

## REASONING

**Directions (1-5) :** Study the following information carefully and answer the given questions based on it.

In each of the following questions two keywords have been written in a code language. The letters in the code equivalent are not necessarily in the same order as letters in the key word for which they stand. Under them a third word has been given which has been written in four different code languages including the one in which the keywords have been written. Find the alternative which may be the code equivalent in the code of the keywords. That is your answer.

- VIBRANT      zsqwpkf  
RENT          wspm  
EXALT  
(1) p s w q f      (2) p m k q z  
(3) p m h g f  
(4) w k h p q
- CRAFT        qwxng  
FATHER        p x q w k n  
SCRIPT  
(1) q w p l v n  
(2) n x k v f q  
(3) w n p k l v  
(4) l n q g v f
- DECOUR        j p s l e a  
SCOPE         h s l m p  
IMPURE  
(1) p e a h r m  
(2) s a j m r g  
(3) m l j e h r  
(4) e a j h m r
- COLUMN        a i o q r w  
BIRTH          g m t v x  
LENGTH  
(1) a i m v w y  
(2) m r s t w x  
(3) g r t u v w  
(4) k m n r v w

- MASTER        b n p q v x  
SECOND        a b j n o w  
NORTH  
(1) a b n w x      (2) b n q v x  
(3) a m v w x      (4) a b n v x

**Directions (6-10) :** In each of the following questions, there is a certain relation between two given numbers on one side of :: and one number is given on another side of :: while another number is to be found from the given alternatives, having the same relation with this number as the numbers of the given bear. Choose the best alternative.

- 11 : 145 :: 14 : ?  
(1) 155              (2) 198  
(3) 226              (4) 238
- 3 : 36 :: 5 : ?  
(1) 130              (2) 138  
(3) 145              (4) 148
- 12 : 5 :: ? : 27  
(1) 78                (2) 81  
(3) 83                (4) 87
- 6 : 108 :: 8 : ?  
(1) 220              (2) 238  
(3) 278              (4) 320
- 8 : 48 :: 14 : ?  
(1) 151              (2) 168  
(3) 171              (4) 188

**Directions (11-15) :** Study the following arrangement of digits, letters and symbols, and answer the questions given below :

F ☆ ETN1 ● 8DIP7 ● ■  
JUG ✕ KG ● ● H2M9★S 3 L  
C \* Q 4 R 5 V \* A B

- How many consonants are there each of which is either immediately preceded by a number and/ or immediately followed by a symbol ?  
(1) Seven            (2) Eight  
(3) Nine             (4) Ten
- Three of the following four are alike in a certain way based on

the above arrangement and form a group. Which is the one that does not belong to the group ?

- (1) G2★              (2) 8PJ  
(3) ●UG              (4) ●2S

- If the positions of E and F are interchanged, and the positions of M and A are interchanged, how many vowels will be there each of which will be both immediately preceded and immediately followed by a consonant ?  
(1) Three            (2) Two  
(3) One              (4) Zero
- What should come in place of the question mark in the following series ?

EB● IV● P\*● ?

- (1) G9■              (2) KH■  
(3) KH✕              (4) GH■

- A man performs three consecutive operations. In his first operation he reverses the order of first 10 elements from the left. After that he starts second operation and reverses the order of first 20 elements from the left. After that he performs his last operation and reverses the order of first 30 elements from the same end. After three operations which element will be 4th to the right of the 15th element from the right end of the newly obtained series ?

- (1) G                (2) K  
(3) F                (4) L

- 'A' went on tour on 15th August, which was the third Sunday of the month and came back on 30th September. So on which day of the month did he return ?  
(1) Fourth Sunday  
(2) Fourth Tuesday  
(3) Fifth Thursday  
(4) Third Saturday

17. If Thursday was the day after the day before Yesterday five days ago, what is the least number of days ago when Sunday was three days before the day after tomorrow?

- (1) Two (2) Three  
(3) Four (4) Five

18. Six friends P, Q, R, S, T and U are sitting around a circular table facing towards centre. The angle made at the centre of the circle by a straight lines from P and Q is  $180^\circ$ , from Q and R is  $120^\circ$ , from R and S  $180^\circ$ . T is not sitting on the immediate left of R while R is not on the immediate right of P. On the basis of the above information which of the following statements is definitely true?

- (1) R is sitting between P and S.  
(2) T is sitting between P and U.  
(3) Q is sitting between S and U.  
(4) T and R are sitting opposite each other.

19. 13 students are standing in a horizontal row from left to right. If all the odd-numbered students in a row are shifted to the successive odd-numbered positions, what will be the position of a boy, who was seventh in the row initially?

- (1) fifth from left  
(2) fifth from right  
(3) eighth from left  
(4) ninth from right

20. 14 students are standing in row from left to right. After interchanging their positions, first student goes at 14th place, second goes at 13th place, third goes at 12th and so on. If 'A' was at ninth position before change, then after changing he would be at which place?

