: BARGAINED : ?
(a) AINEDBARG (b) GAINEDBAR
(c) GAINEDRAB (d) RABGAINED
5. 8 : 256 :: ?
(a) 7 : 343 (b) 9 : 243 (c) 10 : 500 (d) 5 : 75
6. 21 : 3 :: 574 : ?
(a) 23 (b) 82 (c) 97 (d) 113

Directions (Qs. 7-12): Find the odd word/number/letters/number pair from the given alternatives.

7. (a) Obstetrician (b) Podiatrist
(c) Pulmonologist (d) Prosthetist
8. (a) Century (b) Decadent
(c) Year (d) Month
9. (a) FEDC (b) STUV
(c) LKJI (d) RQPO
10. (a) LPXOY (b) RQST
(c) FBDLX (d) MPONL
11. (a) 14-16 (b) 56-64
(c) 77-88 (d) 80-93
12. (a) 13-21 (b) 19-27
(c) 15-23 (d) 16-24
13. Which one of the given responses would be a meaningful order of the following?
1. apartment 2. Town 3. Street 4. Building 5 complex
(a) 1,5,4,3,2 (b) 4,5,3,2,1 (c) 2,1,3,4,5 (d) 1,4,5,3,2
14. If the following words are arranged in reverse dictionary order, which word comes second ?
(a) Explosion (b) Express
(c) Exploit (d) Expulse
15. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
ac_c_cb_acbcacbca_bc

- (a) abbb (b) bacc (c) babc (d) bbcc

Directions (Qs. 16-18): A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

16. AZ, CX, FU,?
 (a) IR (b) IV (c) JQ (d) KP
17. 1, 2, 6, 24, ?, 720
 (a) 3 (b) 5 (c) 120 (d) 8
18. 156, 506, ?, 1806
 (a) 1056 (b) 856 (c) 1456 (d) 1506
19. Suket has three daughters and each daughter has a brother. How many male members are there in the family?
 (a) 4 (b) 2 (c) 3 (d) 1
20. Dinesh and Ramesh start together from a certain point in the opposite direction on motorcycles. The speed of Dinesh is 60 km per hour and Ramesh 44 km per hour. What will be the distance between them after 15 minutes?
 (a) 20km. (b) 24km. (c) 26km. (d) 30km
21. An insect is walking in a straight line. It covers a distance of 15 cm per minute. It comes back 2.5 cm after every 15 cm. How long will it take to cover a distance of 1 metre?
 (a) 6.5 min (b) 8 min (c) 10min (d) 12 min
22. A group of alphabets are given with each being assigned a number. These have to be unscrambled into a meaningful word and correct order of letters may be indicated from the given responses.

T	M	H	R	E	O
5	4	3	2	1	0

 (a) 025314 (b) 315402
 (c) 405312 (d) 504231
23. From the given alternative words, select the word which cannot be formed using the letters of the given word:
 TRIVANDRUM
 (a) RAIN (b) DRUM (c) TRAIN (d) DRUK
24. How many meaningful English words can be made with the letters 'OEHM' using each letter only once in each word?
 (a) FOUR (b) THREE (c) TWO (d) ONE
25. A shopkeeper quotes the rate on the price tag by replacing numbers with letters as follows:

0	1	2	3	4	5	6	7	8	9
B	R	O	W	N	S	T	I	C	K

 If a customer purchases two items whose price tags read ₹ IIT and ₹ NICK, what is the total amount he has to Pay?
 (a) ₹4776 (b) 4765 (c) ₹5565 (d) ₹5665
26. If CASUAL is coded as SACLAU, then what would be the code of MATRIC?
 (a) CIRTAM (b) TMAICR
 (c) TAMCIR (d) ATMCIR
27. If 'S' is written as 'H' 'R' as '@' 'A' as '▼' 'M' as '#', 'T' as '\$' and 'E' as "%" then how is MASTER written in that code?
 (a) # ▼H \$ % @ (b) # H ▼ \$ % @
 (c) # ▼ \$ H % @ (d) # ▼ H % @ \$

28. If 1 candle in box number 1 is placed in box number 2, then box-2 has twice the number of candles that box 1 has.
 If 1 candle from box-2 is placed in box-1, the box-2 and box-1 have the same number of candles.
 How many candles were there in box-1 and box-2?
- | | | | |
|-----------|-------|-----------|-------|
| Box-1 | Box-2 | Box-1 | Box-2 |
| (a) 5 : 3 | | (b) 7 : 5 | |
| (c) 6 : 4 | | (d) 5 : 7 | |
29. Which of the following interchange of signs would make the equation correct?
 $6 \times 4 + 2 = 16$
 (a) + and $\times$, 2 & 4 (b) + and $\times$, 4 & 6
 (c) + and $\times$, 2 & 6 (d) + and $\times$, 3 & 4
30. Select the correct combination of mathematical signs to replace the * signs and to balance the following equation:
 $45 * 3 * 6 * 2 * 16$
 (a) + $\times \div$ = (b) + $\div \times$ =
 (c) + $\times -$ = (d) + + - =
31. Select the correct combination of mathematical signs to replace * signs and to balance the following equation
 $8 * 5 * 10 * 2 * 25$
 (a) + $\times \div$ = (b) + $\div -$ = (c) $\times + = \times$ (d) $\times - = \times$

Directions (Qs. 32-34): Select the missing number from the given responses.

32.

7	6	6
8	6	?
3	4	5
168	144	120

 (a) 8 (b) 10 (c) 5 (d) 4
33.

8	5	6
3	7	5
1	4	2
74	90	?

 (a) 65 (b) 85 (c) 2 (d) 76
34.

22	46	24
27	58	31
32	68	?

