



# TARA INSTITUTE

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## TEST ST

**Time Allowed: 90 MINUTES**  
**Maximum Marks: 100**

**NAME:** \_\_\_\_\_

**MARKS OBTAINED :** \_\_\_\_\_

**EXAM CENTRE. :** \_\_\_\_\_

**REMARKS :** \_\_\_\_\_

### REASONING ABILITY

**Directions: In questions no. 1 to 9, select the related letters/word/number from the given alternatives.**

- Supervisor : Worker :: ?  
(A) Junior : Senior (B) Elder : Younger  
(C) Debtor : Creditor (D) Officer : Clerk
- Thunder : Rain :: Night : ?  
(A) Day (B) Dusk  
(C) Darkness (D) Evening
- ACE : HIL :: MOQ : ?  
(A) XVT (B) TVX  
(C) VTX (D) TUX
- NUMBER : UNBMER :: GHOST : ?  
(A) HOGST (B) HOGTS  
(C) HGOST (D) HGSOT
- 11 : 17 :: 19 : ?  
(A) 29 (B) 27  
(C) 23 (D) 21
- Court : Justice :: School : ?  
(A) Teacher (B) Student  
(C) Ignorance (D) Education
- Breeze : Cyclone :: Drizzle : ?  
(A) Earthquake (B) Storm  
(C) Flood (D) Downpour
- Oxygen : Burn :: Carbon dioxide : ?  
(A) Isolate (B) Foam  
(C) Extinguish (D) Explode
- Teheran : Iran :: Beijing : ?  
(A) China (B) Japan  
(C) Turkey (D) Malaysia

**Directions: In question no. 10 to 15, find the odd number / letters / word from the given alternatives.**

- (A) Wood (B) Cork  
(C) Stone (D) Paper
- (A) FBI (B) QMT  
(C) VRY (D) HEK
- (A) BCD (B) NPR  
(C) KLM (D) PQR
- (A) CJG (B) HNK  
(C) ELI (D) JQN
- (A) 248 (B) 326  
(C) 414 (D) 392
- (A) Mango (B) Apple  
(C) Brinjal (D) Grapes
- In a certain code 'ni tim si' means 'How are you'; 'ble ni si' means 'where are you', then which of the following word is used for 'where'?  
(A) ni (B) tim  
(C) si (D) None of these
- In a certain code, SUBSTITUTION is written as ITSBUSNOITUT. How is DISTRIBUTION written in that code?  
(A) IRTSIDNOITUB (B) IRTSIDNOIBUT  
(C) IRTDISNOITUB (D) IRTDISNOIUTB
- Arrange the words given below in a meaningful sequence.  
1. Mother 2. Child 3. Milk 4. Cry 5. Smile  
(A) 1, 5, 2, 4, 3  
(B) 2, 4, 1, 3, 5  
(C) 2, 4, 3, 1, 5  
(D) 3, 2, 1, 5, 4

19. If it is possible to make a meaningful word with the second, the fifth and the eighth letters of the word 'CARETAKER', which of the following will be the first letter of that word? If no such word can be made, give X as answer. If more than one such word can be made, give M as the answer.
- (A) A (B) E  
(C) X (D) M
20. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
- bca \_ b \_ aabc \_ \_ a \_ \_ caa
- (A) acab (B) bobb  
(C) cbab (D) ccab
- Directions: In questions no. 21 to 24, a series is given, with one/two term(s) missing. Choose the correct alternative**
21. D I L Q T Y B G ?
- (A) H (B) I  
(C) J (D) P
22. 3, 15, 4, 16, 5, 17, 6, ?, 7
- (A) 12 (B) 18  
(C) 15 (D) 13
23. 240, ?, 120, 40, 10, 2
- (A) 480 (B) 240  
(C) 220 (D) 120
24. BC FG JK ?? RS VW
- (A) LM (B) OP  
(C) QR (D) NO
25. Reena is twice as old as Sunita. Three years ago, she was three times as old as Sunita. How old is Reena now?
- (A) 6 years (B) 7 years  
(C) 8 years (D) 12 years
26. Anil, introducing a girl in a party, said, she is the wife of the grandson of my mother. How is Anil related to the girl?
- (A) Father (B) Grandfather  
(C) Husband (D) Father-in-law
27. A man said to a woman, "Your mother's husband's sister is my aunt." How is the woman related to the man?
- (A) Granddaughter (B) Daughter  
(C) Sister (D) Aunt
28. If  $A + B$  means A is the brother of B;  $A \div B$  means A is the father of B and  $A \times B$  means A is the sister of B, which of the following means M is the uncle of P?
- (A)  $N \times P \div M$   
(B)  $M + S \div R \div P$   
(C)  $M \div N \times P$   
(D)  $M + K \div T \times P$
29. Find the wrong number in the series.
- 7, 28, 63, 124, 215, 342, 511
- (A) 7 (B) 28  
(C) 124 (D) 215
30. From her home, Purna wishes to go to school. From home, she goes towards North and then turns left and then turns right, and finally she turns left and reaches school. In which direction her school is situated with respect to her home?
- (A) North - East (B) North - West  
(C) South - East (D) South - West
31. One day, Ravi left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometres will he have to cycle to reach his home straight?
- (A) 10 km (B) 15 km  
(C) 20 km (D) 25 km
32. In a cricket season, India defeated Australia twice, West Indies defeated India twice, Australia defeated West Indies twice, India defeated New Zealand twice and West Indies defeated New Zealand twice. Which country has lost number of times?
- (A) India (B) Australia  
(C) New Zealand (D) West Indies
33. Vijay's position is 14th from upwards in a class of 43 students. What will be his position from downwards?
- (A) 30th (B) 28th  
(C) 29th (D) 31st
34. In a line of students Madhukar is on 15th position from right and Dharendra is on 18th position from left. When they both interchange their positions then Madhukar is on 20th position from right. What will be the position of Dharendra from left?
- (A) 18th (B) 24th  
(C) 23rd (D) 20th
35. In a class of 45 students, among those students who passed, Anmol secured 11th position from upwards and 15th from downwards. How many students failed?
- (A) 19 (B) 20  
(C) 15 (D) 18



