

# Staff Selection Commission

## Multi Tasking Staff Posts Examination

### Model Paper

#### Test-I : GENERAL INTELLIGENCE

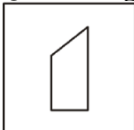
**Directions (Q. 1-5) :** In each of the following questions, select the related letter/word/ figure/ number from the given alternatives.

- Ink : Writing :: ? : Painting  
(1) Colour (2) Brush  
(3) Canvas (4) Painter
- Cuba : Havana :: Saipras : ?  
(1) Zagreb (2) Prague  
(3) Caro (4) Nicosia
- 6 : 21 :: 3 : ?  
(1) 28 (2) 18  
(3) 61 (4) 32
- LKJ : MNO :: DCB : ?  
(1) FEG (2) EGF  
(3) FGH (4) EFG
- Brick : Mason :: Colour : ?  
(1) Child (2) Teacher  
(3) Painter (4) Potter

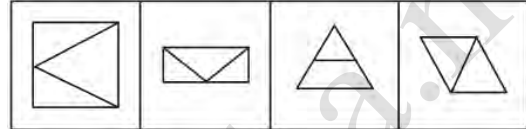
**Directions (Q. 6-9) :** Find the odd word/letter/ number from the given alternatives.

- (1) CBCD (2) IHJ  
(3) ONOP (4) UTUW
- (1) (96, 24) (2) (39, 18)  
(3) (81, 54) (4) (82, 64)
- (1) ADGPT (2) ACEIK  
(3) ABDEI (4) ADIPY
- (1) 36 (2) 61  
(3) 84 (4) 108
- If 'FEED' is coded as 20 then what will be the code for 'BREAD'?  
(1) 15 (2) 60  
(3) 35 (4) 30
- Find out the alternative figure which contains question figure as its part?

**Question figure:**



Answer figures:



- (1) (2) (3) (4)
- From the below given responses, choose the response which shows meaningful order of the following words?  
1. Point 2. Triangle  
3. Square 4. Angle  
5. Line  
(1) 4, 1, 5, 2, 3 (2) 3, 2, 1, 5, 4  
(3) 2, 1, 4, 5, 3 (4) 1, 5, 4, 2, 3
- Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?  
bca\_b\_aabc\_a\_caa  
(1) cbab (2) bacc  
(3) acab (4) bcbb
- The height of a tree was 12 cm at the time of plantation. At the end of 1 st year, it became 18 cm. At the end of 2 nd year, it became 27 cm. What will be its height (in cm) at the end of third year?  
(1) 45 (2)  $40\frac{1}{2}$   
(3) 40 (4) 39
- In a class of 51 students, the position of Yash is 21 st from the beginning. What is his position from the last?  
(1) 29 (2) 28  
(3) 27 (4) 31
- If '+' = '÷', '×' = '+', '-' = '×' and '÷' = '-' then which among the following equation is correct?  
(1)  $36 - 6 + 3 \times 5 \div 3 = 74$   
(2)  $36 \times 6 + 7 \div 2 - 6 = 20$   
(3)  $36 + 6 - 3 \times 5 \div 3 = 24$   
(4)  $36 \div 6 + 3 \times 5 - 3 = 45$

**Directions (Q. 17-18) :** In the given series, some letter/number/digit is missing. Choose the appropriate option.

- ACFJO?B

- (1) I (2) H  
 (3) U (4) D
18. 17, 14, 15, 12, 13, ?, ?  
 (1) 10, 11 (2) 14, 11  
 (3) 11, 13 (4) 12, 15

**Directions (Q. 19-20) : From the given options choose the missing number.**

19. 

5	8	7
2	4	6
6	2	3
60	64	?

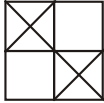
  
 (1) 68 (2) 49  
 (3) 39 (4) 126
20. 

24	51	67
2	4	6
5	7	5
53	211	?

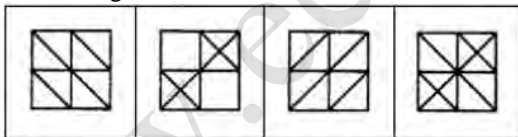
  
 (1) 135 (2) 235  
 (3) 347 (4) 407

21. If  $1 \times 10 = 9$ ,  $2 \times 10 = 18$ ,  $3 \times 10 = 27$ , then what is the value of  $8 \times 10$ ?  
 (1) 36 (2) 72  
 (3) 78 (4) 52
22. If a mirror is placed on the line MN then which of the answer figures is the right image of the given figure?

Question Figure



M N  
 Answer Figure



- (1) (2) (3) (4)
23. Which one of the following diagrams represents the correct relationship among Dog, Animal and Pet?



24. If  $6 + 3 = 13$ ,  $5 + 20 = 96$  and  $11 + 7 = 67$  then  $19 + 11 = ?$   
 (1) 207 (2) 209  
 (3) 191 (4) 194

25. 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 letters 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., 'B' can be represented by 01, 31 etc., and 'P' can be represented by 67, 75 etc. Similarly, you have to identify the set for the word 'CARD'.

**Matrix - I**

	0	1	2	3	4
0	A	B	C	D	E
1	D	C	B	A	E
2	B	A	D	C	E
3	D	B	C	A	E
4	C	D	A	E	B

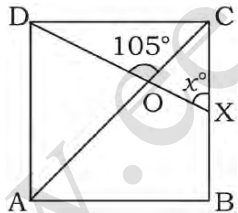
**Matrix - II**

	5	6	7	8	9
5	P	Q	R	S	T
6	Q	S	P	R	T
7	P	T	R	S	Q
8	Q	S	P	R	T
9	T	P	S	Q	R

- (1) 32, 00, 56, 10 (2) 40, 21, 68, 44  
 (3) 11, 33, 57, 22 (4) 02, 42, 77, 20

**Test-II : QUANTITATIVE APTITUDE**

26. Two numbers are in the ratio 3 : 4. The product of their H.C.F. and L.C.M. is 2028. The sum of the numbers is:  
 (1) 68 (2) 72  
 (3) 86 (4) 91
27. If  $\sin\theta + \cos\theta = p$  and  $\sec\theta + \operatorname{cosec}\theta = q$ , then find the value of  $q(p^2 - 1)$ .  
 (1) p (2) 2p  
 (3) 3p (4) 2p<sup>2</sup>
28. In a school, the ratio of boys to girls is 4 : 3 and the ratio of girls to teachers is 8 : 1. The ratio of students to teachers is:  
 (1) 56 : 3 (2) 55 : 1  
 (3) 49 : 3 (4) 56 : 1
29. Average of first five odd multiples of 3 is:  
 (1) 12 (2) 16  
 (3) 15 (4) 21
30. The side AB of a parallelogram ABCD is produced to E in such way that BE = AB. DE intersects BC at Q. The point Q divides BC in the ratio:  
 (1) 1 : 2 (2) 1 : 1  
 (3) 2 : 3 (4) 2 : 1
31. If  $\frac{x}{y} + \frac{y}{x} = -2$ ,  $x \neq 0$  and  $y \neq 0$  then  $x^3 + y^3 + 3xy(x + y) = ?$   
 (1) 0 (2) 1  
 (3) -1 (4) -2