 (a) 46 (b) 36 (c) 32 (d) 38
35. On one side of a street are even numbers and on the other side are odd numbers. No. I is exactly in front of No. 2. My House is No. 9. From my house, a man comes up from No. 2 and knocks at the door, five doors beyond the house in front of me. What is the No. of that house?
 (a) 18 (b) 20 (c) 22 (d) 26
36. Four players P, Q, R and S are standing a play field in such a way that Q is to East of P, R is to the South of P and S is to the North of P. In which direction of Q is S Standing?
 (a) North (b) South (c) North-West (d) South-East
37. One statement is given followed by two Conclusions I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You are to decide which of the given conclusions can definitely be drawn from the given statement.
 Indicate your answer
Statement: The rich must live more simply. All poor people are simple.
Conclusions:
 I. Rich people waste money.
 II. Poor people save money.

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

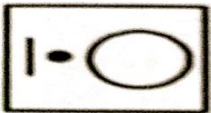
- 38 (1) All roses in Sita's garden are red.
 (2) All marigold flowers in Sita's garden are orange.
 (3) All flowers in Sita's garden are either red or orange.
 If Ist two statements are true, the third is
 (a) True (b) False (c) Uncertain (d) Vague

39. Find out which answer figure will exactly make up the question figure.

Question figure :



Answer figures :



(a)



(b)

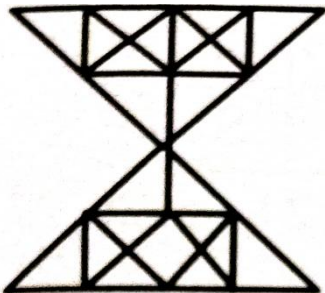


(c)



(d)

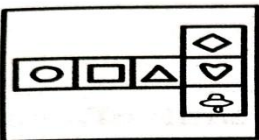
40. How many triangles are there in the give figure?



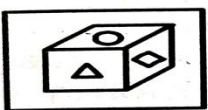
- (a) 48
- (b) 60
- (c) 56
- (d) 52

41. Choose the cube that will be formed by folding the sheet of paper shown in the problem figure.

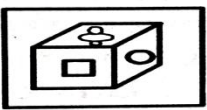
Question figure :



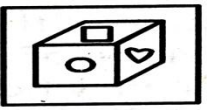
Answer figures :



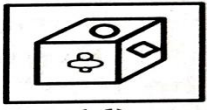
(a)



(b)

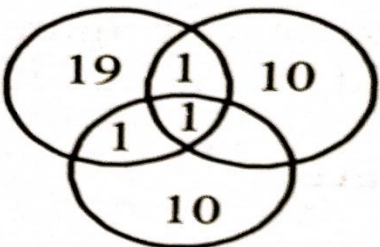


(c)



(d)

42. In a group of persons, 11 persons speak Kannada, 20 persons speak Tamil and 11 persons speak Telugu. In that group, if two persons speak two languages and one person speak all the languages, then how many persons are there in the group?

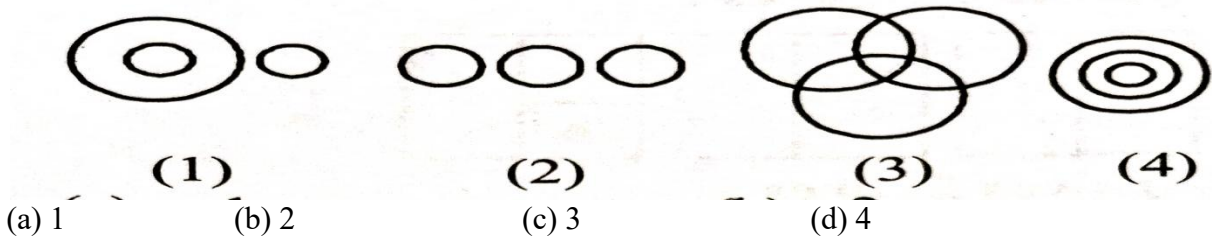


- (a) 40
- (b) 41
- (c) 42
- (d) 43

43. Which one of the following diagrams best depicts the relationship among Human Society -Youth Club, Political Party and Youths?



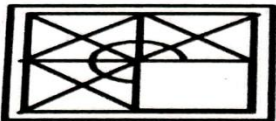
44. Which one of the following diagrams represent correct relationship among pigeon, birds, dogs?



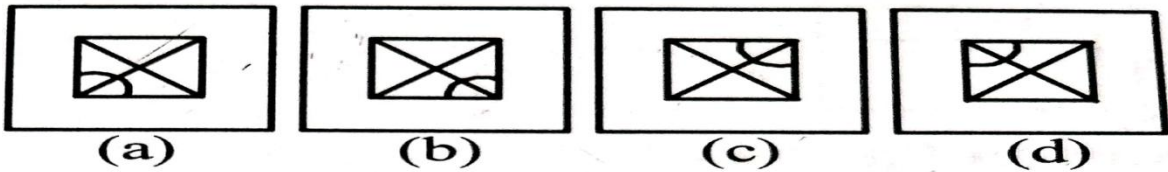
Directions (Qs. 45-46): Which answer figure will complete the pattern in the question figure ?

45.

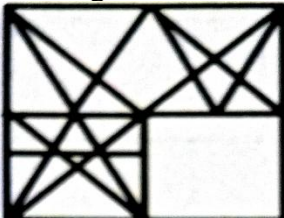
Question figure :



Answer figures :

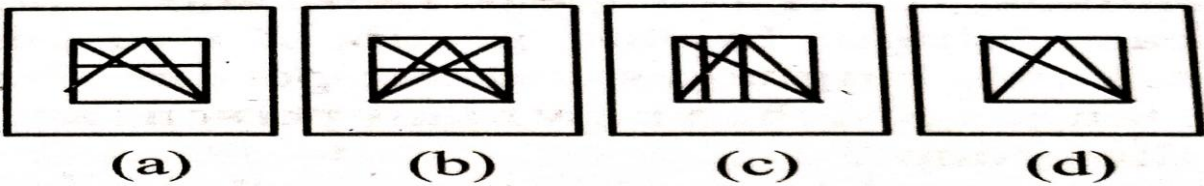


46. Question figure:



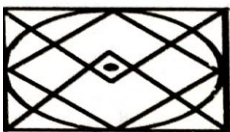
Answer figures:

Answer figures :

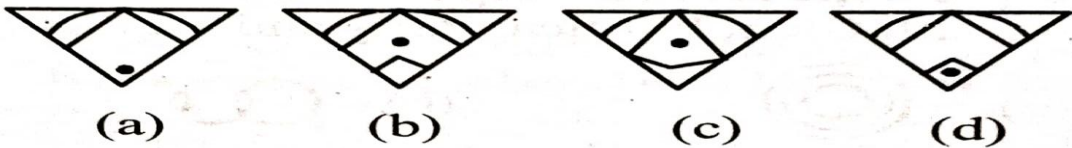


47. From the given answer figures, select the figure which is hidden/embedded in the question figure.

Question figure :

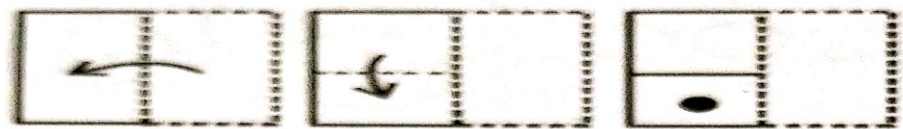


Answer figures :

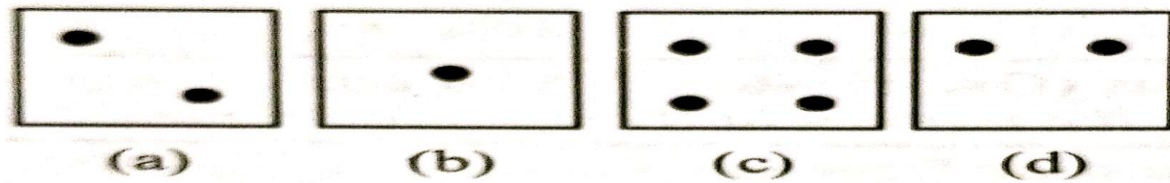


48. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.

Question figures :

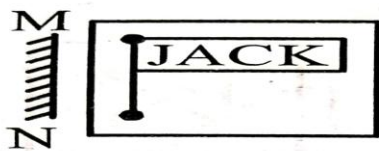


Answer figures :

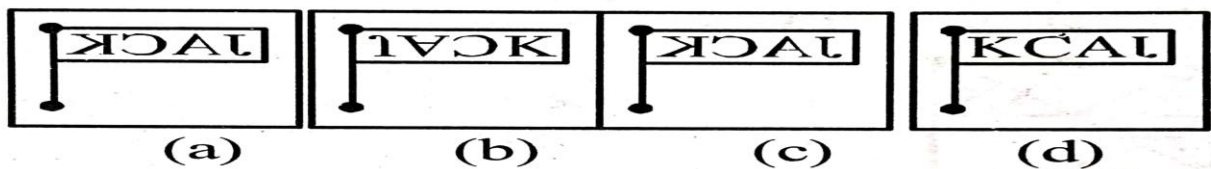


49. If a mirror is place on the line MN, then which of the answer figures is the right image of the given figure?

Question figure :



Answer figures :



50. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, e.g., F can be represented by 30, 22, etc. and 'N' can be represented by 97, 89, etc. Similarly, you have to identify the set for the given word. "DAKU"

Matrix-I

	0	1	2	3	4
4	A	F	K	P	U
3	F	K	A	U	P
2	P	U	F	K	A
1	K	P	U	A	F
0	U	A	P	F	K

Matrix-II

	5	6	7	8	9
9	D	I	N	S	X
8	X	S	I	D	N
7	N	X	S	I	D
6	S	D	X	N	I
5	I	N	D	X	S

- (a) 95,40,04,42
- (c) 88,24,10,34

- (b) 24,95,20,27
- (d) 57.13.23.21

PART-B: GENERAL AWARENESS

51. Prof. Milton Friedman was the leader of
(a) Ohio school (b) Chicago school
(c) Cambridge school (d) London school
52. Which one of the following is not a qualitative control of credit by the Central Bank of a country?
(a) Rationing of credit
(b) Regulation of consumer credit
(c) Variation of the reserve ratio
(d) Regulation of margin requirements
53. The market in which loans of money can be obtained is called
(a) Reserve market (b) Institutional market
(c) Money market (d) Exchange market
54. If the marginal return increases at a diminishing rate, the total return
(a) increases (b) decreases
(c) remains constant (d) becomes zero
55. The law of Increasing Returns means
(a) increasing cost (b) decreasing cost
(c) increasing production (d) increasing income
56. The most important feature of Cabinet system of Government is
(a) Individual responsibility (b) Collective responsibility
(c) Responsibility to none (d) Non-responsibility
57. Direct legislation in Switzerland has
(a) a natural growth (b) a haphazard growth
(c) an artificial growth (d) None of the above
58. Who gave the idea of "Cabinet Dictatorship"?
(a) Muir (b) Lowell (c) Marriot (d) Laski
59. In which of the following countries are the judges of the federal court elected by the two Houses of the Federal Legislature?
(a) Switzerland (b) Germany (c) Canada (d) Both (a) and (b)
60. The President of the USA appoints Supreme Court Judges
(a) with Senate's consent
(b) at his discretion
(c) with consent of the House of Representatives
(d) None of these
61. Multan was named by the Arabs as
(a) City of beauty (b) City of wealth
(c) City of gold (d) Pink city
62. Which one of the following was the book written by Amoghvarsha, the Rashtrakuta King?
(a) Adipurana (b) Ganitasara Samgraha
(c) Saktayana (d) Kavirajamarga
63. Who built the Kailasanatha Temple at Ellora?
(a) Rajendra I (b) Mahendra Varman I
(c) Krishna I (d) Govinda I
64. The land measures of the Second Pandyan Empire was mentioned in
(a) Thalavaipuram Copper Plates (b) Uttirameru Inscription
(c) Kudumiyammalai Inscription (d) Kasakudi Copper Plates