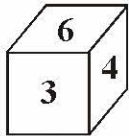
36. A statement is given followed by four alternative arguments. Select the alternative which is most appropriate.

Statement:

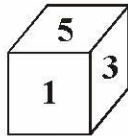
Should the consumption of aerated drinks be banned in India?

Arguments:

- I. Yes. This is the only way to reduce the risk of exposing people to some diseases.
  - II. No. Each individual should have right to choose what he wants.
  - III. No. There is no confirmed evidence that such products have adverse effects on human body.
  - IV. Yes. It is banned in many other countries also.
- (A) Only I is strong  
 (B) Only I and II are strong  
 (C) Only III is strong  
 (D) Only I and IV are strong
37. On the basis of two positions of dice, find what number will be on the opposite face of number 5 ?



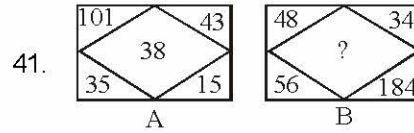
(i)



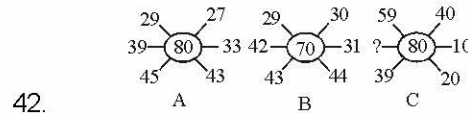
(ii)

- (A) 1 (B) 3  
 (C) 4 (D) 5
38. Find the two letters in the word EXTRA which have as many letters between them in the word as in the alphabet. If these two letters are arranged in alphabetical order which letter will come second?  
 (A) E (B) X  
 (C) T (D) R
39. If it is possible to make only one meaningful English word from the sixth, the fifth, the twelfth and the fourth letters of the word IMAGINATIONS, using each letter only once, the **second** letter of that word is your answer. If no such word can be made mark 'X' as your answer, and if more than one such word can be formed mark 'M' as your answer.  
 (A) I (B) N  
 (C) M (D) X
40. In a certain code language 'OMNIPRESENT' is written as 'QJONPTSMDRD'. How is 'CREDIBILITY' written in that code?  
 (A) JEFSDCXSHKH (B) JEFSDDXSHKH  
 (C) DSFEJDDXSHKH (D) JEFSDXDSHKH

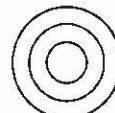
Directions: In questions no. 41 and 42, select the missing number from the given responses.



- (A) 127 (B) 142  
 (C) 158 (D) 198



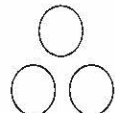
- (A) 49 (B) 50  
 (C) 60 (D) 69
43. It being given that  $>$  denotes  $+$ ,  $<$  denotes  $-$ ,  $+$  denotes  $\div$ ,  $-$  denotes  $=$ ,  $=$  denotes 'less than' and  $\times$  denotes 'greater than', find which of the following is a correct statement:  
 (A)  $3 + 2 > 4 = 9 + 3 < 1$   
 (B)  $3 > 2 > 4 = 18 + 3 < 2$   
 (C)  $3 > 2 < 4 \times 8 + 4 < 2$   
 (D)  $3 + 2 < 4 \times 9 + 3 < 3$
44. If  $3 + 5 = 16$  ;  $7 + 9 = 64$  ;  $10 + 12 = 121$ , then  $11 + 3 = ?$   
 (A) 56 (B) 48  
 (C) 49 (D) 196
45. Which diagram correctly represents the relationship between Tables, Chairs, Furniture?



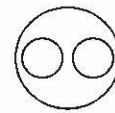
(a)



(b)

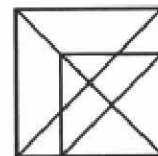


(c)



(d)

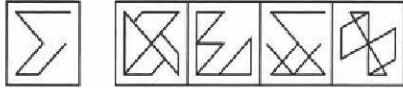
46. How many triangles are there in the following figures?



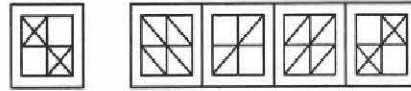
- (A) 21 (B) 22  
 (C) 19 (D) 20



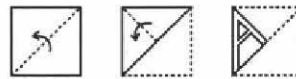
47. I have a few sweets to be distributed. If I keeps 2, 3 or 4 in a pack, I have left one sweet. If I keep 5 in a pack, I have nothing left. What is the minimum number of sweets I can have to pack and distribute?  
 (A) 25 (B) 37  
 (C) 54 (D) 65
48. From the given answer figures select the one in which the question figure hidden/embedded.
49. Which of the answer figures is the correct mirror image of the given question figure?
50. A piece of paper is folded and cut as shown in the question figures. From the given answer figures, indicate how it will appear when opened.