- (1) Fifth from right  
(2) Sixth from right  
(3) Fifth from left  
(4) Sixth from left

**Directions (21-25) :** In questions given below, a statement is followed by reasons I and II. Apply the reasons to the statement and mark your answer as under :

- (1) Only I is right  
(2) Only II is right  
(3) Both I and II are right  
(4) Neither I nor II is right

21. The President sometimes pardons the victims who have been destined to be sent to gas chamber.

- I. The President is more kind-hearted than the judges.  
II. The President is constantly interfering with law.

22. After the bomb blasts, the citizens of Mumbai declared that they were not afraid of terrorist activities.

- I. They knew that all the persons involved in such disgraceful activity would be caught by the police.  
II. They are a brave lot and do not believe in giving up or losing confidence if anti-social elements try to frighten them.

23. Volunteers often offer their services for scientific and medical experiments that may prove harmful or even fatal.

- I. They do not give importance to their life where advancement of science and help to humanity is concerned.  
II. They are confident that the scientists would somehow save them.

24. Some species of birds are on the verge of extinction.

- I. They are being constantly hunted.  
II. Pollution and destruction of forests have affected their breeding process.

25. Pesticides are responsible for causing different diseases in human beings, because

- I. They contain some or the other type of poison that kills worms and pests but affects the plants adversely.  
II. Poisons are harmful to human beings too.

**Directions (26-30) :** In each question below are given two statements followed by four conclusions numbered I, II, III and IV. You have to take the two given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/follow from the two given statements disregarding commonly known facts.

26. **Statements :**

- Some men are home-makers.  
Some home-makers are women.

**Conclusions :**

- I. Some men are women.  
II. Some women are men.  
III. All women are home-makers.  
IV. All home-makers are men.  
(1) All follow  
(2) None follows  
(3) Only I and III follow  
(4) Only II and IV follow.

27. **Statements :**

- All scholars are teachers.  
Some teachers are researchers.

**Conclusions :**

- I. All scholars are researchers.  
II. Some scholars are researchers.  
III. Some researchers are teachers.  
IV. Some teachers are scholars.  
(1) None follows  
(2) Only III and IV follow  
(3) All follow  
(4) Only III follows.

28. **Statements :**

- Some men are boys.  
No boy is a woman.

**Conclusions :**

- I. No man is woman  
II. No boy is man  
III. Some men are women  
IV. Some boys are men.  
(1) All follow  
(2) None follows  
(3) Only IV and either I or III follow  
(4) Only I and III follow

**29. Statements :**

No Manager is a teacher.  
All teachers are researchers.

**Conclusions :**

- I. No researcher is a teacher.
- II. No researcher is a manager.
- III. Some teachers are researchers.
- IV. Some researchers are teachers.

- (1) None follows
- (2) All follow
- (3) Only II follows
- (4) Only III and IV follow

**30. Statements :**

All houses are rooms.  
All rooms are windows.

**Conclusions :**

- I. All windows are rooms.
  - II. All rooms are houses.
  - III. All houses are windows.
  - IV. Some windows are houses.
- (1) None follows
  - (2) Only I and II follow
  - (3) Only III and IV follow
  - (4) Only II follows

**Directions (31-35) :** A letter/

letter combination arrangement machine when given an input of letters/letter combinations rearranges them following a particular rule in each step. The following is an illustration of the input and the steps of rearrangement.

Input : Going but for crept te light sir

Step I : Crept going but for te light sir

Step II : Crept going light but for te sir

Step III : Crept going light but for sir te

(Step III is the last step for this input.)

As per the rules followed in the above steps, find out in the given questions the appropriate step for the given input.

**31. Input :** the in car as he may me

Which of the following will be the third step for this input ?

- (1) car the in as he may me
- (2) car may the as in he me

(3) car as may he the in me

(4) car may the in as he me

**32.** If the second step of an input is 'clever remand window sales batch tiger never' which of the following steps would be last step of that input ?

- (1) IV
- (2) V
- (3) VI
- (4) VII

**33.** If the input is 'true se veto be nuke my like,' which of the following will be the IV step ?

- (1) veto true nuke like se be my
- (2) be my se like true veto nuke
- (3) like nuke true veto be se my
- (4) be my like se true veto nuke

**34.** Input : 'more fights cats cough sough acts idea'.

Which of the following steps would be the last step for this input ?

- (1) IV
- (2) V
- (3) VI
- (4) VII

**35.** In how many steps the following input be fully arranged ?

Input : amis goes to the bar after dinner everyday

- (1) Four
- (2) Five
- (3) Six
- (4) Seven

**Directions (36-40) :** Read the following information carefully and answer the questions given below it :

(i)  $P \alpha Q$  means Q is to the right of P at a distance of one metre.

(ii)  $P \beta Q$  means Q is to the North of P at a distance of one metre

(iii)  $P \gamma Q$  means Q is to the left of P at a distance of one metre.

(iv)  $P \eta Q$  means Q is to the South of P at a distance of one metre.

(v) In each of the following questions all persons face South.