65. Who was the greatest ruler of the Satavahanas?
 (a) Satkarni I (b) Gautamiputra Satkarni
 (c) Simuka (d) Hala
66. Cactus is referred to as
 (a) Hydrophyte (b) Mesophyte
 (c) Xerophyte (d) Epiphyte
67. Which of the following is not a renewable resource?
 (a) Thorium (b) Geothermal heat
 (c) Tidal power (d) Radiant energy
68. Which of the following statements is correct?
 (a) Mahadeo hills are in the west of Maikala hills.
 (b) Mahadeo hills are the part of Karnataka Plateau
 (c) Mahadeo hills are in the east of Chhotanagpur Plateau.
 (d) Mahadeo hills are the part of Aravalli ranges.
69. Which one of the following pairs is not correctly matched?
 (a) Hevea Tree – Brazil (b) Sumatra Storm - Malaysia
 (c) Kajan River-Borneo (d) Dekke Toba fish-Brazil
70. Which of the following resources is renewable one?
 (a) Uranium (b) Coal
 (c) Timber (d) Natural Gas
71. How many neck canal cells are found in the archegonium of a fern?
 a) One (b) Two (c) Three (d) Four
72. Which angiosperm is vesselless?
 (a) Hydrilla (b) Trochodendron
 (c) Maize (d) Wheat
73. Who was the first child born after operative procedure?
 (a) Caesar (b) Huxley (c) William (d) Pasteur
74. Myrmecology is study of
 (a) Insects (b) Ants (c) Crustaceans (d) Arthropods
75. NIN (National Institute of Nutrition) Central Office is located at
 (a) Hyderabad (b) Mumbai
 (c) Bengaluru (d) Kolkata
76. HIV often changes its shapes due to the presence of an enzyme called
 (a) Reverse Transcriptase (b) Enterokinase
 (c) Nucleotidase (d) Nucleoditase
77. Fleming's right hand rule is used to find the direction of the
 (a) Alternate current (b) Direct current
 (c) Induced current (d) Actual current
78. The unit of electrical power is
 (a) Volt (b) Watt
 (c) Kilowatt hour (d) Ampere
79. The resistance of the human body (dry condition) is of the order of
 (a) 10^1 Ohm (b) 10^2 Ohm
 (c) 10^3 Ohm (d) 10^4 Ohm

80. Certain substances lose their electrical resistance completely at super low temperature. Such substances are called
(a) super conductors (b) semi conductors
(c) dielectrics (d) perfect conductors
81. The section of the CPU that selects, interprets and monitors the execution of program instructions is
(a) Memory (b) Register unit
(c) Control unit (d) ALU
82. Who among the following introduced the world's first laptop computer in the market?
(a) Hewlett-Packard (b) Epson
(c) Laplink travelling software Inc (d) Microsoft
83. Brass contains
(a) Copper and Zinc (b) Copper and Tin
(c) Copper and Silver (d) Copper and Nickel
84. Which is the purest commercial form of iron?
(a) Pigiron (b) Steel
(c) Stainless steel (d) Wrought iron
85. In galvanization, iron is coated with
(a) Copper (b) Zinc (c) Tin (d) Nicked
86. Which one of the following is also known as solution?
(a) A compound (b) A homogeneous mixture
(c) A heterogeneous mixture (d) A suspension
87. The cells which are closely associated and interacting with guard cells are
(a) Transfusion tissue (b) Complementary cells
(c) Subsidiary cells (d) Hypodermal cells
88. Conversion of starch to sugar is essential for
(a) Stomatal opening (b) Stomatal closing
(c) Stomatal formation (d) Stomatal growth
89. Soil erosion can be prevented by
(a) Increasing bird population (b) Afforestation
(c) Removal of vegetation (d) Overgrazing
90. Natural sources of air pollution are
(a) Forest fires (b) Volcanic eruptions
(c) Dust storm (d) Smoke from burning dry leaves
91. Which of the following Genetically Modified vegetable is recently being made available in Indian market?
(a) Carrot (b) Radish (c) Brinjal (d) Potato
92. "Bull's eye" is used in the game of
(a) Boxing (b) Basketball (c) Polo (d) Shooting
93. As per newspapers report what percent of Government stake will be disinvested in Rashtriya Ispat Nigam Ltd. (RINL)?
(a) 5% (b) 50% (c) 10% (d) 12%
94. Pablo Picasso, the famous painter was
(a) French (b) Italian (c) Flemish (d) Spanish
95. Which of the following is the Regulator of the credit rating agencies in India?
(a) RBI (b) SBI (c) SIDBI (d) SEBI

96. Which is the first Indian Company to be listed in NASDAQ?
 (a) Reliance (b) TCS (c) HCL (d) Infosys
97. RRBs are owned by
 (a) Central Government (b) State Government
 (c) Sponsor Bank (d) Jointly by all of the above
98. The Monetary and Credit Policy is announced by which of the following?
 (a) Ministry of Finance of Centre
 (b) Reserve Bank of India
 (c) State Bank of India
 (d) Planning Commission of India
99. Which of the following method is not used in determining National Income of a country?
 (a) Income Method (b) Output Method
 (c) Input Method (d) Investment Method
100. What does the letter 'e' denotes in the term 'e-banking'?
 (a) Essential Banking (b) Economic Banking
 (c) Electronic Banking (d) Expansion Banking