(A) (B) (C) (D)



(A) (B) (C) (D)



(A) (B) (C) (D)

## QUANTITATIVE APTITUDE

51. Given  $\frac{(\sqrt{x+4} + \sqrt{x-10})^2}{(x+4) - (x-10)} = \frac{5}{2}$ , find the value of x.  
 (A) 1 (B)  $\frac{331}{5}$   
 (C)  $\frac{263}{20}$  (D)  $\frac{17}{21}$
52. The value of  $\frac{(243)^{0.13} \times (243)^{0.07}}{(7)^{0.25} \times (49)^{0.075} \times (343)^{0.2}}$  is :  
 (A)  $\frac{3}{7}$  (B)  $\frac{7}{8}$   
 (C)  $1\frac{3}{7}$  (D)  $2\frac{2}{7}$
53. What is the value of  $5\frac{2}{3} \times 3\frac{1}{6} + 2\frac{1}{3} = ?$   
 (A)  $20\frac{7}{18}$  (B)  $20\frac{3}{18}$   
 (C)  $20\frac{5}{18}$  (D)  $20\frac{1}{9}$
54. How many numbers are there between 300 and 400 in which 7 occurs only once?  
 (A) 18 (B) 14  
 (C) 11 (D) 10
55. The unit's digit in the product  $(3127)^{173}$  is:  
 (A) 1 (B) 3  
 (C) 7 (D) 9
56. Three men start together to travel the same way around a circular track of 11 kms. Their speeds are 4,  $5\frac{1}{2}$ , and 8 kms per hour respectively. When will they meet at the starting point?  
 (A) 22 hrs (B) 12 hrs  
 (C) 11 hrs (D) 44 hrs
57. If  $x^{abc} = x^a x^b x^c$  and x are all positive integers, then  $a^2 + b^2 + c^2 = ?$   
 (A) 12 (B) 14  
 (C) 29 (D) cannot be determined
58. The fourth root of  $28 + 16\sqrt{3}$  is-  
 (A)  $4 + 2\sqrt{3}$  (B)  $2\sqrt{2} + \sqrt{3}$   
 (C)  $\sqrt{3} + 1$  (D)  $\sqrt{3} - \sqrt{2}$
59. What should come in place of the question mark (?) in the following equation?  
 $47^{7.5} \div 47^{3/2} \times 47^{-3} = (\sqrt{47})^?$   
 (A) 3 (B)  $2\frac{1}{2}$   
 (C) 6 (D) 3.5



60. The difference between a two-digit number and the number obtained by interchanging the position of the digits of the number is 27. What is the difference between the digits of that number?  
 (A) 2 (B) 3  
 (C) 4 (D) Cannot be determined
61. The sum of the ages of a father and his son is 4 times the age of the son. If the average age of the father and the son is 28 years, what is the son's age?  
 (A) 14 years (B) 16 years  
 (C) 12 years (D) Data inadequate
62. A batsman in his 12th innings makes a score of 65 and thereby increases his average by 2 runs. What is his average after the 12th innings if he had never been 'not out'?  
 (A) 42 (B) 43  
 (C) 44 (D) 45
63. Ratio of the two numbers is 3 : 4 and the sum of these two numbers is 420. The sum of their squares is:  
 (A)  $9 \times 10^3$  (B)  $9 \times 10^4$   
 (C)  $9 \times 10^5$  (D) none of these
64. Two numbers are such that if the first be added to 5 times the second, their sum becomes 52, and if the second be added to 8 times the first, their sum becomes 65. The two numbers are:  
 (A) 9, 7 (B) 3, 7  
 (C) 7, 9 (D) 7, 3
65. It costs Re. 1 to photocopy a sheet of paper. However, 2% discount is allowed on all photocopies done after first 1000 sheets. How much will it cost to copy 5000 sheets of paper?  
 (A) ₹ 3920 (B) ₹ 3980  
 (C) ₹ 4900 (D) ₹ 4920
66. A student X passes his examination with 515 marks, having scored 3% above the minimum. If Y had obtained 710 marks, what % would have been above the minimum?  
 (A) 40% (B) 42%  
 (C) 50% (D) Cannot be determined
67. Ravi's salary is 150% of Amit's salary. Amit's salary is 80% of Ram's salary. What is the ratio of Ram's salary to Ravi's salary?  
 (A) 1 to 2 (B) 2 to 3  
 (C) 5 to 6 (D) 6 to 5
68. A fruitseller sells 8 oranges at a cost price of 9. The profit per cent is  
 (A)  $12\frac{1}{2}$  (B)  $11\frac{1}{9}$   
 (C)  $5\frac{15}{17}$  (D)  $8\frac{2}{3}$
69. The cost price of 20 articles is equal to the selling price of 25 articles. The loss percent in the transaction is  
 (A) 5 (B) 20  
 (C) 25 (D) 30
70. By selling 66 metres of cloth a person gains the cost price of 22 metres. Find the gain per cent.  
 (A) 22% (B)  $22\frac{1}{2}$  %  
 (C) 33% (D)  $33\frac{1}{3}$  %
71. The average age of three boys is 25 years and their ages are in the proportion 3 : 5 : 7. The age of the youngest boy is:  
 (A) 21 years (B) 18 years  
 (C) 15 years (D) 9 years
72. A photograph measuring  $2\frac{1}{2} \times 1\frac{7}{8}$  is to be enlarged so that the length will be 4". How many inches will the enlarged breadth be?  
 (A)  $1\frac{1}{2}$  (B)  $2\frac{1}{8}$   
 (C) 3 (D)  $3\frac{3}{8}$
73. The ratio of the number of boys and girls in a college is 7 : 8. If the percentage increase in the number of boys and girls be 20% and 10% respectively, what will be the new ratio?  
 (A) 8 : 9 (B) 17 : 18  
 (C) 21 : 22 (D) Cannot be determined
74. Atul and Babita enter into a business partnership in which Atul contributes ₹ 2000 for 9 months and Babita contributes ₹ 5000 for 7 months. A profit of ₹ 1100 will be divided between Atul and Babita in the ratio of :  
 (A) 6 : 11 (B) 12 : 15  
 (C) 7 : 8 (D) 18 : 35
75. Nirmal and Kapil started a business investing ₹ 9,000 and ₹ 12,000 respectively. After 6 months, Kapil withdrew half of his investment. If after a year, the total profit was ₹ 4,600, what was Kapil's share in it?  
 (A) ₹ 2,000 (B) ₹ 2,600  
 (C) ₹ 1900 (D) ₹ 2,300