32. If population of women in a village is 90% of population of men, what is the population of men as a percentage of population of women? (in approximate)
- (1) 100% (2) 105%  
(3) 108% (4) 111%
33. The length of each side of an equilateral triangle is  $14\sqrt{3}$  cm. What is the area of the incircle? (in  $\text{cm}^2$ )
- (1) 450 (2) 308  
(3) 154 (4) 77
34. A person of height 2m wants to get a fruit which is on a tree at height  $\left(\frac{10}{3}\right)$ m. If he stands at a distance of  $\left(\frac{4}{\sqrt{3}}\right)$ m from the foot of the tree, then the angle at which he should throw the stone, so that he hits the fruit is:
- (1)  $60^\circ$  (2)  $45^\circ$   
(3)  $90^\circ$  (4)  $30^\circ$
35. The value of  $\sqrt{2^3 4 \sqrt{2^3 4 \sqrt{2^3 4 \sqrt{2^3 4 \dots}}}}$  is
- (1) 2 (2)  $2^2$   
(3)  $2^3$  (4)  $2^5$
36. 12 copies of a book were sold for ₹ 1800 and thereby gaining cost price of 3 copies. The cost price of a copy is:
- (1) ₹ 120 (2) ₹ 150  
(3) ₹ 1200 (4) ₹ 1500
37. In the given figure, ABCD is a square. A line segment DX cuts the side BC at X and the diagonal AC at O such that  $\angle COD = 105^\circ$  and  $\angle OXC = x$ . The value of x is:
- 
- (1)  $40^\circ$  (2)  $60^\circ$   
(3)  $80^\circ$  (4)  $85^\circ$
38. A man has in all ₹ 640 in the denominations of one-rupee, five rupee and ten rupee notes. The number of each type of notes are equal. What is the total number of notes he has?
- (1) 150 (2) 120  
(3) 100 (4) 90
39. If the 4th term of an arithmetic progression is 16 and the 12th term is 80, then find the first term.
- (1) - 8 (2) - 7  
(3) + 7 (4) + 8
40. If  $\frac{\cos \alpha}{\cos \beta} = m$  and  $\frac{\cos \alpha}{\sin \beta} = n$ , then find the value of  $(m^2 + n^2) \cos^2 \beta$ .
- (1) n (2) 2n  
(3)  $n^2$  (4)  $2n^2$
41. A can do as much work as B and C together can do. A and B can together do a piece of work in 9 hours 36 minutes and C can do it in 48 hours. The time (in hours) that B needs to do the work alone is:
- (1) 18 hrs (2) 24 hrs  
(3) 30 hrs (4) 12 hrs
42. If  $\tan \theta + \sin \theta = m$  and  $\tan \theta - \sin \theta = n$ , then find the value of  $m^2 - n^2$ .
- (1) mn (2)  $4\sqrt{mn}$   
(3)  $m^2 n^2$  (4)  $m^3 n^3$
43. Out of 4 numbers, whose average is 60, the first one is one-fourth of the sum of the last three. The first number is:
- (1) 15 (2) 45  
(3) 48 (4) 60
44. A certain distance is covered by a cyclist at a certain speed. If a jogger covers half the distance in double the time, then what is the ratio of the speed of the jogger to that of the cyclist?
- (1) 1 : 4 (2) 4 : 1  
(3) 1 : 2 (4) 2 : 1
45. Two trains of equal length, running in opposite directions, pass a pole in 18 and 12 seconds respectively. In how much time the trains will cross each other?
- (1) 14.4 sec (2) 15.5 sec  
(3) 18.8 sec (4) 20.2 sec

**Directions (Q. 46-50) :** Following table shows the marks scored by seven students in different subjects. Read the table and answer the questions based on this table.

Student	Subject					GK (80)
	Maths (150)	Hindi (120)	English (100)	Physics (100)	Chemistry (50)	
A	85	65	70	65	35	40
B	70	80	63	68	49	30
C	32	60	40	80	50	35
D	140	104	65	48	60	18
E	123	79	79	84	40	27
F	57	106	68	66	48	44
G	144	76	64	58	56	22

46. What overall percentage did student G get in all subjects together?
- (1) 62.5% (2) 64%  
(3) 70% (4) 67.5%

47. What is the ratio of the total marks obtained by A to that obtained by D?
- (1) 4 : 5                      (2) 24 : 29  
(3) 5 : 4                      (4) 29 : 24
48. What is the average of marks obtained by all the students in Physics?
- (1) 67                              (2) 74.5  
(3) 75                              (4) 76.5
49. What is the average percentage of marks obtained by all the students in Maths? (in approximate)
- (1) 62%                          (2) 65%  
(3) 68%                          (4) 70%
50. The total marks obtained by B is what percentage more than the total marks obtained by E? (in approximate)
- (1) 9%                              (2) 20%  
(3) 13%                              (4) 15%

### Test-III : ENGLISH LANGUAGE

**Directions (Q. 51 to 55):** In these questions some part of the sentences have errors and some are correct. Find out which part of a sentence has an error and choose the correct alternative out of (1), (2), (3). If a sentence is free from error, blacken the oval corresponding to (4) in the Answer Sheet.

51. These vegetables which are grown here are cheap in cost and rich of vitamins.
- (1) These vegetables which are grown  
(2) here are cheap  
(3) in cost and rich of vitamins.  
(4) No error
52. I have criticise the remarkable book because I didn't benefit from reading it.
- (1) I have criticise  
(2) the remarkable book  
(3) because I didn't benefit from reading it.  
(4) No error
53. Citizens needed to know that our leader can't be trusted.
- (1) Citizens needed  
(2) to know that  
(3) our leader can't be trusted.  
(4) No error
54. Now a days the cost of living is so high that people find it difficult to make both ends meeting.
- (1) Now a days the cost of living  
(2) is so high that people find it difficult  
(3) to make both ends meeting.  
(4) No error
55. Allahabad is one of the leading business centers in our state.
- (1) Allahabad is  
(2) one of the leading

- (3) business centers in our state.  
(4) No error

**Directions (Q. 56-60):** In these questions, sentences 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 in the Answer Sheet.

56. I have always admired his ..... knowledge and scholarship.
- (1) highest                      (2) flexible  
(3) provocative              (4) profound
57. The fight for liberation brings ..... the best and the noblest qualities in mankind.
- (1) with                          (2) in  
(3) for                              (4) out
58. They were waiting for official ..... of the news they had heard from a friend.
- (1) ratification              (2) confirmation  
(3) sanction                  (4) recommendation
59. They offered a ..... of incentives to attract qualified people of the post.
- (1) bundle                      (2) assurance  
(3) package                      (4) gift
60. Those who have ..... the transition from villages to cities have been able to secure good jobs.
- (1) tried                          (2) arranged  
(3) planned                      (4) managed

**Directions (Q. 61-65) :** In the following passages some of the words have been left out. Read the passages carefully and choose the correct answer to each question out of the four alternative and fill in the blanks.

Many parents greet their children's teenage years with needles dread. While teens ...(61)... assault us with heavy-metal music, ...(62)... outlandish clothes and spend all ...(63)... time with friends, such behaviour ...(64)... adds up to full-scale revolt. Teenage ...(65)..., according to psychologist Laurence Steinberg, has been greatly exaggerated.