**36.** If  $A \eta B \gamma L \beta K$ , then K is in which direction with respect to A ?

- (1) South
- (2) East
- (3) North
- (4) West

**37.** If  $G \alpha I \eta R \alpha M$ , then M is in which direction with respect to I ?

(1) North-East

(2) North-West

(3) South-East

(4) South-West

**38.** If  $\alpha B \gamma C \beta D$ , then D is in which direction with respect to A ?

- (1) North
- (2) South
- (3) East
- (4) West

**39.** If  $R \beta L \eta S \alpha N \gamma F$ , then N is in which direction with respect to L ?

- (1) South
- (2) South-West
- (3) North
- (4) North-East

**40.** If  $A \gamma F \beta G \gamma T \beta Q$ , then Q is in which direction with respect to A ?

- (1) South-East
- (2) South-West
- (3) North-East
- (4) North-West

**Directions (41-45) :** Choose the odd numerical pair in each of the following questions :

**41.** (1) 13 - 22 (2) 24 - 76

(3) 16 - 52 (4) 17 - 62

**42.** (1) 6 - 16 (2) 18 - 48

(3) 21 - 56 (4) 27 - 76

**43.** (1) 39 - 77 (2) 51 - 119

(3) 33 - 88 (4) 52 - 91

**44.** (1) 26 - 4 (2) 226 - 14

(3) 274 - 16 (4) 82 - 8

**45.** (1) 2 - 4 (2) 4 - 8

(3) 6 - 18 (4) 8 - 32

**Directions (46 - 50) :** Read the information given below and then answer the questions that follow :

An Insurance Agent must schedule his appointment with eight clients A, B, C, D, E, F, G and H during one week, Monday through Friday. He must schedule two appointments for Monday, Tuesday and Wednesday each, and one each for Thursday and Friday.

He must see C on Thursday.

He must see B on a day before the day on which he sees D.

He must see E on a day before the day on which he sees G.



He must see A on a day before the day on which he sees G.

He must see F and A on the same day.

46. If the Insurance Agent sees D and G on the same day, which of the following is a complete and accurate listing of the days on which he could see them ?

- (1) Monday
- (2) Tuesday
- (3) Wednesday
- (4) Monday and Wednesday

47. If he sees F on Wednesday, which of the following must be true ?

- I. He sees D on Tuesday.
- II. He sees H on Monday.
- III. He sees G on Friday.

- (1) I only
- (2) III only
- (3) I and III only
- (4) II and III only

48. If the Insurance Agent sees D on Tuesday, then which of the following must be true ?

- (1) He sees E on Monday.
- (2) He sees F on Tuesday.
- (3) He sees H on Friday.
- (4) He sees G on Friday.

49. Which of the following, if true, provides sufficient additional information to determine on which day each client will have his appointment ?

- (1) H's appointment is scheduled for Monday.
- (2) B's appointment is scheduled for Tuesday.
- (3) B's appointment is two days before D
- (4) F's appointment is two days before B.

50. Which of the following is an acceptable schedule for the week's appointments ?

- |                            |      |      |       |      |
|----------------------------|------|------|-------|------|
| Mon.                       | Tue. | Wed. | Thur. | Fri. |
| (1) B, H, D, G, F, A       | C    | E    |       |      |
| (2) B, H, D, E, F, A       | C    | G    |       |      |
| (3) B, D, H, G, E, C, F, A |      |      |       |      |
| (4) G, B, D, E, F, H, C, A |      |      |       |      |

**Directions (51-55) :** In all the questions that follow, different symbols have been used with dif-

ferent meanings. For each set of questions you have to assume given statements to be true and then decide which of the two conclusions is/are definitely true.

**Give answer (1)** If only conclusion I is true.

**Give answer (2)** If only conclusion II is true.

**Give answer (3)** If either conclusion I or II is true.

**Give answer (4)** If both are true.

The symbols +, -, x, + and = are used with the following meanings :

$P + Q$  means P is greater than Q.

$P - Q$  means P is greater than or equal to Q.

$P \times Q$  means P is equal to Q.

$P + Q$  means P is smaller than Q.

$P = Q$  means P is either smaller than or equal to Q.