PART-C: QUANTITATIVE APTITUDE

101. Arrange the following in ascending order
 $3^{34}, 2^{51}, 7^{17}$, we get
 (a) $3^{34} > 2^{51} > 7^{17}$ (b) $7^{17} > 2^{51} > 3^{34}$
 (c) $3^{34} > 7^{17} > 2^{51}$ (d) $2^{51} > 3^{34} > 7^{17}$
102. If the product of first fifty positive consecutive integers be divisible by 7^{11} , where n is an integer, Then the largest possible value of n is
 (a) 7 (b) 8 (c) 10 (d) 5
103. A, B and C together can do a piece of work in 40 days After working with Band C for 16 days, A leaves and then B and C complete the remaining work in 40 days more. A alone could do the work in
 (a) 80 days (b) 90 days
 (c) 100 days (d) 120 days
103. Three pipes A, B and C can fill a tank in 6 hours. After working it together for 2 hours, C is closed and A and B can fill the remaining part in 7 hours. The number of hours taken by C alone to fill the tank is
 (a) 10 (b) 12 (c) 14 (d) 16
105. Pratibha is thrice as efficient as Sonia and is therefore able to finish a piece of work in 60 days less than Sonia. Pratibha and Sonia can individually complete the work respectively in
 (a) 30,60 days (b) 60,90 days
 (c) 30,90 days (d) 40, 120 days
106. The base of a right pyramid is an equilateral triangle of side 4 cm each. Each slant edge is 5 cm long. The volume of the pyramid is
 (a) $4\sqrt{8}/3 \text{ cm}^3$ (b) $4\sqrt{60}/3 \text{ cm}^3$
 (c) $4\sqrt{59}/3 \text{ cm}^3$ (d) $4\sqrt{61}/3 \text{ cm}^3$
107. There are two cones. The curved surface area of one is twice that of the other. The slant height of the latter is twice that of the former. The ratio of their radii is
 (a) 4:1 (b) 4:3 (c) 3:4 (d) 1:4

108. A wire is bent into the form of a circle, whose area is 154 cm^2 . If the same wire is bent into the form of an equilateral triangle, the approximate area of the equilateral triangle is
 (a) 93.14 cm^2 (b) 90.14 cm^2 (c) 83.14 cm^2 (d) 39.14 cm^2
109. A shopkeeper allows 10% discount on goods when he sells without credit. Cost price of his goods is 80% of his selling price. If he sells his goods by cash, then his profit is
 (a) 50% (b) 70% (c) 25% (d) 40%
110. A dealer of scientific instruments allows 20% discount on the marked price of the instruments and still makes a profit of 25%. If his gain over the sale of an instrument is ₹150, find the marked price of the instrument.
 (a) ₹938.50 (b) ₹940 (c) ₹938 (d) ₹937.50
111. Ram bought a TV with 20% discount on the labelled price. Had he bought it with 30% discount he would have saved ₹800. The value of the T.V. set that he bought is
 (a) ₹5,000 (b) ₹8,000 (c) ₹9,000 (d) 10,000
112. A vessel full of pure acid contains 10 litres of it, of which 2 litres are withdrawn. The vessel is then filled with water. Next 2 litres of the mixture are withdrawn, and again the vessel is filled up with water. The ratio of the acid left in the vessel with that of the original quantity is
 (a) 1 : 5 (b) 4 : 5 (c) 4 : 25 (d) 16 : 25
113. Gold is 19 times as heavy as water and copper is 9 times as heavy as water. In what ratio should these be mixed to get an alloy 15 times as heavy as water?
 (a) 1 : 1 (b) 1 : 2 (c) 2 : 3 (d) 3 : 2
114. The average age of boys in the class is twice the number of girls in the class. The ratio of boys and girls in the class of 50 is 4: 1. The total of the ages (in years) of the boys in the class is
 (a) 2000 (b) 2500 (c) 800 (d) 400
115. There are 100 students in 3 sections A, B and C of a class. The average marks of all the 3 sections was 84. The average of B and C was 87.5 and the average marks of A is 70. The number of students in A was
 (a) 30 (b) 35 (c) 20 (d) 25
116. A sold an article to B at 20% profit and B sold it to C at 15% loss. If A sold it to C at the selling price of B, then A would make
 (a) 5% profit (b) 2% profit (c) 2% profit (d) 5% loss
117. The monthly salaries of A and B together amount to ₹40,000. A spends 85% of his salary and B, 95% of his salary. If now their savings are the same, then the salary (in ₹) of A is
 (a) 10,000 (b) 12,000
 (c) 16,000 (d) 18,000
118. It takes 8 hours for a 600 km journey, if 120 km is done by train and the rest by car. It takes 20 minutes more if 200 km is done by train and the rest by car. The ratio of the speed of the train to that of the car is
 (a) 2:3 (b) 3:2 (c) 3:4 (d) 4:3
119. If a train runs at 70 km/hour, it reaches its destination late by 12 minutes. But if it runs at 80 km/hour, it is late by 3 minutes. The correct time to cover the journey is
 (a) 58 minutes (b) 2 hours
 (c) 1 hour (d) 59 minutes
120. A man borrowed some money from a private organisation at 5% simple interest per annum. He lent 50% of this money to another person at 10% compound interest per annum and thereby the man made a profit of ₹3205 in 4 years. The man borrowed
 (a) ₹80,000 (b) ₹1,00,000
 (c) ₹1,20,000 (d) ₹1,50,000