61. (1) can                              (2) must  
(3) may                              (4) should
62. (1) show                              (2) dress  
(3) put                                  (4) flaunt
63. (1) her                                  (2) his  
(3) their                                  (4) our
64. (1) sporadically              (2) always  
(3) infrequently              (4) scarcely
65. (1) rebellion                      (2) subversion  
(3) mania                              (4) revolution

**Directions (Q. 66-72) :** In these questions, four alternative are given for the underlined Idiom/Phrase. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

66. Rack and ruin  
(1) Successful (2) Debt  
(3) Destroyed (4) Ransacked
67. To pour oil in troubled water  
(1) To foment trouble  
(2) To add to the trouble  
(3) To instigate  
(4) To calm a quarrel with soothing words
68. Iron will  
(1) Good health (2) Strong determination  
(3) Sticks to the point (4) Has high hemoglobin
69. Having no arguments to defend his point, the speaker began to beat about the bush.  
(1) Wander across the words  
(2) Speak in a haphazard manner  
(3) Speak in a round-about manner  
(4) Make use of irrelevant reference
70. Something up one's sleeve  
(1) A grand idea (2) A secret plan  
(3) A profitable plan (4) Something important
71. Adam's ale  
(1) Grace (2) Pleasure  
(3) Water (4) Wine
72. To draw the long bow  
(1) To overestimate oneself  
(2) To put up high demands  
(3) To demand a very high price  
(4) To make an exaggerated statement

**Directions (Q. 73-79) :** In these questions, a sentence/ a part of the sentence is underlined. Below are given alternatives to the underlined part at (1), (2), (3) which may improve the sentence. Choose the correct alternative. In case no improvement is needed your answer is (4). Mark your answer in the Answer Sheet.

73. If you have studied hard, you would have got a first class.  
(1) If you studied hard  
(2) If you had studied hard  
(3) If you would study hard  
(4) No improvement
74. We hurried to the door but nobody is there  
(1) nobody was there (2) nobody are there  
(3) nobody were there (4) No improvement

75. The two brothers shared the property beside themselves.  
(1) among (2) between  
(3) amidst (4) No improvement
76. A bird in hand is worth two in bush.  
(1) two in the bush (2) two at a bush  
(3) two on bush (4) No improvement
77. Scarcely had he entered the room than the phone rang.  
(1) when (2) while  
(3) as (4) No improvement
78. You called on me when I was not at home, don't you?  
(1) did you? (2) didn't you?  
(3) didn't I? (4) No improvement
79. He paid the caretaker for his board and lodging.  
(1) room (2) furniture  
(3) boarding (4) No improvement

**Directions (Q. 80-82) :** In these questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

80. **MORBID**  
(1) Diseased (2) Dyeing  
(3) Irritated (4) Angry
81. **Jink**  
(1) Inherit (2) Refrain  
(3) Dodge (4) Travel
82. **Reluctant**  
(1) Ready (2) Willing  
(3) Hesitating (4) Inclined

**Directions (Q. 83-85) :** In these questions, choose the word opposite in meaning to the given word.

83. **HEREDITARY**  
(1) Carried (2) Acquired  
(3) Possessed (4) Regained
84. **BARBAROUS**  
(1) Improved (2) Cordial  
(3) Civilized (4) Modified
85. **Boisterous**  
(1) Calm (2) Comfortable  
(3) Good (4) Happy

**Directions (Q. 86 and 87) :** In these questions, four words are given in each question, out of which only one word is spelt correctly. Find the word spelt correct and mark your answer in the Answer Sheet.

86. (1) Incumbent (2) Incumbant  
(3) Incambant (4) Incambent
87. (1) Psychology (2) Sycology  
(3) Psykology (4) Sychology

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**Directions (Q. 88-92) : In these question you have a brief passage with five questions following the passage. Read the passage carefully and choose the best answer to each question out of the four alternatives.**

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Democratic societies from the earliest times have expected their governments to protect the weak against the strong. No 'era of good feeling' can justify discharging the police force or giving up the idea of public control over concentrated private wealth. On the other hand, it is obvious that a spirit of self-denial and moderation on the part of those who hold economic power will greatly soften the demand for absolute equality. Men are more interested in freedom and security than in an equal distribution of wealth. The extent to which Government must interfere with business, therefore, is not exactly measured by the extent to which economic power is concentrated into a few hands. The required degree of government interference depends mainly on whether economic powers are oppressively used, and on the necessity of keeping economic factors in a tolerable state of balance. But with the necessity of meeting all these dangers and threats to liberty, the powers of government are unavoidably increased, whichever political party may be in office. The growth of government is a necessary result of the growth of technology and of the problems that go with the use of machines and science. Since the government in our nation, must take on more powers to meet its problems, there is no way to preserve freedom except by making democracy more powerful.

88. The advent of science and technology has increased the
- (1) freedom of people
  - (2) tyranny of the political parties
  - (3) powers of the government
  - (4) chances of economic inequality
89. A spirit of moderation on the economically sound people would make the less privileged
- (1) unhappy with the rich people
  - (2) more interested in freedom and security
  - (3) unhappy with their lot
  - (4) clamour less for absolute equality
90. The growth of government is necessitated to
- (1) make the rich and the poor happy
  - (2) curb the accumulation of wealth in a few hands
  - (3) monitor science and technology
  - (4) deploy the police force wisely
91. 'Era of good feeling' in sentence 2 refers to
- (1) time of prosperity
  - (2) time of adversity
  - (3) time without government

- (4) time of police atrocities
92. "Tolerable state of balance" in the last sentence may mean
- (1) an adequate level of police force
  - (2) a reasonable level of economic equality
  - (3) a reasonable amount of government interference
  - (4) a reasonable check on economic power

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**Directions (Q. 93-100) : In the following question, out of the four alternatives, choose the one which can be substituted for the given sentence.**

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93. To confirm with the help of evidence
- (1) Corroborate
  - (2) Implicate
  - (3) Designate
  - (4) Extricate
94. Those who go on to someone else land without the owner's permission.
- (1) Delinquents
  - (2) Trespassers
  - (3) Offenders
  - (4) Culprits
95. Printed notice of somebody's death
- (1) Condolence
  - (2) Obituary
  - (3) Calumny
  - (4) Ouija
96. Man whose wife has been unfaithful to him
- (1) Dandy
  - (2) Bastard
  - (3) Concubine
  - (4) Cuckold
97. The power of reading the thought of others
- (1) Psychopathy
  - (2) Telecommunication
  - (3) Psychology
  - (4) Telepathy
98. Use of more words than are needed to express the meaning
- (1) Circumlocution
  - (2) Verbatim
  - (3) Ventriloquism
  - (4) Pleonasm
99. The science of judging a person's character, capabilities, etc. From an examination of the shape of his skull
- (1) Physiology
  - (2) Anthropology
  - (3) Phrenology
  - (4) Morphology
100. One filled with excessive and mistaken enthusiasm in cause
- (1) Martyr
  - (2) Pedant
  - (3) Fanatic
  - (4) Patriot

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### **Test-IV : GENERAL AWARENESS**