- 51. Statements :**  
 $M \times X, L + O, N + M, L = X$

**Conclusions :**  
 I.  $N + L$  II.  $X + O$

- 52. Statements :**  
 $S = F, K + S, B \times K, R + B$

**Conclusions :**  
 I.  $F + K$  II.  $K + R$

- 53. Statements :**  
 $H = V, A \times Z, H - Z, F + V$

**Conclusions :**  
 I.  $A \times H$  II.  $H + A$

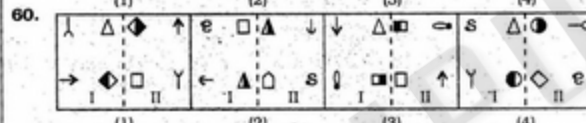
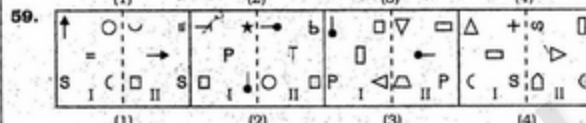
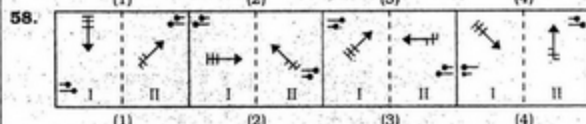
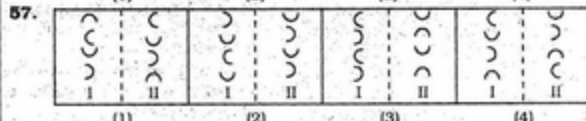
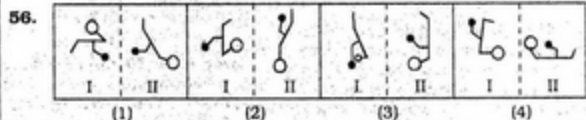
- 54. Statements :**  
 $I + O, R - I, Z \times R, J + Z$

**Conclusions :**  
 I.  $Z \times I$  II.  $Z + I$

- 55. Statements :**  
 $Q + R, C + D, F - R, D \times F$

**Conclusions :**  
 I.  $Q + C$  II.  $C + F$

**Directions (56 - 60) :** In each of the following questions, in three out of the given four pairs of figures, the first element is related to the second element in the same particular manner. Spot out the pair in which this relationship does not exist between the figures.



## ENGLISH LANGUAGE

**Directions (61 - 64) :** In each of the following sentences four words or phrases have been printed in **bold**. One **bold** part in each sentence is not acceptable in standard English. Pick up that part and mark its number.

61. The government **initiated** (1) various **measure** (2) to **raise** (3) the living **standards** (4) of the people.
62. **Most of the critics** (1) agree that **this is one of** (2) the best novels **that has** (3) appeared **in recent years.**(4)
63. If (1) any one cares **to join** (2) me in this campaign, **either** (3) now or in future **they** (4) are most welcome.
64. The **reason** (1) for my **prolonged** (2) **absence** (3) from the class was **because** (4) I was ill.

**Directions (65-68) :** Fill in the blanks with the most appropriate words.

65. He was given a good ..... when he left for America.  
(1) take off (2) send off  
(3) brush off (4) breakoff
66. It would be difficult for one so ..... to be led to believe that all men are equal and that we must disregard race, colour and creed.  
(1) emotional (2) democratic  
(3) intolerant (4) obsolete
67. The failing ..... of the enemy helped to shorten the war.  
(1) moral (2) morale  
(3) hold (4) discipline
68. This island is a colony of British, but in most matters it is ..... and receives no orders from the mother country.  
(1) submissive  
(2) distant (3) aloof  
(4) autonomous

**Directions (69-72) :** Each question below consists of a related pair of words followed by four pairs of words. Select the pair that best expresses the relationship similar to the original pair.

69. **Poor : Wealth :**

- (1) Calorific : Heat  
(2) Affluent : Health  
(3) Emaciated : Obesity  
(4) Honest : Truth

70. **Starey : Glance ::**

- (1) Scorn : Admire  
(2) Hunt : Stalk  
(3) Gulp : Sip  
(4) Confide : Tell

71. **Storey : Building ::**

- (1) Plot : Outline  
(2) Rung : Ladder  
(3) Câble : Elevator  
(4) Foundation : Skyscraper

72. **Doctor : Disease ::**

- (1) Moron : Imbecility  
(2) Paediatrician : Senility  
(3) Broker : Stocks  
(4) Psychiatrist : Maladjustment :

**Directions (73-76) :** In the following questions choose the alternative which best expresses the meaning of the given word.

73. **Clandestine**

- (1) Secret (2) gloomy  
(3) partial (4) cautious

74. **Gratify**

- (1) devour (2) grant  
(3) grab (4) satisfy

75. **Credible**

- (1) worthy (2) believable  
(3) noticeable (4) careful

76. **Despicable**

- (1) contemptible  
(2) faithless  
(3) desperate  
(4) undesirable

**Directions (77-80) :** Choose the word which is opposite in meaning to the given word.

77. **LUSCIOUS**

- (1) fickle (2) insipid  
(3) languid  
(4) deteriorating

78. **UNDULATING**

- (1) flat (2) ups  
(3) steep  
(4) gradual

79. **SUPERFICIAL**

- (1) shallow (2) deep  
(3) real (4) artificial

80. **SUPPRESS**

- (1) stimulate (2) lengthen  
(3) abandon (4) smother

**Directions (81 - 84) :** In the following questions the word at the top is used in four different ways. Choose the option in which the usage of the word is *incorrect* or *inappropriate*.

81. **PUSH**

- (1) The manufacturers are really pushing this new shampoo.  
(2) He has difficulty pushing his feelings into words.  
(3) We should be able to move this table if we push it together.  
(4) She pushed through the crowd saying that she was a doctor.