## ENGLISH LANGUAGE

**Directions: In questions no. 76 to 80, some of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the rectangle corresponding to the appropriate letter (A, B, C). If a sentence is free from errors, blacken the rectangle corresponding to (D) in the Answer Sheet.**

76. (A) The party chief made it a point to state that  
(B) the Prime Minister and the Union Home Minister should also come.  
(C) and they see what his party men had seen.  
(D) No error.
77. (A) She walked in  
(B) the room where the murder  
(C) had taken place.  
(D) No error.
78. (A) I could not convince them  
(B) because they persisted to suggest  
(C) that I was lying.  
(D) No error.
79. (A) The eminent speaker's speech  
(B) was broadcasted over  
(C) all the major radio-stations.  
(D) No error.
80. (A) He gave them no money  
(B) nor did help them  
(C) in any way.  
(D) No error.

**Directions: In questions no. 81 to 85, sentences are given with blanks to be filled in with an appropriate word. Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate rectangle in the Answer Sheet.**

81. The labour leader\_\_\_\_\_ the Government in the assembly today of not.  
(A) assured (B) instigated  
(C) assaulted (D) accused
82. A five-year-old boy was\_\_\_\_\_ from his school on Monday last by his servant for a ransom of Rs 8, 000.  
(A) driven (B) arrested  
(C) escorted (D) kidnapped

83. All the national bodies responsible for\_\_\_\_\_ the standards of education will be brought under an apex body too shortly.  
(A) selecting (B) creating  
(C) determining (D) constructing
84. The car driver was arrested for rash driving and his licence was\_\_\_\_\_ by the police.  
(A) impounded (B) prescribed  
(C) suspended (D) penalised
85. When people around you are losing their heads, it is very difficult to remain serene. It needs a lot of\_\_\_\_\_.  
(A) patience (B) strength  
(C) courage (D) goodness

**Directions: In questions no. 86 to 90, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.**

86. IMMINENT  
(A) eminent (B) immediate  
(C) future (D) impending
87. CHASTE  
(A) Filthy (B) Lewd  
(C) Immoral (D) Noble
88. FEMINITY  
(A) Cowardice (B) Manly  
(C) Angelic (D) Inherent
89. CURVATURE  
(A) Angularity (B) Straightness  
(C) Short-cut (D) Streamline
90. SUMMIT  
(A) Base (B) Slope  
(C) Declivity (D) Peak

**Directions: In question no. 91 to 95, out of the four alternatives, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.**

91. CAPTIOUS  
(A) capable (B) detailed  
(C) tolerant (D) classical
92. MANIFOLD  
(A) hidden (B) enrolled  
(C) simple (D) exact



93. WARP  
(A) plush (B) web  
(C) alienate (D) straighten
94. JOCOSE  
(A) dull (B) humorous  
(C) regulated (D) brief
95. PAMPER  
(A) neglect (B) scold  
(C) scorn (D) discourage

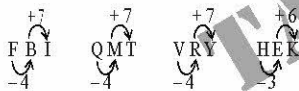
**Directions: In questions no. 96 to 100, four alternatives are given for the meaning of the given Idiom/phrase. Choose the alternative which best expresses the meaning of the Indian/Phrase and mark in the Answer Sheet.**

96. *To clear the air*  
(A) to work hard  
(B) to wash properly  
(C) to remove tension  
(D) to create confusion
97. *To chew the cud*  
(A) to be very annoyed  
(B) to think deeply  
(C) to eat humble food  
(D) to start doing something new
98. *No axe to grind*  
(A) a bad situation (B) to rebuke  
(C) to act selflessly (D) to confuse others
99. *A good samaritan*  
(A) a genuinely helpful person  
(B) an honest politician  
(C) a clever person  
(D) a priest
100. *To steal a march*  
(A) to outshine  
(B) to start early  
(C) to command an army  
(D) to overtake