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101. Division of powers is the principle of
- (1) Unitary form of Government
  - (2) Federal form of Government
  - (3) Socialist form of Government
  - (4) Republican form of Government
102. In which region does rainfall occur throughout the year?
- (1) Mediterranean
  - (2) Equatorial
  - (3) Tropical
  - (4) Temperate

103. The proceeds of income tax go to  
 (1) Central Government (2) State Government  
 (3) Centre and States (4) Corporation authorities
104. Which of the following properties is generally found in non-metals?  
 (1) Brittleness (2) Conductivity  
 (3) Ductility (4) Malleability
105. Jaundice is caused due to the infection of  
 (1) brain (2) liver  
 (3) kidney (4) spleen
106. The part of the flower that can carry out photosynthesis is  
 (1) Androecium (2) Gynoecium  
 (3) Calyx (4) Corolla/dksjksyk
107. Who is the first Aborigin to win a Gold Medal at the Olympic Games?  
 (1) Maria Mutola (2) Cathy Freeman  
 (3) Lorraine Graham (4) Katherine Merry
108. The central control of respiratory activity in human body is exercised by  
 (1) cerebrum (2) cerebellum  
 (3) medulla oblongata (4) hypothalamus
109. Legal Tender Money is  
 (1) accepted only by Government  
 (2) accepted by people and Government as per the law  
 (3) not accepted for business purposes by law  
 (4) not accepted by Government
110. Which of the following is a river flowing from Central India and joining Yamuna/Ganga?  
 (1) Ghaghra (2) Gomati  
 (3) Kosi (4) Betwa
111. What Constitutional provision enables the Central Government to provide reservations in jobs and educational institutions for the weaker sections of the society?  
 (1) Article 14 (2) Article 16  
 (3) Article 46 (4) Article 19
112. During whose reign did the Gandhara School of Art blossom?  
 (1) Harsha (2) Ashok  
 (3) Kanishka (4) Chandragupta II
113. Name of the Indian army soldier who found alive at siachen glacier?  
 (1) Dalbir Singh (2) Hanuman Thapa  
 (3) Sarabjeet Rathaur (4) Ratinder Singh Sodhi
114. The strong earthquake-cum-tsunami which has moved Japan's main island Honshu by a few feet has also caused Earth's axis to wobble by about  
 (1) 1 inch (2) 2 inches  
 (3) 4 inches (4) 6 inches
115. Birds usually have a single  
 (1) Kidney (2) Lung  
 (3) Testis (4) Ovary
116. The percentage of oxygen in air is approximately  
 (1) 100% (2) 1%  
 (3) 78% (4) 21%
117. Core Industries are  
 (1) Basic industries  
 (2) Consumer goods industries  
 (3) Capital goods industries  
 (4) Government industries
118. During which Five-Year Plan did India lay down the objective of the need to ensure environmental sustainability of the development strategy?  
 (1) 6th Five Year Plan (2) 7th Five Year Plan  
 (3) 8th Five Year Plan (4) 9th Five Year Plan
119. The chemical used for cloud seeding for artificial rains is  
 (1) Silver Nitrate (2) Potassium Bromide  
 (3) Silver Iodide (4) Potassium Nitrate
120. Who constitutes the Finance Commission after every five years?  
 (1) The Council of Ministers  
 (2) The Parliament  
 (3) The President  
 (4) The Comptroller and Auditor General
121. Which of the following is at the apex of the subordinate criminal courts?  
 (1) Supreme Court  
 (2) High Court  
 (3) Court of Sessions Judge  
 (4) Court of District Judge
122. In which session of the Indian National Congress did the historic union of Congress and Muslim League take place?  
 (1) Surat (2) Bombay  
 (3) Calcutta (4) Lucknow
123. Velocity of sound in air does not depend on  
 (1) Density of air (2) Temperature of air  
 (3) Pressure of air (4) Humidity of air
124. The red blood cells are produced by the  
 (1) Liver (2) Hormones  
 (3) Bone-marrow (4) Heart
125. Who was not a politician?  
 (1) I.K. Gujral (2) S.L. Bahuguna  
 (3) J. Jayalalitha (4) H.N. Bahuguna
126. Of the following, who held the offices of Judge of the Supreme Court and the Speaker of the Lok Sabha?  
 (1) M. Hidayatullah (2) K.S. Hegde  
 (3) Subba Rao (4) P.N. Bhagwati
127. The famous slogan "GARIBI HATAO" (Remove Poverty) was launched during the-  
 (1) First Five Year Plan (1951-56)  
 (2) Third Five Year Plan (1961-66)  
 (3) Fourth Five Year Plan (1969-74)  
 (4) Fifth Five Year Plan (1974-78)
128. Clothes keep us warm in winter because they:  
 (1) supply heat

- (2) do not radiate heat  
 (3) prevent air from contacting the body  
 (4) prevent the heat of the body from escaping
129. Which one of the following four secretions, is different from the remaining three in regard to its mode of transport from the source gland to the site of action?  
 (1) Saliva (2) Sweat  
 (3) Bile (4) Epinephrine
130. What is the maximum permitted length of cricket bat?  
 (1) 32" (2) 34"  
 (3) 36" (4) 38"
131. Which is the anti-coagulant substance in blood?  
 (1) Fibrinogen (2) Heparin  
 (3) Thrombin (4) Globin
132. The oldest source of energy known to man is  
 (1) wind energy (2) solar energy  
 (3) tidal energy (4) geothermal energy
133. The longest river of Peninsular India is:  
 (1) Narmada (2) Godavari  
 (3) Mahanadi (4) Cauvery
134. Where do you find the temple of Angkor Wat?  
 (1) In Thailand (2) In Malaysia  
 (3) In Cambodia (4) In Myanmar
135. In which one of the following places is electricity generated from hydel power?  
 (1) Neyveli (2) Ennore  
 (3) Tuticorin (4) Mettur
136. Which among the following standard protocols is the most widely used by the Internet?  
 (1) HTTP (2) TCP/IP  
 (3) SMTP (4) SLIP
137. Which of the following is most important for growth of children upto the age of 14?  
 (1) Proteins (2) Vitamins  
 (3) Fats (4) Milk
138. NIFTY is associated with  
 (1) Cloth Market Price Index  
 (2) Consumer Price Index  
 (3) BSE Index  
 (4) NSE Index
139. Litmus is obtained from  
 (1) a bacterium (2) a fungus  
 (3) an alga (4) lichen
140. Where is Brihadeshwara Temple situated?  
 (1) Karachi (2) Madurai  
 (3) Shri Shailam (4) Tanjore
141. Ashoka called the Third Buddhist Council at  
 (1) Pataliputra (2) Magadha  
 (3) Kalinga (4) Sarnath
142. Who was the author of the Kadambari, a great romantic play?  
 (1) Banabhatta (2) Harshavardhana  
 (3) Baskaravardhana (4) Bindusara
143. Basic infrastructure facilities in Economics are known as:  
 (1) Human capital  
 (2) Physical capital  
 (3) Social overheads capital  
 (4) Working capital
144. German silver used for making utensils is an alloy of  
 (1) copper, silver, nickel  
 (2) copper, zinc, nickel  
 (3) copper, zinc, aluminium  
 (4) copper, nickel, aluminium
145. Which one of the following is also called the 'power house' of the cell?  
 (1) Golgi body  
 (2) Mitochondrion  
 (3) Ribosome  
 (4) Lysosome
146. In C language, the formatting character should be preceded by the symbol:  
 (1) + (2) /  
 (3) % (4) -
147. Match List I (Newspapers) with List II (Country) and select the correct answer using the codes given below the lists.
- | List I            | List II         |
|-------------------|-----------------|
| a. Al Ahram       | 1. Moscow       |
| b. Izvestia       | 2. New York     |
| c. The Daily News | 3. Beijing      |
| d. People's Daily | 4. Cairo        |
| (a) (b) (c) (d)   | (a) (b) (c) (d) |
| (1) 1 2 3 4       | (2) 4 1 2 3     |
| (3) 4 1 3 2       | (4) 1 4 2 3     |
148. Who said that 'The real seat of taste is not the tongue, but the mind'?  
 (1) Aurobindo Ghosh (2) Mahatma Gandhi  
 (3) Bal Gangadhar Tilak (4) Swami Vivekananda
149. Sardar Sarovar dam is being built on the river  
 (1) Tapti (2) Mahi  
 (3) Chambal (4) Narmada
150. Who said "The Simon Commission Report should be thrown on a heap of rubbish"?  
 (1) Mahatma Gandhi  
 (2) Shivaswami Ayyar  
 (3) Mohammad Ali Jinnah  
 (4) Jawaharlal Nehru