121. $a^2 + b^2 + c^2 = 2a - 2b - 2$ then the value of $3a - 2b + c$ is
 (a) 0 (b) 3 (c) 5 (d) 2
122. $a+b+c = 3$, $a^2 + b^2 + c^2 = 6$ and $1/a + 1/b + 1/c = 1$ where a, b, c are all non-zero, then 'abc' is equal to
 (a) $2/3$ (b) $3/2$ (c) $1/2$ (d) $1/3$
123. If $a^2 - 4a - 1 = 0$ $a \neq 0$ then the value $a^2 + 3a + 1/a^2 - 3/a$ is
 (a) 24 (b) 26 (c) 28 (d) 30
124. The total area (in sq. unit) of the triangles formed by the graph $4x + 5y = 40$, x-axis, y-axis and $x = 5$ and $y = 4$ is
 (a) 10 (b) 20 (c) 30 (d) 40
125. For what value of k , the system of equations $kx + 2y - 2$ and $3x + y = 1$ will be coincident?
 (a) 2 (b) 3 (c) 5 (d) 6
126. $x = 2 + \sqrt{3}$, then $x^2 + 1/x^2$ is equal to
 (a) 10 (b) 12 (c) -12 (d) 14
127. If $a = 4.965$, $b = 2.343$ and $c = 2.622$ then the value of $a^3 - b^3 - c^3 - 3abc$ is
 (a) -2 (b) -1 (c) 0 (d) 9.93^2
128. If $x + y + z = 0$, then the value of $(x^2 + y^2 + z^2)/(x^2 - yz)$ is
 (a) -1 (b) 0 (c) 1 (d) 2
129. The value of $\sin^2 1^\circ + \sin^2 2^\circ + \sin^2 3^\circ + \dots + \sin^2 89^\circ$ is
 (a) 22 (b) 44 (c) $22(1/2)$ (d) $44\frac{1}{2}$
130. The value of $(\cos^3 \theta + \sin^3 \theta)/(\cos \theta + \sin \theta) + (\cos^3 \theta - \sin^3 \theta)/(\cos \theta - \sin \theta)$ is equal to
 (a) -1 (b) 1 (c) 2 (d) 0
131. The shadow of a tower standing on a level plane is found to be 30 m longer when the Sun's altitude changes from 60° to 45° . The height of the tower is
 (a) $15(3 + \sqrt{3})$ m (b) $15(\sqrt{3} + 1)$ m
 (c) $15(\sqrt{3} - 1)$ m (d) $15(3 - \sqrt{3})$ m
132. If $\sin 17^\circ = x/y$ then $\sec 17^\circ - \sin 73^\circ$ is equal to
 (a) $y / \sqrt{y^2 - x^2}$ (b) $y^2 / (x\sqrt{y^2 - x^2})$
 (c) $x / (y\sqrt{y^2 - x^2})$ (d) $x^2 / (y\sqrt{y^2 - x^2})$
133. If θ is a positive acute angle and $\operatorname{cosec} \theta + \cot \theta = \sqrt{3}$, then the value of $\operatorname{cosec} \theta$ is
 (a) $1/\sqrt{3}$ (b) $\sqrt{3}$ (c) $2/\sqrt{3}$ (d) 1
134. If $\cos \alpha + \sec \alpha = \sqrt{3}$, then the value of $\cos^3 \alpha + \sec^3 \alpha$ is
 (a) 2 (b) 1 (c) 0 (d) 4
135. If $\sin \theta + \cos \theta = \sqrt{2} \cos \theta$, then the value of $\cot \theta$ is
 (a) $\sqrt{2} + 1$ (b) $\sqrt{2} - 1$
 (c) $\sqrt{3} - 1$ (d) $\sqrt{3} + 1$
136. In a quadrilateral ABCD, the bisectors of $\angle A$ and $\angle B$ meet at O. If $\angle C = 70^\circ$ and $\angle D = 130^\circ$ then measure of $\angle AOB$ is
 (a) 40° (b) 60° (c) 80° (d) 100°
137. In $\triangle ABC$, E and D are points on sides AB and AC respectively such that $\angle ABC = \angle ADE$. If $AE = 3\text{cm}$, $AD = 2\text{cm}$ and $EB = 2\text{cm}$, then length of DC is
 (a) 4cm (b) 4.5 cm (c) 5.0cm (d) 5.5cm
138. In a circle with centre O, AB is a chord, and AP is a tangent to the circle. If $\angle AOB = 140^\circ$ then the measure of $\angle PAB$ is

- (a) 35° (b) 55° (c) 70° (d) 75°

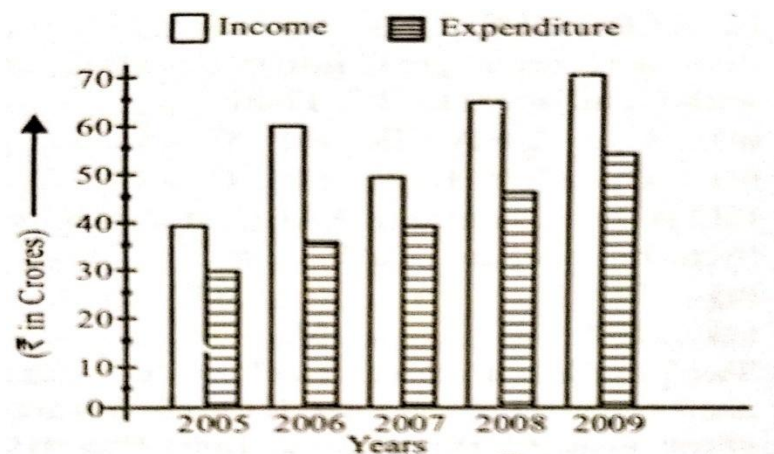
139. In $\triangle ABC$ $\angle A < \angle B$. The altitude to the base divides vertex angle C into two parts C_1 , and C_2 , with C_2 adjacent to BC. Then
- (a) $C_1 + C_2 = A + B$ (b) $C_1 - C_2 = A - B$
(c) $C_1 - C_2 = B - A$ (d) $C_1 + C_2 = B - A$
140. If O is in-centre of $\triangle ABC$; if $\angle BOC = 120^\circ$, then the measure of $\angle BAC$ is
- (a) 30° (b) 60° (c) 150° (d) 75°
141. Two parallel chords of a circle of diameter 20cm are 12cm and 16cm long. If the chords are in the same side of the centre, then the distance between them is
- (a) 28 cm (b) 2cm (c) 4cm (d) 8cm
142. The interior angle of a regular polygon is 140° . The number of sides of that polygon is
- (a) 9 (b) 8 (c) 7 (d) 6
143. If two circles of radii 9 cm and 4 cm touch externally, then the length of a common tangent is
- (a) 5cm (b) 7cm (c) 8cm (d) 12cm

Study the following table and answer Question Nos.144 to 146:

School	No. of students scoring marks less 50%	Percentage of students scoring marks more than than 50%	No. of students appeared
A	240	55	600
B	220	40	400
C	300	20	375
D	280	10	350
E	210	25	300

144. The ratio of the total number of students scoring marks less than 50% to that of scoring marks exactly 50% is
- (a) 50 : 3 (b) 25 : 2
(c) 25 : 4 (d) 35 : 2
145. Which school has the highest number of students scoring exactly 50% marks?
- (a) D (b) E (c) B (d) A
- 190
146. The total number of students scoring 50% or more marks is
- (a) 1250 (b) 875 (c) 775 (d) 675

Study the following graph which shows income and expenditure of a company over the years 2005-2009 and answer questions 147 to 150.