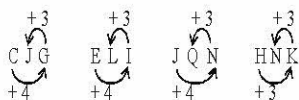


## ANSWERS

- (D) As supervisor supervises the worker, in the same way, officer supervises the clerk.
- (C) As 'Rain' is followed by 'Thunder', similarly 'Darkness' is followed by 'Night'.
- (D) As, Similarly,  
 $A \xrightarrow{+7} H$      $M \xrightarrow{+7} T$   
 $C \xrightarrow{+6} T$      $M \xrightarrow{+6} U$   
 $E \xrightarrow{+7} L$      $Q \xrightarrow{+7} X$
- (D) First two letters of the first term are in reverse order in the second term and so are the next two letters.
- (A) 11 : 17 alternate prime number (skipping 13) 19 : 29 alternate prime number (skipping 23)
- (D) First is the place where the second is imparted.
- (D) Second is more intense than the first.
- (C) 'Oxygen' helps in burning while 'carbon dioxide' extinguishes fire.
- (A) 'Teheran' is the capital of 'Iran' and 'Beijing' is the capital of 'China'
- (C) All the other items are lighter than water, while stone is heavier.
- (D) In each other groups, the first letter is four letters ahead the second letter and the third letter is three letters ahead the first letter.



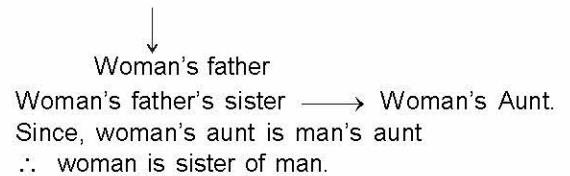
- (B) All other groups contain three consecutive letters of the alphabet.
- (A) In each other group, the third letter is four letters ahead the first letter and the second letter is three letters ahead the third letter.



- (D) In all the rest numbers, the third digit is the product of first and second digit.
- (C) Except 'Brinjal' all the rest are the names of fruits, while 'Brinjal' is the name of a vegetable.
- (D) 'ni tim si' means 'How are you' ... (i)  
 'ble ni si' means 'where are you' ... (ii)  
 From (i) and (ii), 'ni si' means 'are you'  
 $\therefore$  ble  $\rightarrow$  where
- (A) The first six letters and then the last six letters are written in a reverse order to obtain the code.
- (B)
- (D) The second, fifth and eighth letters of the word CARETAKER are A, T and E respectively. The words

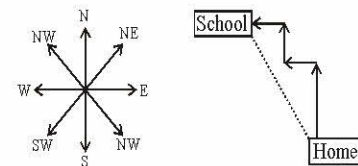
formed are EAT, ATE and TEA.

- (A) The series is bcaa/bcaa/bcaa/bcaa. Thus, the pattern 'bcaa' is repeated.
- (C) After D, 4 letters are skipped and I follows after which 2 letters are skipped Trend flows alternatively :  
 $D(EFGH)I(JK)L(MNOP)Q(RS)T(UVWX)Y(ZA)B(CDEF)G(HI)J$ .
- (B) There are two alternate series.  
 1st series : 3, 4, 5, 6, 7... and so on.  
 2nd series : 15, 16, 17, 18, 19 ... and so on.
- (B) Ratios of two consecutive terms are 1, 1/2, 1/3, 1/4, and 1/5 respectively.
- (D)  
 $BC \xrightarrow{-3} FG \xrightarrow{-3} JK \xrightarrow{-3} NO \xrightarrow{-3} RS$
- (D) Let Sunita's present age be  $x$  years. Then, Reena's present age =  $2x$  years  
 Three years ago, Sunita's age =  $(x - 3)$   
 and Reena's age =  $(2x - 3)$   
 $\therefore 2x - 3 = 3(x - 3)$  or  $2x - 3 = 3x - 9$  or  $x = 6$ ,  
 $\therefore$  Reena's present age =  $2x = 12$  years
- (D) Clearly, the grandson of Anil's mother is son of Anil and wife of Anil's son is daughter in-law of Anil. Thus, Anil is the father-in-law of the girl.
- (C) Woman's Mother's husband



- (D) M is the uncle of P means M is the brother of the father (say K) of the sister (say T) of P, i.e.  $M + K + T \times P$ .
- (B) The series is  
 $2^3 - 1, 3^3 - 1, 4^3 - 1, 5^3 - 1, 6^3 - 1, 7^3 - 1, 8^3 - 1$

- (B)



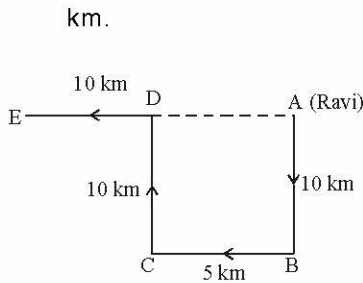
It is clear from the diagram that school is in North-west direction with respect to home.

- (B) Here, Ravi starts from home at A, moves 10 km southwards up to B, turns right and moves 10 km up to C, turns right again and moves 10 km up to D and finally turns left and moves 10 km up to E.  
 Thus, his distance from initial position A = AE  
 = AD + DE





= BC + DE = (5 + 10) km = 15



32. (C) Australia was defeated twice by India.  
 India was defeated twice by West Indies.  
 West Indies was defeated twice by Australia.  
 New Zealand was defeated twice by India and twice by West Indies, i.e., 4 times in all.