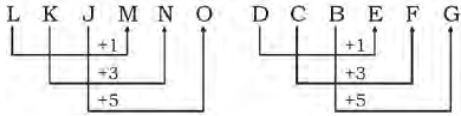


ANSWER KEY

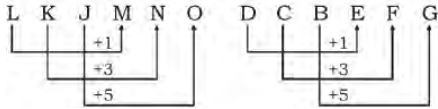
1	(1)	26	(4)	51	(3)	76	(1)	101	(2)	126	(2)
2	(4)	27	(2)	52	(1)	77	(1)	102	(2)	127	(4)
3	(2)	28	(1)	53	(1)	78	(2)	103	(3)	128	(4)
4	(4)	29	(3)	54	(3)	79	(3)	104	(1)	129	(3)
5	(3)	30	(2)	55	(4)	80	(1)	105	(2)	130	(4)
6	(4)	31	(1)	56	(4)	81	(3)	106	(3)	131	(2)
7	(4)	32	(4)	57	(4)	82	(3)	107	(2)	132	(4)
8	(1)	33	(3)	58	(2)	83	(2)	108	(3)	133	(2)
9	(2)	34	(4)	59	(3)	84	(3)	109	(2)	134	(3)
10	(4)	35	(1)	60	(4)	85	(1)	110	(4)	135	(4)
11	(2)	36	(1)	61	(3)	86	(1)	111	(2)	136	(2)
12	(4)	37	(2)	62	(4)	87	(1)	112	(3)	137	(1)
13	(3)	38	(2)	63	(3)	88	(3)	113	(2)	138	(4)
14	(2)	39	(1)	64	(2)	89	(4)	114	(3)	139	(4)
15	(4)	40	(3)	65	(1)	90	(1)	115	(4)	140	(4)
16	(1)	41	(2)	66	(3)	91	(1)	116	(4)	141	(1)
17	(3)	42	(2)	67	(4)	92	(3)	117	(1)	142	(1)
18	(1)	43	(3)	68	(2)	93	(1)	118	(4)	143	(3)
19	(4)	44	(1)	69	(3)	94	(2)	119	(3)	144	(2)
20	(4)	45	(1)	70	(2)	95	(2)	120	(3)	145	(2)
21	(2)	46	(3)	71	(3)	96	(4)	121	(3)	146	(3)
22	(2)	47	(2)	72	(4)	97	(4)	122	(4)	147	(2)
23	(3)	48	(1)	73	(2)	98	(4)	123	(3)	148	(2)
24	(3)	49	(1)	74	(1)	99	(3)	124	(3)	149	(4)
25	(3)	50	(2)	75	(2)	100	(3)	125	(2)	150	(2)

## HINTS & SOLUTIONS

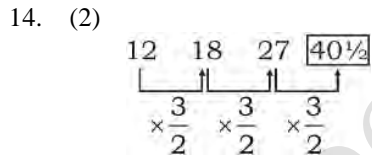
1. (1) Ink is used for writing, similarly Colour is used for painting.  
 2. (4) Havana is the capital of Cuba and Nicosia is the capital of Saipras.  
 3. (2)  $6 + 15 = 21$                        $3 + 15 = 18$   
 4. (4)



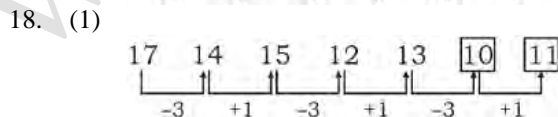
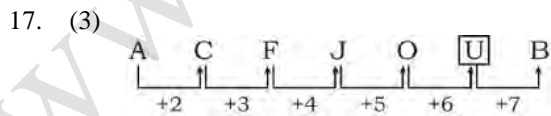
5. (3) Brick is used by Mason and Colour is used by painter.  
 6. (4)



7. (4)  $96 = 32 \times 3$ ;                       $24 = 8 \times 3$   
 $39 = 13 \times 3$ ;                       $18 = 6 \times 3$   
 $81 = 27 \times 3$ ;                       $54 = 18 \times 3$   
 Here (82, 64) are not multiples of 3.  
 8. (1) We can find more than one vowel in rest of the options.  
 9. (2) 61 is the only prime number in the given options.  
 10. (4) Since  $F(6) + E(5) + E(5) + D(4) = 20$   
 $B(2) + R(18) + E(5) + A(1) + D(4) = 30$   
 11. (2)  
 12. (4)  $1 \rightarrow 5 \rightarrow 4 \rightarrow 2 \rightarrow 3$   
 13. (3)  $b c a \underline{a} / b \underline{c} a a / b c \underline{a} a / \underline{b} c a a$   
 $\Rightarrow acab$



15. (4) Required number =  $51 - 21 + 1 = 31$   
 16. (1)  $+\Rightarrow \div, \times \Rightarrow +, - \Rightarrow \times, \div \Rightarrow -$   
 $36 - 6 + 3 \times 5 \div 3 = 74$   
 $\Rightarrow 36 \times 6 \div 3 + 5 - 3 = 74$   
 $\Rightarrow 36 \times 2 + 5 - 3 = 74$   
 $\Rightarrow 72 + 5 - 3 = 74$   
 $\Rightarrow 74 = 74$



19. (4)  $5 \times 2 \times 6 = 60$   
 $8 \times 4 \times 2 = 64$   
 $7 \times 6 \times 3 = 126$   
 20. (4)  $(24 \times 2) + 5 = 48 + 5 = 53$

- (51 × 4) + 7 = 204 + 7 = 211  
 (67 × 6) + 5 = 402 + 5 = 407  
 21. (2)  $1 \times 10 \Rightarrow (1 \times 10) - 1 = 9$   
 $2 \times 10 \Rightarrow (2 \times 10) - 2 = 18$   
 $3 \times 10 \Rightarrow (3 \times 10) - 3 = 27$   
 $8 \times 10 \Rightarrow (8 \times 10) - 8 = 72$