82. **LINE**

- (1) Our telephone line is down due to the heavy rain last night.  
(2) The students were standing in a line for the morning prayer.  
(3) His coat is lined with silk.  
(4) The teacher cut off his name from the line of scholarship awardees.

83. **FAR**

- (1) She is clever and intelligent and will go far in her life.  
(2) We went for a drive but we couldn't go far.  
(3) I can't remain without far for a long time.  
(4) So far everything has gone well with our theatre.

84. **MASTER**

- (1) She could not master the courage to tell her friend about her loss.  
(2) She quickly mastered the art of interviewing people.  
(3) The terrorist was a master of disguise.  
(4) He is the master of his house.

**Directions (85 - 88) :** Fill in the blanks with appropriate alternative.

85. Vijay asked me .....  
(1) why didn't you go to London?

- (2) why I didn't go to London ?  
 (3) why didn't I go to London ?  
 (4) why you didn't go to London ?

86. To answer accurately is more important than .....  
 (1) a quick finish  
 (2) finish quickly  
 (3) finishing quickly  
 (4) you finish quickly
87. Even after repeated warnings, Mr. Iswari Prasad ..... to office on time.  
 (1) comes never  
 (2) never comes  
 (3) is never coming  
 (4) have never come
88. This is ..... of such atrocious behaviour.  
 (1) my first time of hearing  
 (2) the first time that I have heard  
 (3) the first time of my hearing  
 (4) the first time of the hearing

**Directions (89-91) :** In the following questions, a sentence is given in active voice. Find the correct passive voice version from the given alternatives.

89. Someone had locked the class-room.  
 (1) The class-room is locked.  
 (2) The class-room was being locked.  
 (3) The class-room has been locked.  
 (4) The class-room had been locked.
90. We justly rebuked him for acting so selfishly.  
 (1) He has justly rebuked for selfishness.  
 (2) He was justly rebuked by us for acting so selfishly.  
 (3) He has been justly rebuked by us for acting so selfishly.  
 (4) He has rebuked by us for acting so selfishly.
91. That remark has wounded my feelings.  
 (1) My feelings have been wounded by that remark.  
 (2) My feelings has been wounded by that remark.

- (3) My feelings was wounded by that remark.  
 (4) My feelings were wounded by that remark.

**Directions (92 - 95) :** In the following sentences replace the words printed in **bold** with the appropriate expression from the given alternatives.

92. A committee has been **established** to select the cricket team.  
 (1) set up (2) set off  
 (3) set out (4) set about
93. The chief guest **distributed** the certificates to the players of the winning team.  
 (1) gave off (2) gave up  
 (3) gave away (4) gave in
94. Our office has been **decorated** for the Chief minister's visit.  
 (1) done for (2) done over  
 (3) done with (4) done up
95. He is always **prominent** in a crowd because of his height.  
 (1) stands out (2) looks out  
 (3) stands up (4) looks up

**Directions (96-100) :** Read the following passage and answer the questions given after it.

Throughout the extensive areas of the tropics the tall and stately primeval forest has given, way to eroded land, scrub, and the jumble of secondary growth. Just as the virgin forests of Europe and North America were laid low by man's improvidence, so those of the tropics are now vanishing - only their destruction may be encompassed in decades instead of centuries. A few authorities hold that, except for government reserves, the earth's great rain forest may vanish within a generation. The economic loss will be incalculable, for the primary rain forests are rich sources of timber (mahogany, teak) and such by-products as resins, gums, cellulose, camphor and rattans. No one, indeed, can compute their resources, for the thousands of species that compose the forest cover, there are only a few whose physical and chemical properties have been studied with a view to commercial use.

Most important of all, the primeval rain forest is a reservoir of specimens, a dynamic centre of evolution whence the rest of the world's plant life has been continuously enriched with new forms. These extensive reserves must be defended from the acquisitive hand of man, whose ruthless axe would expose them to the ravages of sun and rain.

96. According to the passage, the primary reason for conservation of the great rain forests is that they are  
 (1) the chief source of income of governments.  
 (2) areas of botanical evolution.  
 (3) major sources of materials for chemical industries.  
 (4) not ready for man's ruthless axe.
97. The word 'primeval' in paragraph two means  
 (1) first in importance  
 (2) commercial (3) gorgeous  
 (4) untouched
98. The ideas of the author would probably be the most strongly supported by  
 (1) lumber company representatives  
 (2) conservationists and botanists  
 (3) chemical manufacturers  
 (4) government representatives
99. According to the passage, the result of chopping down the tropical rain forest is  
 (1) an increase in government reserves.  
 (2) a surge in plant evolution.  
 (3) damage to the soil.  
 (4) a decrease of commercial exploitation.
100. 'Only their destruction may be encompassed in decades instead of centuries' means that the destruction of forests  
 (1) will take only a few decades.  
 (2) will happen in this century.  
 (3) will be surely by the next century.  
 (4) will take place in a decade.