33. (A) Vijay's position from downwards

$$= [\text{Total students} - \text{Vijay's position from upwards}] + 1$$

$$= [43 - 14] + 1 = 30\text{th}$$

34. (C) Second place of Dhirendra from left

$$= \left[ \begin{array}{l} \text{Difference of} \\ \text{places of} \\ \text{Madhukar} \end{array} + \begin{array}{l} \text{First place} \\ \text{of Dhirendra} \end{array} \right]$$

$$= [(20 - 15) + 18] = 23\text{rd}$$

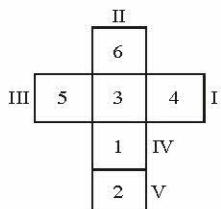
35. (B) Failed Students

$$= [\text{Total students}] - [(\text{Anmol's position from upwards}) + (\text{Anmol's position from downwards}) - 1]$$

$$= 45 - [(11 + 15) - 1] = 20$$

36. (C) The use of 'only' in I makes it invalid. Also, it is the duty of the government to save its citizens from intake of any harmful products, even if they like them. So, II does not hold strong. Besides, a product must not be banned unless its harmful effects have been proved. So, III holds strong. Lastly, we cannot blindly follow the decisions taken by other countries. So, IV also does not hold.

37. (C) Common number i.e. 3 to both the dice is placed on the central position of the figure. Now place the numbers in the anticlockwise direction in block I, II, III and IV respectively. Remaining number i.e. 2 will come in the block V. Hence number 4 is opposite to number 5.



38. (A) E X T R A

When E and A are arranged in alphabetical order then i.e. AE, E will be second.

39. (C) SING, SIGN

40. (B) Split the word OMNIPRESENT in three parts OMNIP, R, and ESENT. Reverse the order of the letters of the first part. It becomes PINMO. Now write each letter of this part one place forward. i.e., PINMO becomes QJONP. Write the letter of the second part two places forward. i.e. R becomes T. Again, reverse the order of the letters of the third part, i.e., ESENT becomes TNESE. Now write each letter one place backward, i.e. TNESE becomes SMDRD. Hence, OMNIPRESENT is coded as QJONPTSMDRD.

Similarly, CREDIBILITY will be written as JEFSDDXSHKH.

41. (B) In fig. (A),

$$(101 + 15) - (35 + 43) = 116 - 78 = 38.$$

In fig. (B), Missing number

$$= (48 + 184) - (56 + 34) = 232 - 90 = 142.$$

42. (D) The sum of numbers at the extremities of the three line segments in each figure is same.

$$\text{In fig. (A), } 39 + 33 = 29 + 43 = 27 + 45 = 72$$

$$\text{In fig. (B), } 42 + 31 = 29 + 44 = 30 + 43 = 73$$

Let the missing number in fig. (C) be x.

$$\text{Then, } x + 10 = 59 + 20 = 40 + 39 = 79 \text{ or } x = 69.$$

43. (C) Using proper notations, we have:

(1) given statement is  $3 + 2 + 4 < 9 + 3 - 1$  or

$$\frac{11}{2} < 2, \text{ which is not true.}$$

(2) given statement is  $3 + 2 + 4 < 18 + 3 - 2$  or  $9 < 4$ , which is not true.

(3) given statement is  $3 + 2 - 4 > 8 + 4 - 2$  or  $1 > 0$ , which is true.

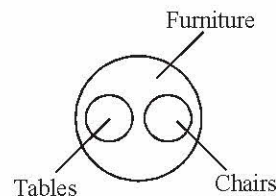
(4) given statement is  $3 + 2 - 4 > 9 + 3 - 3$  or -

$\frac{5}{2} > 0$ , which is not true. So, the statement (C) is true.

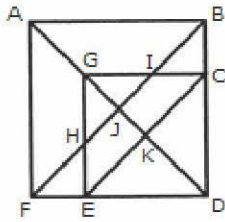
44. (C) The rule is  $a + b = \left(\frac{a+b}{2}\right)^2$

$$3 + 5 = \left(\frac{3+5}{2}\right)^2 \text{ etc. } \therefore 11 + 3 = \left(\frac{11+3}{2}\right)^2 = 49$$

45. (D) Tables and chairs are unrelated items. But, both are items of Furniture.



46. (A) The figure may be labelled as shown as below:



The simplest triangles are IJO, BCJ, CDK, KQL, MLQ, GFM, GHN and NIO i.e. 8 in number.

The triangles composed of two components each are ABO, AHO, NIJ, IGP, ICP, DEQ, FEQ, The simplest triangles are EFH, BIC, GHJ, GIJ, EKD and CKD i.e. 6 in number.

The triangles composed of two components each are ABJ, AFJ, GCK, GEK, CED and GHI i.e. 6 in number.

The triangles composed of three components each are GCD, GED, DJB and DJF i.e. 4 in number.

The triangles composed of four components each are ABF and GCE i.e. 2 in number.

The triangles composed of five components each are ABD and AFD i.e. 2 in number.

There is only one triangle i.e. FBD composed of six components.

Total number of triangles in the figure = 6 + 6 + 4 + 2 + 2 + 1 = 21.

47. (A) Clearly, the required number would be such that it leaves remainder of 1 when divided by 2, 3 or 4 and no remainder when divided by 5. Such a minimum number is 25.