22. (2)  
 23. (3)  
 24. (3)  $6 + 3 \Rightarrow 3 \times 6 - (6 - 1) = 18 - 5 = 13$   
 $5 + 20 \Rightarrow 5 \times 20 - (5 - 1) = 100 - 4 = 96$   
 $11 + 7 \Rightarrow 11 \times 7 - (11 - 1) = 77 - 10 = 67$   
 $19 + 11 \Rightarrow 19 \times 11 - (19 - 1) = 209 - 18 = 191$

25. (3)  $C \Rightarrow 02, 11, 23, 32, 40$   
 $A \Rightarrow 00, 13, 21, 33, 42$   
 $R \Rightarrow 57, 68, 77, 88, 99$   
 $D \Rightarrow 03, 10, 22, 30, 41$   
 26. (4) Let the numbers be  $3x$  and  $4x$  respectively  
 First number × second number = HCF × LCM

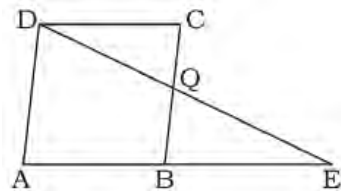
$\Rightarrow 3x \times 4x = 2028$   
 $\Rightarrow x^2 = \frac{2028}{3 \times 4} = 169$   
 $\therefore x = \sqrt{169} = 13$   
 $\therefore$  Sum of the numbers =  $3x + 4x = 7x = 7 \times 13 = 91$

27. (2)  $q(p^2 - 1) = (\sec\theta + \operatorname{cosec}\theta) \{(\sin\theta + \cos\theta)^2 - 1\}$   
 $= \left(\frac{1}{\cos\theta} + \frac{1}{\sin\theta}\right) \{\sin^2\theta + \cos^2\theta + 2\sin\theta\cos\theta - 1\}$   
 $= \left(\frac{\sin\theta + \cos\theta}{\cos\theta\sin\theta}\right) (1 + 2\sin\theta\cos\theta - 1)$   
 $= \left(\frac{\sin\theta + \cos\theta}{\cos\theta\sin\theta}\right) (2\sin\theta\cos\theta)$   
 $= 2(\sin\theta + \cos\theta) = 2p$

28. (1) Boys : Girls = 4 : 3 = 32 : 24  
 Girls : Teachers = 8 : 1 = 24 : 3  
 $\therefore$  Boys : Girls : Teachers = 32 : 24 : 3  
 $\therefore$  Required ratio =  $(32 + 24) : 3 = 56 : 3$

29. (3) Average of first five odd multiples of 3  
 $= \frac{3(1+3+5+7+9)}{5} = \frac{3 \times 25}{5} = 15$

30. (2)  $AD \parallel BC$   
 $\Rightarrow AD \parallel BQ$



Point B is the mid-point of AE.

∴ Q is the mid-point of DE.

In Δs DQC and BQE.

∠DQC = ∠BQE

∠DCQ = ∠QBE

∠CDQ = ∠QEB

∴ Both triangles ΔDQC and ∠BQE are similar.

∴ CQ : QB = 1 : 1

31. (1)  $\frac{x}{y} + \frac{y}{x} = -2 \Rightarrow \frac{x^2 + y^2}{xy} = -2$

$\Rightarrow x^2 + y^2 = -2xy$

$\Rightarrow x^2 + y^2 + 2xy = 0$

$\Rightarrow (x + y)^2 = 0$

$\Rightarrow x + y = 0$

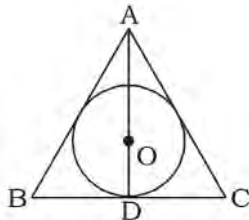
$\Rightarrow x^3 + y^3 + 3xy(x + y) = (x + y)^3 = 0$

32. (4) If the number of men be 100.

Then Number of women = 90

∴ Required percent

$= \frac{100}{90} \times 100 = 111\%$  (Approximate)



33. (3)

BD = DC =  $7\sqrt{3}$  cm

$\Rightarrow AD = \sqrt{AB^2 - BD^2} = \sqrt{(14\sqrt{3})^2 - (7\sqrt{3})^2}$

$= \sqrt{(14\sqrt{3} + 7\sqrt{3})(14\sqrt{3} - 7\sqrt{3})}$

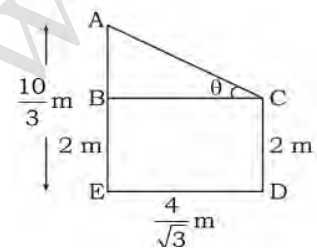
$= \sqrt{21\sqrt{3} \times 7\sqrt{3}} = 21$  cm

∴ OD = Radius of circle =  $\frac{1}{3} \times 21 = 7$  cm

∴ Area of circle

$= \pi r^2 = \frac{22}{7} \times 7 \times 7 = 154$  sq. cm.

34. (4)



$\tan \theta = \frac{AB}{BC} = \frac{\frac{10}{3} - 2}{\frac{4}{\sqrt{3}}} = \frac{4}{3} \times \frac{\sqrt{3}}{4}$

$\Rightarrow \frac{1}{\sqrt{3}} = \tan 30^\circ \Rightarrow \theta = 30^\circ$

35. (1)  $x = \sqrt[2]{2^3 \sqrt[4]{2^3 \sqrt[4]{4}}}$

On squaring

$x^2 = 2^3 \sqrt[4]{2^3 \sqrt[4]{4}}$

On cubing,

$x^6 = 8 \times 4x$

$\Rightarrow x^5 = 32 = 2^5 \Rightarrow x = 2$

36. (1) Let the cost price of 1 book be x

⇒ Cost price of 3 books = 3x

and, cost price of 12 books = 12x

Selling price of 12 books = 1800

$= 12x + 3x$

$= 1800$

$\Rightarrow 15x = 1800$

$\therefore x = \frac{1800}{15} = 120$

The cost price of each book = ` 120

37. (2) ∠OCX = 45° (ABCD is a square & AC bisects ∠BCD)

∠COD + ∠COX = 180°

$\Rightarrow \angle COX = 180^\circ - \angle COD = 180^\circ - 105^\circ = 75^\circ$

In ΔOCX

∠OCX + ∠COX + ∠OXC = 180°

$\Rightarrow 45^\circ + 75^\circ + \angle OXC = 180^\circ$

$\Rightarrow \angle OXC = 180^\circ - 120^\circ = 60^\circ$

∴ x = 60°

38. (2) Let the number of each type of notes be x

∴ x + 5x + 10x = 640

$\Rightarrow 16x = 640$

$\Rightarrow x = 40$

∴ Total number of notes = 3 × 40 = 120

39. (1)  $a_4 = a + (4 - 1) \times d$

$16 = a + 3d \Rightarrow a = 16 - 3d$

...(1)

Also, 80 = a + 11d

...(2)

After putting the value of a from equation

(1) in equation (2)