## NUMERICAL ABILITY

101. The value of

$$\sqrt[3]{24 - 16\sqrt{2}} \times \sqrt[3]{4 + 2\sqrt{2}} \text{ is}$$

(1)  $\sqrt[3]{2}$                       (2)  $\sqrt[3]{2}$

(3)  $\sqrt{2}$                       (4) 2

102.  $\frac{1}{2} + \frac{1}{5} + \frac{1}{8} + \frac{1}{11} + \frac{1}{20} + \frac{1}{41} + \frac{1}{110} + \frac{1}{1640}$  is equal to

(1) 0.97                      (2) 0.99

(3) 1                              (4) 1.23

103. The first 44 positive integers are written in an order to form a larger number

$N = 1\ 2\ 3\ 4\ 5\ 6\ 7\ 8\ 9\ 10\ 11\ 12$   
..... 42 43 44

when  $N$  is divided by 45, then the remainder is

(1) 5                              (2) 7

(3) 9                              (4) 11

104. When a natural number  $N$  is divided by 5, the remainder is 2, when divided by 7, the remainder is 3, when divided by 9, the remainder is 4. If  $N$  is the smallest number, then the sum of the digits of  $N$  is

(1) 7                              (2) 8

(3) 11                              (4) 13

105. In the sum below,  $F = 0$ , and the other letters represent the digits 1, 2, 3, 4, 5, or 6, with each digit used exactly once and the two digit number  $AB$  is a prime number.

$$\begin{array}{r} AB \\ + CD \\ \hline EFG \end{array}$$

Then the value of  $A + 2B$  is

(1) 10                              (2) 8

(3) 7                              (4) 9

106. Which of the following is the largest?

(1)  $10000^{100}$                       (2)  $2^{10000}$

(3)  $1000^{1000}$                       (4)  $3^{1000}$

107. A sum of three non-zero numbers is eight times the first number, three times the second number and  $p$  times the third number. The value of  $p$  is

(1)  $\frac{11}{24}$                               (2)  $\frac{24}{13}$

(3)  $\frac{24}{11}$                               (4)  $\frac{13}{24}$

108. Unit's digit of  $(7^{777} + 777777)$  is

(1) 0                              (2) 4

(3) 1                              (4) 7

109. Which one of the following does not divide  $(2^{1000} - 1)$ ?

(1)  $3^7$                               (2) 7

(3) 127                              (4) 2047

110. HCF of three numbers 3240, 3600 and  $p$  is 36. If their LCM is  $2^4 \times 3^5 \times 5^2 \times 7^2$ , then the number  $p$  is

(1)  $2^2 \times 5^2 \times 7^2$

(2)  $3^2 \times 5^2 \times 7^2$

(3)  $2^2 \times 3^2 \times 7^2$

(4)  $2^2 \times 3^2 \times 7^2$

111. Fresh cherries contain 99% water. Suppose you have 1 kg of fresh cherries. After a few hours in the sun, some water evaporates and the percentage of water in the cherries becomes 98%. The new weight (in g) of cherries is

(1) 750                              (2) 700

(3) 600                              (4) 500

112. To  $x$  litres of an  $x\%$  solution of acid,  $y$  litres of water is added to get  $(x-10)\%$  solution of acid. If  $x > 20$ , then value of  $y$  is

(1)  $\frac{x^2}{100}$                               (2)  $\frac{10x}{x-10}$

(3)  $\frac{10x}{x+10}$                               (4)  $\frac{10x^2}{x-10}$

113. A and B are two alloys of gold and copper prepared by mixing metals in the ratio 7 : 2 and 7 : 11 respectively. If equal quantities of the alloys are melted to form a third alloy C, the ratio of gold and copper in C will be :

(1) 5 : 7                              (2) 5 : 11

(3) 7 : 5                              (4) 9 : 11

114. The price of a diamond is proportional to the square of its

mass, which is measured in carats. A 6 carat diamond was broken into two parts and total price of the two pieces is  $\frac{5}{8}$  of the price of original dia-

mond. The masses (in carat) of two pieces are

(1) 3.5 and 2.5

(2) 5 and 1

(3) 4.5 and 1.5

(4) 3.2 and 2.8

115. In a mathematics examination, the average score of students who passed is  $x$  and those who failed is  $y$ . If the average score of all the students who appeared in the examination is  $z$ , then the percentage of students who failed was

(1)  $\frac{100xy}{z^2}$                               (2)  $\frac{100(y-z)}{x-y}$

(3)  $\frac{100(x-y)}{x-z}$                               (4)  $\frac{100(x-z)}{x-y}$

116. Height of a cylindrical jar is decreased by 36%. By what per cent must the radius be increased so that there is no change in its volume?