147. The difference in profit (₹ in crores) of the company during 2006 and 2007 is
(a) 10 (b) 15 (c) 20 (d) 25
148. In how many years was the income of the company less than the average income of the given years?
(a) 4 (b) 3 (c) 2 (d) 1
149. The percentage increase in expenditure for the company from 2007 to 2008 is
(a) 20 (b) 25 (c) 30 (d) 35
150. Profit of the company was maximum in the year
(a) 2009 (b) 2008 (c) 2006 (d) 2005

PART-D ENGLISH COMPREHENSION

DIRECTIONS (Qs. 151-155): Some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the oval [*] corresponding to the appropriate letter (A, B, C). If a sentence is free from error, blacken the oval corresponding to (D) in the Answer Sheet

151. If I would have realized / what a bad shape our library is in / I would have done something, to arrest
(a) (b) (c)
the deterioration. / No error
(d)
152. He has been / enhanced in position / as a result of his diligence and integrity. / No error
(a) (b) (c) (d)
153. It is I / who is responsible / for the delay. / No error
(a) (b) (c) (d)
154. There is only one cure / to the evils which newly / acquired freedom produces and that cure is
(a) (b) (c)
freedom. / No error
(d)
155. He flew / over extensively / the Pacific last winter. / No error
(a) (b) (c) (d)

DIRECTIONS (Qs. 156-160): Sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval [*] in the Answer Sheet

156. The student was punished for his _____.
(a) impudence (b) prudence
(c) modesty (d) elemency
157. My father was too _____ to push the heavy door.
(a) faint (b) feeble
(c) fragile (d) faltering
158. The flood damaged the books so much that it them. was impossible to _____.
(a) retrieve (b) retrace
(c) retract (d) retreat
159. His bungalow went through a make _____.
(a) up (b) out
(c) over (d) for
160. This auspicious beginning _____ well for a successful completion of our project.
(a) attunes (b) argues
(c) augurs (d) answers

DIRECTIONS (Qs. 161-163): Out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet

161. Persist
(a) Resist (b) Leave
(c) Quit (d) Insist
162. Eventually
(a) previously (b) briefly
(c) finally (d) successfully
163. Impeccable
(a) remarkable (b) unbelievable
(c) flawless (d) displeasing

DIRECTIONS (Qs. 164-166): Choose the word opposite in meaning to the given word and mark it the Answer Sheet.

164. Predilection
(a) Predicament (b) Afterthought
(c) Aversion (d) Postponement
165. Pompous
(a) Uppish (b) Humble
(c) Meek (d) Grandiose
166. Serene
(a) Calm (b) Angry
(c) Ruffled (d) Bitter

DIRECTIONS (Qs. 167-171): Four alternatives are given for the Idiom/Phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

167. With great difficulty, he was able to carve out a niche for himself.
(a) became a sculptor (b) did the best he could do
(c) destroyed his career (d) developed a specific position for himself
168. You will succeed if you follow my advice to the letter.
(a) about writing letters (b) written in the letter
(c) in every detail (d) very thoughtfully
169. A critic's work is to read between the lines.
(a) to comprehend the meaning (b) to appreciate the inner beauty
(c) to understand the inner meaning (d) to read carefully
170. Where discipline is concerned I put my foot down.
(a) take a firm stand (b) take a light stand
(c) take a heavy stand (d) take a shaky stand
171. The convict claimed innocence and stood his ground in spite of the repeated accusations.
(a) knelt (b) surrendered
(c) kept standing (d) refused to yield

DIRECTIONS(QS. 172-181): A sentence/a part of the sentence is underlined. Below are given alternatives to the underlined part at (a), (b), (c) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (d). Mark your answer in the Answer Sheet.

172. Why should you be despaired of your success of your undertaking?
(a) you despair of the success of your undertaking
(b) you despair of success of undertaking

- (c) you be despaired of the success of your undertaking
- (d) No improvement.

173. As Rees was going to town in the High Street a savage dog attacked him and bit him.

- (a) going to town a savage dog attacked him and bit him in the High Street
- (b) in the High Street a savage dog attacked him and bit him in the town
- (c) going to town in the High Street a savage dog bit him and attacked him
- (d) No improvement

174. Something is pretty here that Vineeta can wear to the party.

- (a) Something here is pretty
- (b) Something is here pretty
- (c) Here is something pretty
- (d) No improvement

175. I have dreamt all my life to own a beautiful maroon coloured car.

- (a) of owning
- (b) to owning
- (c) at owning
- (d) No improvement

176. Sitting on the hill top, the sun went down watching before him.

- (a) he watched the sun go down.
- (b) the sun went down with him watching
- (c) the sun went down when he watched
- (d) No improvement

177. The office is soon to be closed.

- (a) just to
- (b) about to
- (c) immediately to
- (d) No improvement

178. He has achieved nothing out of his way worth mentioning.

- (a) out of the way
- (b) by the way
- (c) in a big way
- (d) No improvement

179. I prevailed on him to vote for you.

- (a) to
- (b) at
- (c) upon
- (d) No improvement

180. Eager to pass his final exams, studying was the students top priority.

- (a) the student's top priority was studying.
- (b) the student made studying his top priority.
- (c) the top priority of studying was made by the student.
- (d) No improvement.

181. Mr. Dev will not go to the wedding reception without being called.

- (a) if he is not invited
- (b) till he is invited
- (c) unless he is invited
- (d) No improvement

DIRECTIONS (Qs. 182-188): Out of the four alternatives, choose the one which can be substituted for the given words/sentences and indicate it by blackening the appropriate oval [*] in the Answer Sheet.