$16 - 3d + 11d = 80$

$\Rightarrow 8d = 80 - 16 = 64$

$\Rightarrow d = 8$

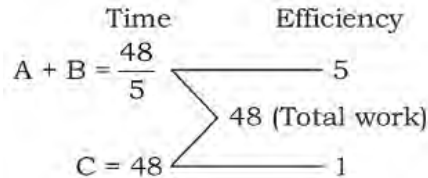
∴ a = 16 - 24 = -8

40. (3)  $(m^2 + n^2) \cos^2 \beta = \left( \frac{\cos^2 \alpha}{\cos^2 \beta} + \frac{\cos^2 \alpha}{\sin^2 \beta} \right) \cos^2 \beta$

$$\begin{aligned} & \left( \because m = \frac{\cos \alpha}{\cos \beta} \text{ and } n = \frac{\cos \alpha}{\sin \beta} \right) \\ & = \left( \frac{\cos^2 \alpha \sin^2 \beta + \cos^2 \alpha \cos^2 \beta}{\cos^2 \beta \sin^2 \beta} \right) \cos^2 \beta \\ & = \cos^2 \alpha \left( \frac{\sin^2 \beta + \cos^2 \beta}{\cos^2 \beta \sin^2 \beta} \right) \cos^2 \beta \\ & = \cos^2 \alpha \left( \frac{1}{\cos^2 \beta \sin^2 \beta} \right) \cos^2 \beta \\ & = \frac{\cos^2 \alpha}{\sin^2 \beta} = \left( \frac{\cos \alpha}{\sin \beta} \right)^2 = n^2 \end{aligned}$$

41. (2) A's work = (B + C)'s work  
ATQ,  
(A + B)'s can complete the work in 9 hr 36 minutes i.e.  $\frac{48}{5}$  hrs

C can complete the work in 48 hours.



We know that  
A's efficiency = (B + C)'s efficiency  
C's efficiency = 1  
then,  $A - B = 1$  and  $A + B = 5$   
 $\Rightarrow$  A's efficiency = 3 and B's efficiency = 2  
Time taken by B is =  $\frac{48}{2} = 24$  hr

42. (2)  $m^2 - n^2 = (\tan \theta + \sin \theta)^2 - (\tan \theta - \sin \theta)^2$   
 $= 4 \tan \theta \sin \theta$   
[ $\because (a + b)^2 - (a - b)^2 = 4ab$ ]

And

$$\begin{aligned} 4\sqrt{mn} &= 4\sqrt{(\tan \theta + \sin \theta)(\tan \theta - \sin \theta)} \\ &= 4\sqrt{\tan^2 \theta - \sin^2 \theta} = 4\sqrt{\frac{\sin^2 \theta}{\cos^2 \theta} - \sin^2 \theta} \\ &= 4\sqrt{\frac{\sin^2 \theta - \sin^2 \theta \cos^2 \theta}{\cos^2 \theta}} \\ &= 4\sqrt{\frac{\sin^2 \theta(1 - \cos^2 \theta)}{\cos^2 \theta}} \\ &= 4\sqrt{\frac{\sin^4 \theta}{\cos^2 \theta}} = 4\frac{\sin^2 \theta}{\cos \theta} \\ &= 4 \sin \theta \frac{\sin \theta}{\cos \theta} = 4 \sin \theta \tan \theta \\ &\Rightarrow m^2 - n^2 = 4\sqrt{mn} \end{aligned}$$

43. (3) Let the first number be x, then

$$\begin{aligned} x &= \frac{60 \times 4 - x}{4} \\ \Rightarrow 4x &= 240 - x \\ \Rightarrow 5x &= 240 \Rightarrow x = \frac{240}{5} = 48 \end{aligned}$$

44. (1) Let speed of cyclist = x kmph  
& Time = t hours  
Then distance covered by jogger =  $\frac{xt}{2}$   
and time = 2t  
 $\Rightarrow$  Required ratio =  $\frac{xt}{2 \times 2t} : x = 1 : 4$
45. (1) Let the length of each train be x metre.  
Speed of first train =  $\frac{x}{18}$  m/sec  
Speed of second train =  $\frac{x}{12}$  m/sec  
When both trains cross each other, time taken  
 $= \frac{2x}{\frac{x}{18} + \frac{x}{12}} = \frac{2x}{\frac{2x+3x}{36}} = \frac{2x \times 36}{5x} = \frac{72}{5} = 14.4$  sec.
46. (3) Required percentage =  $\frac{420}{600} \times 100 = 70\%$
47. (2) Required ratio =  $\frac{360}{435} = \frac{24}{29}$  i.e. 24 : 29
48. (1) Total marks of Physics = 469  
Average marks =  $\frac{469}{7} = 67$
49. (1) Average marks =  $\frac{651}{7} = 93$   
Required percentage =  $\frac{93}{150} \times 100 = 62\%$
50. (2) Total (B) = 70 + 80 + 63 + 68 + 49 + 30 = 360  
Total (E) = 123 + 79 + 79 + 84 + 40 + 27 = 432  
Required percentage  
 $= \frac{432 - 360}{360} \times 100 = 20\%$
51. (3) 'Rich' will be followed by 'in', as 'rich in something' means 'containing or providing a large supply of something'.
52. (1) 'Have' is followed by 'V<sub>3</sub>'. Here we have present perfect tense.
53. (1) Change 'needed' into 'need'. The sentence is a general fact.
54. (3) 'Make both ends meet' is a definite phrase which means 'to earn livelihood'.
55. (4) No error
56. (4) Profound means extreme.

73. (2) The formula of past conditional sentence is - 'If + sub + had +  $V_3$ , sub + would + have +  $V_3$ .
74. (1) The sentence is of past. Change 'is' into 'was'
75. (2) When there are 'two', we use 'between'.
77. (1) 'Scarcely.... When' is a correlative.
78. (2) 'Question tag' is in the same tense as that of the sentence and if the sentence
101. (2) The separation of powers, often imprecisely used interchangeably with the trias political principle, is a model for the governance of a state. The normal division of branches is into a legislature, an executive, and a judiciary. Division of powers is the often overlooked principle of dividing governmental power among the federal, state, and local governments.
102. (2) The equatorial climate is found between 5 degree north and 10 degree south of the equator. Precipitation in the equatorial region is heavy between 60 inches and 106 inches and is well distributed throughout the year. Due to this abundant rainfall, tropical rainforest climate is usually found at latitudes within five degrees North and South of the equator.
104. (1) An important physical property of non-metals is that they are brittle and hence cannot be beaten into sheets or drawn into wires. In other words, non-metals are non-malleable and non-ductile. When stress is applied on non-metals, they shatter into pieces.
105. (2) Jaundice is a yellow discoloration of the skin, mucous membranes, and the whites of the eyes caused by increased amounts of bilirubin in the blood. Normally, the liver metabolizes excretes the bilirubin in the form of bile. However, if there is a disruption in this normal metabolism and/or production of bilirubin, jaundice may result.
106. (3) The different parts of a flower are calyx, corolla, androecium and gynoecium. Calyx and corolla are accessory organs, while androecium and gynoecium are reproductive organs. Photosynthetic activity is found in the calyx, green shoulder, pericarp and locular parenchyma. It suggests that all of these tissues have significant roles in  $CO_2$  scavenging and the provision of carbon assimilates.
109. (2) Legal tender is a medium of payment allowed by law or recognized by a legal system to be valid for meeting a financial obligation. So it is accepted by people and government on a legal basis. Paper currency and coins are common forms of legal tender in many countries.
112. (3) The Kushan period is considered the Golden period of Gandhara. Peshawar Valley and Taxila are littered with ruins of stupas and monasteries of this period. Gandharan art flourished and it produced some of the best pieces of Indian sculpture. Many monuments were created to commemorate the Jataka tales. The Gandhara civilization peaked during the reign of the great Kushan King Kanishka (128-151). The cities of Taxila (Takshasila) at Sirsukh and Peshawar were built.
115. (4) Female birds in most families have only one functional ovary (the left one), connected to an oviduct-although two ovaries are present in the embryonic stage of each female bird.
116. (4) **Composition of air**  
 Nitrogen : 78.08 percent  
 Oxygen : 20.94 percent  
 Argon : 0.93 percent  
 Carbon dioxide : 0.03 percent  
 Neon : 0.0018 percent  
 Helium : 0.005 percent  
 Ozone : 0.00006 percent  
 Hydrogen : 0.00005 percent
118. (4) The Ninth Five Year Plan recognised the integral link between rapid economic growth and the quality of life of the mass of the people. Ensuring environmental sustainability of the development process through social mobilisation and participation of people at all level was one of the specific objectives of the Ninth Plan as approved by the National Development Council. In the Ninth Plan document, policies and programmes during the Eighth Plan period were reviewed, shortcomings identified and new policy framework suggested overcoming the shortcomings and ensuring sustainability of the development process not only in economic terms but also in terms of social and environmental factors.
119. (3) The chemical used for cloud seeding for artificial rains is silver iodide.
120. (3) Article 280 of the Indian Constitution deals with the Finance Commission. The Finance Commission of India came into existence in 1951. It was established under