48. (C)

49. (D)

50. (B)

$$101. (C) \frac{(\sqrt{x+4} + \sqrt{x-10})^2}{(x+4) - (x-10)} = \frac{5}{2}$$

$$\text{or } \frac{(x+4) + (x-10) + 2\sqrt{x^2 - 6x - 40}}{14} = \frac{5}{2}$$

$$\text{or } 2x + 2\sqrt{x^2 - 6x - 40} = 35 + 6$$

$$\text{or } (2x - 41) = -2\sqrt{x^2 - 6x - 40}$$

$$\text{or } (2x - 41)^2 = 4(x^2 - 6x - 40)$$

$$\text{or } 4x^2 + 1681 - 164x = 4x^2 - 24x - 160$$

$$\text{or } 140x = 1841$$

$$\text{or } x = \frac{263}{20}$$

$$102. (A) \frac{(243)^{0.13} \times (243)^{0.07}}{7^{0.25} \times (49)^{0.075} \times (343)^{0.2}}$$

$$= \frac{(243)^{(0.13+0.07)}}{7^{0.25} \times (7^2)^{0.075} \times (7^3)^{0.2}}$$

$$= \frac{(243)^{(0.2)}}{7^{0.25} \times (7)^{(2 \times 0.075)} \times (7)^{(3 \times 0.2)}}$$

$$= \frac{(3^5)^{0.2}}{7^{0.25} \times 7^{0.15} \times 7^{0.6}}$$

$$= \frac{(3)^{(5 \times 0.2)}}{7^{(0.25+0.15+0.6)}} = \frac{3^1}{7^1} = \frac{3}{7}$$

$$103. (C) \frac{17}{3} \times \frac{19}{6} + \frac{7}{3}$$

$$= \frac{(20-3) \left( \frac{20-1}{6} \right) + 7}{3}$$

$$= \left( \frac{20}{3} - 1 \right) \left( \frac{20-1}{6} \right) + \frac{7}{3}$$

$$= \frac{400}{18} - \frac{20}{18} - \frac{20}{6} + \frac{1}{6} + \frac{7}{3}$$

$$= \frac{400 - 20 - 60 + 3 + 42}{18}$$

$$= \frac{365}{18} = 20 \frac{5}{18}$$

104. (A) The required numbers are 307, 317, 327, 337, 347, 357, 367, 370, 371, 372, 373, 374, 375, 376, 378, 379, 387, 397.

Hence there are 18 numbers.

105. (C) Unit digit in  $(3127)^{173}$  = Unit digit in  $(7)^{173}$ . Now,  $7^4$  gives unit digit 1.

$\therefore (7)^{173} = (7^4)^{43} \times 7^1$ . Thus,  $(7)^{173}$  gives unit digit 7.

106. (A) Time taken by them to complete the track

$$= \frac{11}{4}, \frac{11}{11/2}, \frac{11}{8} \text{ hrs}$$

$$= \frac{11}{4}, 2, \frac{11}{8} \text{ hrs}$$



Required time

$$= \text{LCM of } \left( \frac{11}{2}, 2, \frac{11}{8} \right)$$

$$= \frac{\text{LCM of } (11, 2, 11)}{\text{HCF of } (2, 1, 8)} = 22 \text{ hrs}$$

107. (B)  $x^{abc} = x^a x^b x^c \Rightarrow x^{abc} = x^{a+b+c} \Rightarrow abc = a+b+c$ . This happens for positive integer value of  $a, b, c$ , only when  $a, b, c$  take value of 1, 2 & 3.

$$\text{Hence, } a^2 + b^2 + c^2 = 1^2 + 2^2 + 3^2 = 1 + 4 + 9 =$$

14.

108. (C)  $\sqrt[4]{(28+16\sqrt{3})} = \sqrt{\sqrt{(28+16\sqrt{3})}}$

$$= \sqrt{\sqrt{(28+2\sqrt{192})}} = \sqrt{\sqrt{(\sqrt{16}+\sqrt{12})^2}}$$

$$= \sqrt{\sqrt{16}+\sqrt{12}} = \sqrt{4+2\sqrt{3}}$$

$$= \sqrt{(\sqrt{3}+1)^2} = \sqrt{3} + 1$$

109. (C)  $(47)^3 = [(47)^{1/2}]^6$

110. (B) Let the two-digit no. be  $10x + y$ .  
Then,  $(10x + y) - (10y + x) = 27$   
or,  $x - y = 3$

111. (A)  $F + S = 4S$   
or,  $F = 3S \Rightarrow F : S = 3 : 1$   
The ages of father and son = 56 years

$$\therefore \text{Son's age} = \frac{1}{4} \times 56 = 14 \text{ years}$$

112. (B) Let 'x' be the average score after 12 th innings  
 $\Rightarrow 12x = 11 \times (x - 2) + 65$   
 $\therefore x = 43$

113. (B) Let numbers be  $3x$  and  $4x$ .  
 $\Rightarrow 3x + 4x = 420$  or  $x = 60$ .  
 $\therefore (3x)^2 + (4x)^2 = 25x^2 = 25 \times 60 \times 60 = 90,000$   
i.e.  $9 \times 10^4$ .

114. (C) Let the numebrs be  $x$  &  $y$   
then  $x + 5y = 52$  and  $8x + y = 65$   
 $\Rightarrow x = 7, y = 9$

115. (D) Total cost = `  $[1 \times 1000 + (100 - 2)\%$  of  $1 \times 4000]$   
= `  $(1000 + 0.98 \times 4000) = \text{`}(1000 + 3920) = \text{`}$   
4920.