(1) 25                              (2) 35

(3) 36                              (4) 40

117. A person can row a boat  $d$  km upstream and the same distance downstream in  $\frac{5}{4}$

hours. Also he can row the boat  $2d$  km upstream in 7 hours. He will row the same distance downstream in

(1)  $3\frac{1}{2}$  hours                              (2)  $3\frac{1}{4}$  hours

(3)  $4\frac{1}{4}$  hours                              (4) 4 hours

118. Surface area of a cuboid is 24  $\text{cm}^2$  and the sum of the lengths of all its edges is 24 cm. Length of each diagonal of the cuboid (in cm) is

(1)  $\sqrt{11}$                               (2)  $\sqrt{13}$

(3)  $\sqrt{14}$                               (4)  $\sqrt{15}$

119. An equilateral triangle and a regular hexagon have equal perimeters. The ratio of the area of the triangle and that of the hexagon is

(1) 1 : 1 (2) 2 : 3  
(3) 3 : 2 (4) 3 : 4

120. A can walk a certain distance in 20 days when he rests 8 hours a day. How long will he take to walk twice the distance, twice as fast and rests twice as long each day?

(1) 40 days (2) 60 days  
(3) 80 days (4) 100 days

121. A person leaves a place A to place B at 6 a.m. and reaches place B at 10 a.m. Another

person leaves B at 7.30 a.m. and reaches A at 11 a.m. They will meet each other at

(1) 7.40 a.m. (2) 8.20 a.m.  
(3) 8.40 a.m.  
(4) 9.20 a.m.

122. The mean of  $n$  observations is

$\bar{x}_1$ . If the first observation is increased by 1, second by 2, and so on, then their mean is  $\bar{x}_2$ . The value of  $\bar{x}_2 - \bar{x}_1$  is

(1)  $n$  (2)  $\frac{n}{2} + 1$   
(3)  $\frac{n(n+1)}{2}$  (4)  $\frac{(n+1)}{2}$

(1) 46 (2) 50  
(3) 72 (4) 92

126. The ratio of imports and exports of country B in 2007 was what per cent more than that for A in 2004?

(1) 26.7 (2) 42.8  
(3) 90 (4) 120

129. In which of the following years was the value of exports less than the value of imports in the case of country B?

(1) 2010 (2) 1998  
(3) 1999 (4) 1997

130. If the exports of country A in 2007 and imports of B in 2008 were Rs. 15 million and 10 million respectively, then the ratio of imports of A in 2007 to exports of B in 2008 was

(1) 8 : 9 (2) 9 : 8  
(3) 2 : 3 (4) 3 : 2

**Directions (123–126) :** Study the following table and answer the questions.

City	Population	Sex		Literacy	
	(in lakhs)	Male	Female	Literate	Illiterates
A	110	6	5	4	7
B	100	3	2	2	5
C	95	2	3	3	2
D	50	12	13	4	1
E	60	8	7	5	1
F	45	4	5	5	4
G	40	5	3	5	3

123. The total number (in lakhs) of the illiterates in cities A and F is

(1) 60 (2) 65  
(3) 90 (4) 95

124. Total illiterates in city E is approximately what percent of total literates in city C?

(1) 17.5 (2) 19  
(3) 26.3 (4) 35

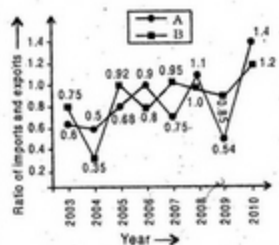
125. Ratio of total number of males in cities A and B to the total number of females in cities C, D, F and G is

(1) 41 : 40 (2) 40 : 41  
(3) 28 : 27 (4) 27 : 28

126. What is the ratio of illiterates in city D to literates in city G?

(1) 3 : 8 (2) 8 : 3  
(3) 5 : 2 (4) 2 : 5

**Directions (127–130) :** The following graph shows the ratio of imports to exports of two countries A and B in different years.



127. If the imports of country A in 2005 and the exports of country B in 2010 were Rs. 3.4 million and Rs. 8 million respectively, the imports of B in 2010 was what per cent more than the exports of A in 2005?

**GENERAL AWARENESS**

131. Government of India launched the Jawaharlal Nehru National Urban Renewal Mission in

(1) 2002 (2) 2005  
(3) 2007 (4) 2010

132. When is National Energy Conservation Day celebrated?

(1) 16th August  
(2) 5th September  
(3) 10th November  
(4) 14th December

133. Which of the Cup / Trophies is associated with the game of Football?

(1) SAFF Cup  
(2) Deodhar Trophy  
(3) Indira Gandhi Gold Cup  
(4) Wimbledon Trophy

134. According to Transparency International Corruption Perception Index, 2011, what is India's rank amongst 183 countries?