Article 280 of the Indian Constitution by the President of India. It was formed to define the financial relations between the centre and the state.

122. (4) Lucknow Pact, (December 1916) was a famous agreement made by the Indian National Congress headed by Maratha leader Bal Gangadhar Tilak and the All-India Muslim League led by Muhammad Ali Jinnah which was adopted by the Congress at its Lucknow session on December 29 and by the league on December 31, 1916. The meeting at Lucknow marked the reunion of the moderate and radical wings of the Congress. The pact dealt both with the structure of the government of India and with the relation of the Hindu and Muslim communities.
126. (2) K.S. Hegde served as a member of the Rajya Sabha from 1952 to 1957, holding office as its vice chairman between 1952 and 1953. He served as Judge of the Supreme Court of India between 1967 and 1973 and as Speaker of the 6th Lok Sabha. K.S. Hegde and Baharul Islam are the only Supreme Court judges to have served in the Parliament of India prior to their appointment to the judiciary.
128. (4) It is just because woolen clothes have fibres and between those fibres air is trapped which reduces heat loss. Air reduces heat loss because it is an insulator i.e. poor conductor of heat. Hence, all the heat from our body gets trapped inside the clothes which makes us feel warmer with the clothes.
129. (3) Saliva: It is secreted by the salivary glands, Sweat achieved by the water-rich secretion of the eccrine glands. Epinephrine: It is also known as adrenaline is a hormone and a neurotransmitter. Bile: It is a bitter-tasting dark green to yellowish brown fluid produced by the liver that aids the process of digestion of lipids in the small intestine. Bile is the odd one among all four as it is secreted by liver, while others are secreted by glands.
135. (4) The Mettur Dam is one of the largest dams in India built in 1934. It was constructed in a gorge, where the Kaveri River enters the plains in Tamil Nadu. The dam is one of the oldest in India. It provides irrigation facilities to parts of Salem, the length of Erode, Namakkal, Karur, Tiruchirapalli and Thanjavur district for 271,000 acres of

farm land. The total length of the dam is 1,700 m. The dam creates Stanley Reservoir.

138. (4) The NSE's key index is the S&P CNX Nifty, known as the NSE NIFTY (National Stock Exchange Fifty), an index of fifty major stocks weighted by market capitalization. Nifty Fifty was an informal term used to refer to 50 popular large cap stocks on the New York Stock Exchange in the 1960s and 1970s that were widely regarded as solid buy and hold growth stocks. NIFTY means National Index for Fifty.
140. (4) The Brihadeshwara Temple at Thanjavur (Tanjore) in the Indian state of Tamil Nadu, is a Hindu temple dedicated to Shiva and a brilliant example of the major heights achieved by Cholas in Tamil architecture. It is a tribute and a reflection of the power of its patron Raja Raja Chola I. It remains India's largest temple and is one of the greatest glories of Indian architecture. The temple is part of the UNESCO World Heritage Site "Great Living Chola Temples".
141. (1) The Third Buddhist Council was convened in about 250 BCE at Ashokarama in Pataliputra, supposedly under the patronage of Emperor Ashoka. The traditional reason for convening the Third Buddhist Council is reported to have been to rid the Sangha of corruption and bogus monks who held heretical views. It was presided over by the Elder Moggaliputta Tissa and one thousand monks participated in the Council.
142. (1) Kadambari is a romantic novel in Sanskrit. It was substantially composed by Banabhatta in the first half of the 7th century, who did not survive to see it through completion. The novel was completed by Banabhatta's son Bhushanabhatta, according to the plan laid out by his late father. It is conventionally divided into Purvabhaga (earlier part) written by Banabhatta and Uttarabhaga (later part) by Bhushanabhatta.
143. (3) Social overhead capital is the capital spent on social infrastructure, such as schools, universities, hospitals, libraries. They are capital goods of types which are available to anybody, hence social and they are not tightly linked to any particular part of production, hence overhead. Because of their broad availability they often have to be provided by the government. Examples of social overhead capital include roads, schools, hospitals and public parks.

144. (2) Nickel silver, also known as German silver, Argentan, new silver, nickel brass, albata, alpacca, or electrum, is a copper alloy with nickel and often zinc. The usual formulation is 60% copper, 20% nickel and 20% zinc. Nickel silver is named for its silvery appearance, but it contains no elemental silver unless plated. The name "German silver" refers to its development by 19th century German metal workers in imitation of the Chinese alloy known as paktong. Nickel silver first became popular as a base metal for silver plated cutlery and other silverware, notably the electroplated wares called EPNS (electro-plated nickel silver). It is used in zippers, better quality keys, costume jewellery, for making musical instruments (example: cymbals, saxophones) and it is preferred for the track in electrically powered model railway layouts, as its oxide is conductive. It is widely used in the production of coins.
146. (3) In C language the formatting character should be preceded by the symbol %.
148. (2) 'The Story of My Experiments with Truth An Autobiography' brings out that all of his life, experiments with food were to be part of Gandhi's experiments with truth. While in England, where food is sometimes tasteless anyway, he decided he could do without condiments, for "The real seat of taste is not the tongue but the mind."
150. (2) Those were the words of Shivaswami Iyer who was a prominent lawyer, administrator and statesman who served as the Advocate General of Madras from 1907 to 1911. He was the Indian delegate to the third session of the League of Nations in 1922 in which, he condemned the mandate policy of General Smuts of the Republic of South Africa. Shivaswami Iyer served as a member of the Council of State from 1922 to 1923. He also opposed the Simon Commission on its arrival in India.

(This model paper was prepared by subject experts of Race Institute, Hyderabad)