116. (B)

$$\therefore \frac{\text{Marks of } y}{\text{Marks of } x} = \frac{100 + \% \text{ above minimum of } y}{100 + \% \text{ above minimum of } x}$$

$$\Rightarrow \frac{710}{515} = \frac{100 + y}{103}$$

$$\Rightarrow 100 + y = \frac{710 \times 103}{515} = 142$$

$$\Rightarrow y = 42\%$$

117. (C) Let the salary of Ram be ` 100. Then, salary of Amit = ` 80 and salary of Ravi = ` 120  
Ratio of Ram's salary to Ravi's salary  
=  $100 : 120 = 5 : 6$

118. (A) Let C.P. of one orange = Re 1  
Then C.P. of 8 oranges = ` 8  
S.P of 8 oranges = ` 9

$$\therefore \text{Gain \%} = \frac{9-8}{8} \times 100 = \frac{100}{8} = 12\frac{1}{2}\%$$

119. (C) Let C.P. of 1 article = Re 1  
then C.P. of 25 articles = ` 25  
and S.P. of 25 articles = ` 20

$$\therefore \text{loss \%} = \frac{25-20}{20} \times 100 = 25\%$$

120. (D) Let C.P. of one metre of cloth = ` 1  
then C.P. of 66 metres of cloth = ` 66  
Gain = C.P. of 22 metres = ` 22

$$\% \text{ gain} = \frac{22}{66} \times 100 = 33\frac{1}{3}\%$$

#### Shortcut method :

If on selling 'x' articles, a man gains equal to the

$$\text{C.P. of 'y' articles, then \% gain} = \frac{y}{x} \times 100$$

$$\therefore \% \text{ gain} = \frac{22}{66} \times 100 = 33\frac{1}{3}\%$$

121. (C) Total age of 3 boys =  $(25 \times 3)$  years = 75 years  
Ratio of their ages = 3 : 5 : 7.

$$\text{Age of the youngest boy} = \left( 75 \times \frac{3}{15} \right) \text{ years} = 15$$

years

122. (C) Let enlarged breadth be  $x$  inches. Then,

$$\frac{5}{2} : 4 :: \frac{15}{8} : x$$

$$\Rightarrow \frac{5}{2}x = 4 \times \frac{15}{8} \Rightarrow x = 3 \text{ inches}$$

123. (C) Originally, let the number of boys and girls in the college be  $7x$  and  $8x$  respectively.

Their increased number is (120% of  $7x$ ) and (110% of  $8x$ )

$$\text{i.e. } \left( \frac{120}{100} \times 7x \right) \text{ and } \left( \frac{110}{100} \times 8x \right)$$

$$\text{i.e. } \frac{42x}{5} \text{ and } \frac{44x}{5}$$

$$\therefore \text{Required ratio} = \frac{42x}{5} : \frac{44x}{5} = 21 : 22.$$

124. (D) Required ratio of profit distribution  
=  $2000 \times 9 : 5000 \times 7 = 18 : 35$



125. (D) Ratio of capital investment  
 = 9,000 × 12 : (12,000 × 6) + (6,000 × 6)  
 = 1 : 1

∴ Kamil's share =  $\frac{1}{2} \times 4600 = \text{Rs } 2,300$

151. (C) and see what his party men had seen

152. (A) She walked into

153. (B) because they persisted in suggesting

154. (B) was broadcast over

155. (B) and also he did not help them

156. (D) The preposition of makes our job easy. Of the given choices, only assured and accused dose followed by the preposition of You accuse/as-sure someone of something. But meaning wise, assured does not fit. Such an assurance (of "not protecting the interests") would be suicidal for any "labour leader"

157. (D) The word "ransom" gives us the clue. A ransom is the money (Rs 8, 000) that has to be paid to the kidnapper (here, "servant") so that he will set free the person kidnapped (here, the "five-year-old boy").

158. (C) If you determine something, you cause it to be of a particular kind. Here, "the national bodies" decide what (kind) "the standards of education" should be.

159. (A) If something (here, the driver's licence) is impounded by the police, customs officers or other officials, they officially take possession of it because a law or rule has been broken (here, "rash driving"). Impounded thus means seized in a specific context.

160. (A)

161. (D)

162. (D) Filth means dirt, Lewd means characterless. A chaste person does not have sex with anyone or has it only with his or her spouse.

163. (A) Inherent means qualities taken from fore-fathers.

164. (A) Angularity

165. (D) Peak. Summit is the highest point.

166. (C) A captious person is too critical, too ready to find fault. He or she cannot tolerate anything that goes even a fraction against them. Such persons are not tolerant at all.

167. (C) The difficulties are manifold. That is, they are of many different kinds. If so, they simply cannot be simple.

168. (D) If something warps, it becomes damaged by bending or curving, often because of the effect of heat or water. In order to bring it back to as it was, you have to make it straight. In other words, you have to straighten it.

169. (A) That which is jocose is meant to cause amusement. If it does not do so, it is dull.

170. (A) If you pamper someone, you pay too much attention to make him comfortable and happy; you treat him too kindly. On the other hand, if you do not pay attention to someone, you neglect him.

171. (C) to remove tension

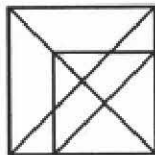
172. (B)

173. (C)

174. (A)

175. (A)

46. How many triangles are there in the following figures?



(A) 21

(B) 22

(c) 19

(D) 20

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



(A)

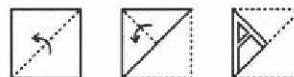
(B)

(C)

(D)

50. A piece of paper is folded and cut as shown in the

question figures. From the given answer figures, indicate how it will appear when opened.



(A)

(B)

(C)

(D)