(1) 91 (2) 93  
(3) 95 (4) 97

135. Many times we read a term DoT in various newspapers in connection with 2G Spectrum. What is its full form?

(1) Directorate of Technology  
(2) Directorate of Tele Services



- (3) Department of Transport  
(4) Department of Telecom
136. Which of the following books is written by Sunil Gavaskar ?  
(1) A Brief History of Time  
(2) A Sense of Time  
(3) Sunny Days  
(4) Great Expectations
137. Which of the following international events is associated with the game of Car Racing ?  
(1) Singapore Grandprix  
(2) Dubai Open  
(3) Twenty-20  
(4) FIFA World Cup
138. For training troops in counter terrorist operations and for enhancing defence cooperation and military relations, which country held Joint-Military Training Exercise, SHAKTI-2011 with India?  
(1) Sri Lanka (2) USA  
(3) France (4) UK
139. Which country has test fired nuclear capable Hatf-7 cruise missile ?  
(1) Japan (2) China  
(3) Russia (4) Pakistan
140. In which year Dadasaheb Phalke Award was instituted ?  
(1) 1965 (2) 1969  
(3) 1972 (4) 1974
141. Iron Lady 'Iron Chanu Sharmila' belongs to  
(1) Arunachal Pradesh  
(2) Nagaland  
(3) Meghalaya  
(4) Manipur
142. Which state has topped in India's Child Right Index, 2011 ?  
(1) Karnataka  
(2) Kerala  
(3) Gujarat  
(4) Maharashtra
143. India celebrated its ..... Republic Day on January, 26, 2012.  
(1) 61st (2) 62nd  
(3) 63rd (4) 64th
144. The maximum weight in the revised whole sale price index implemented from September, 2010 is given to which of the

following items ?

- (1) Food items  
(2) Manufactured items  
(3) Fuel  
(4) Primary articles
145. Which blood vessel in human body, normally carries the urea ?  
(1) Hepatic Vein  
(2) Portal Vein  
(3) Dorsal Aorta  
(4) Renal Vein
146. The Directive Principles of State Policy were adopted from the  
(1) British Constitution  
(2) Irish Constitution  
(3) U.S. Constitution  
(4) Swiss Constitution
147. Where was electricity first introduced on a commercial scale in India ?  
(1) Kolkata (2) Mumbai  
(3) Chennai (4) Darjeeling
148. 'Yang in Yin' formed the basis of Chinese  
(1) Medicine (2) Philosophy  
(3) Religion (4) Astronomy
149. Virgin Forests are located in  
(1) Assam (2) Gujarat  
(3) Kerala (4) Mizoram
150. This State contributes 70% of India's coffee and silk. Name this state :  
(1) Karnataka (2) Assam  
(3) Rajasthan (4) Punjab

## ANSWERS

1.(3)	2.(4)	3.(2)	4.(4)
5.(3)	6.(3)	7.(3)	8.(1)
9.(4)	10.(2)	11.(2)	12.(1)
13.(3)	14.(4)	15.(1)	16.(3)
17.(2)	18.(3)	19.(2)	20.(4)
21.(4)	22.(3)	23.(1)	24.(2)
25.(3)	26.(2)	27.(2)	28.(3)
29.(4)	30.(3)	31.(2)	32.(1)
33.(3)	34.(3)	35.(2)	36.(2)
37.(4)	38.(1)	39.(2)	40.(4)
41.(2)	42.(4)	43.(1)	44.(3)
45.(3)	46.(3)	47.(3)	48.(4)

49.(4)	50.(2)	51.(1)	52.(4)
53.(3)	54.(3)	55.(4)	56.(3)
57.(2)	58.(1)	59.(2)	60.(2)
61.(2)	62.(3)	63.(3)	64.(4)
65.(2)	66.(3)	67.(2)	68.(4)
69.(3)	70.(3)	71.(2)	72.(3)
73.(1)	74.(4)	75.(2)	76.(1)
77.(2)	78.(1)	79.(2)	80.(1)
81.(2)	82.(4)	83.(3)	84.(1)
85.(2)	86.(2)	87.(2)	88.(2)
89.(4)	90.(2)	91.(1)	92.(1)
93.(3)	94.(4)	95.(1)	96.(3)
97.(3)	98.(2)	99.(3)	100.(1)
101.(4)	102.(3)	103.(3)	104.(4)
105.(1)	106.(2)	107.(2)	108.(1)
109.(3)	110.(3)	111.(4)	112.(2)
113.(3)	114.(3)	115.(4)	116.(1)
117.(1)	118.(3)	119.(2)	120.(1)
121.(3)	122.(4)	123.(3)	124.(1)
125.(2)	126.(4)	127.(4)	128.(3)
129.(1)	130.(2)	131.(2)	132.(4)
133.(1)	134.(3)	135.(4)	136.(3)
137.(1)	138.(3)	139.(4)	140.(2)
141.(4)	142.(2)	143.(3)	144.(2)
145.(2)	146.(2)	147.(4)	148.(2)
149.(3)	150.(1)		

## EXPLANATIONS

1. (3) The common letters in VI-BRANT and RENT are RNT. Therefore, RNT  $\Rightarrow$  w s p  
Now, E  $\Rightarrow$  m  
T  $\Rightarrow$  p  
A  $\Rightarrow$  f  
h and g may be codes for X and L.
2. (4)  
C R A F T  $\Rightarrow$  q w x n g  
F A T H E R  $\Rightarrow$  p x q w k n  
Therefore, C  $\Rightarrow$  g  
The code for SCRIPT  $\Rightarrow$  l n q g v f
3. (2) D E C C O U R  $\Rightarrow$  j p s t e a  
S C Q P E  $\Rightarrow$  h s l m p  
P  $\Rightarrow$  h or m