182. Belief in many gods

- (a) pantheism
- (b) monotheism
- (c) polytheism
- (d) atheism

183. A cluster of flowers on a branch

- (a) bouquet
- (b) inflorescence
- (c) wreath
- (d) incandescence

184. A person who believes that only selfishness motivates human actions

- (a) agnostic
- (b) cynic
- (c) sceptic
- (d) misogynist

185. A highly skilled musician
 (a) artiste (b) virtuoso
 (c) performer (d) diva
186. A method of boiling briefly to cook food slightly
 (a) steam (b) bake
 (c) sauté (d) parboil
- 187 The group, especially in the arts, regarded as being the most experimental
 (a) avant-garde (b) iconoclast
 (c) revolutionary (d) nerd
188. One who helps people by giving them money or other aid
 (a) benefactor (b) beneficiary
 (c) tycoon (d) patriot

DIRECTIONS (Qs. 189-190): Four words are given in each question, out of which only one word it correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet.

189. (a) Plebeian (b) Plibeian
 (c) Plebian (d) Plebican
190. (a) Suroundings (b) Surroundings
 (c) Sarroundings (d) Surondings

DIRECTIONS (Qs. 191-195): You have two brief passages with 5 questions following each passage. Read the passages carefully and choose the best answer to each question out of the four alternatives and mark it by blackening the appropriate oval [*] in the Answer Sheet.

PASSAGE-1 (Q. NOS. 191-195)

As I stepped out of the train I felt unusually solitary since I was the only passenger to alight. I was accustomed to arriving in the summer, when holiday-makers throng coastal resorts and this was my first visit when the season was over. My destination was a little village which was eight miles by road. It took only a few minutes for me to come to the foot of the cliff path. When I reached the top I had left all signs of habitation behind me. I was surprised to notice that the sky was already a flame with the sunset. It seemed to be getting dark amazingly quickly. I was at a loss to account for the exceptionally early end of daylight since I did not think I had walked unduly slowly. Then I recollected that on previous visits I had walked in high summer and how it was October.

All at once it was night. The track was grassy and even in daylight showed up hardly at all. I was terrified of hurtling over the edge of the cliff to the rocks below. I felt my feet squelching and sticking in something soggy. Then I bumped into a little clump of trees that loomed up in front of me. I climbed up the nearest trunk and managed to find a tolerably comfortable fork to sit on. The waiting was spent by my attempts to identify the little stirrings and noises of animal life that I could hear. I grew colder and colder and managed to sleep only in uneasy fitful starts. At last when the moon came up I was on my way again.

191. The writer felt unusually solitary because
 (a) he was feeling very lonely without his family.
 (b) he was missing the company of other holiday-makers.
 (c) his destination was a little village eight miles away.
 (d) there was no one to meet him.
192. "I left all signs of habitation behind me." This means that he
 (a) came to a place where there were very few houses.
 (b) was in front of a large collection of cottages.
 (c) had come very far from places where people lived.
 (d) had just passed a remote village.

193. I became darker than the writer expected because
 (a) the nights are shorter in autumn than in summer.
 (b) the nights are longer in October than mid summer
 (c) the train arrived later than usual.
 (d) he had walked unduly slowly.
194. The writer found it difficult to keep to the path because of
 (a) the darkness and narrowness of the path.
 (b) poor visibility and grassy track.
 (c) the darkness and his slow pace.
 (d) poor visibility and dew on grass.
195. When he settled himself on the fork of the tree the writer _____.
 (a) had a sound sleep.
 (b) was disturbed by noises of animals.
 (c) was too afraid to sleep.
 (d) tried to sleep but without much success.

PASSAGE-II (Q. NOS. 196-200)

It is sad that in country after country, progress should become synonymous with an assault on nature. We who are a part of nature and dependent on her for every need, speak constantly about 'exploiting' nature. When the highest mountain in the world was climbed 1953, Jawaharlal Nehru objected to the phrase conquest of Everest' which he thought was arrogant. It is surprising that this lack of consideration and the constant need to prove one's superiority should be Projected on to our treatment of our fellowmen? I remember Edward Thompson, a British writer and a good friend of India, once telling Mr. Gandhi that wildlife was fast disappearing. Remarked Mr. Gandhi: 'It is decreasing in the jungles but it is increasing in the towns

On the one hand the rich look askance at our continuing poverty, on the other they warn us against their own methods. We do not wish to impoverish the environment any further and yet we cannot forget the grim poverty of large numbers of people. Are not poverty and need the great polluters? For instance, unless we are in a position to provide employment and purchasing power for the daily necessities of the tribal people and those who live in and around our jungles, we cannot prevent them from combing the forest for food and livelihood, from poaching and from despoiling the vegetation.

196. At the beginning of the passage, the writer expresses her opinion that in many countries progress is synonymous with
 (a) development. (b) utmost care for nature.
 (c) a balanced treatment of nature. (d) utmost cruelty to nature.
197. In the passage the term 'exploiting' nature suggests
 (a) regretfulness. (b) sarcasm.
 (c) destructive urge of man. (d) greed of man.
198. Nehru objected to the phrase 'conquest of Everest' since
 (a) it carries a war-like connotation. (b) it sounds pompous and boastful.
 (c) it depicts Everest as a victim. (d) Everest is unconquerable.
199. Gandhi's statement 'It is decreasing in the jungles but it is increasing in the towns.!' "
 (a) Refers to wild animals' decrease in the jungle.
 (b) Refers to flora and fauna.
 (c) Refers to man's selfishness.
 (d) Is a satirical comparison of man's callousness to the animals.
200. The writer is of opinion that tribal people can be prevented from combing forest for food
 (a) to provide employment
 (b) to increase purchasing power
 (c) by deterring them from poaching and despoiling vegetation
 (d) to provide employment and purchasing power for *daily* necessities.