

ANALYTICAL ABILITY AND LOGICAL REASONING

66. Steel Express runs between Tatanagar and Howrah and has five stoppages in between. Find the number of different kinds of one-way second class ticket that Indian Railways will have to print to service all types of passengers who might travel by Steel Express? .
 (1) 49 (2) 42 (3) 21 (4) 7
67. There are 6561 balls out of them 1 is heavy. Find the minimum number of times the balls have to be weighed for finding out the heavy ball.
 (1) 12 (2) 9 (3) 8 (4) 15
68. Find the word that names a necessary part of the underlined word.
Gala
 (1) Celebration (2) Tuxedo (3) Appetizer (4) Orator
69. How many numbers between 1 to 1000 (both excluded) are both squares and cubes?
 (1) none (2) 1 (3) 2 (4) 3
70. Rita, an accomplished pastry chef who is well known for her artistic and exquisite wedding cakes, opened a bakery one year ago and is surprised that business has been so slow. A consultant she hired to conduct market research has reported that the local population doesn't think of her shop as one they would visit on a daily basis but rather a place they'd visit if they were celebrating a special occasion. Which of the following strategies should Rita employ to increase her daily business?
 (1) Making coupons available that entitle the coupon holder to receive a 25% discount on wedding, anniversary, or birthday cakes.
 (2) Exhibiting at the next Bridal Expo and having pieces of one of her wedding cake? Available for tasting.
 (3) Placing a series of ads in the local newspaper that advertise the wide array of breads, muffins, and cookies offered at her shop.
 (4) Moving me bakery to the other side of town.
71. There are 6 tasks and 6 persons. Task 1 cannot be assigned either to person 1 or to person 2, task 2 must be assigned to either person 3 or person 4, Every person is to be assigned one task. In how many ways can the assignment be done?
 (1) 144 (2) 180 (3) 192 (4) 360
72. What are X and Y?

S	8	W	16	A	5	C	X	A	4
20	J	25	T	4	K	7	L	Y	N

(1) X is 6, Y is 7 (2) X is 5, Y is 15 (3) X is 4, Y is 6 (4) X is 16, Y is 23

73. Which should be the next two numbers in the series 28 25 5 21 18 5 14
 (1) 11, 5 (2) 10, 7 (3) 11, 8 (4) 5, 10
74. A, B, C, D and E are five integers. When written in the ascending order of values* the difference between any two adjacent integers is 4. D is the greatest and A is the least B is greater than E but less than C, The sum of the integers is equal to E, What is the product of integers ?
 (1) - 945 (2) 945 (3) 315 (4) 0
75. Persons X, Y, Z and Q live in red, green, yellow or blue colored houses placed in a sequence on a street. Z lives in a yellow house. The green house is adjacent to the blue house. X does not live adjacent to Z, The yellow house is in between the green and red house. The color of the house X lives in is
 (1) Green (2) Blue (3) Red (4) Cannot be determined

Directions: Questions 76 to 78.

220 guests are to be transported from A to B. Any number of buses of the following passenger carrying capacities are available.

Type P: 60, Type Q : 50, Type R : 40, Type S : 30

The cost per trip for a bus of each of these types is given as follows:

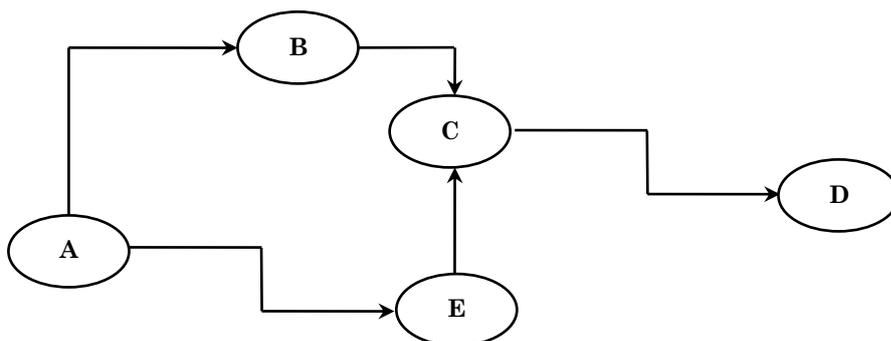
Type P: Rs 200, Type Q: Rs 140, Type R: Rs 125, Type S: Rs 95

No buses can be overloaded and, prefer no vacant seats in each trips.

76. What is the minimum possible cost for the trip?
 (1) Rs 690 (2) Rs 615 (3) Rs 640 (4) Rs 695
77. How many buses are needed for the above (Minimum cost trip)
 (1) 5 (2) 4 (3) 7 (4) 6
78. The second cheapest trip arrangement would involve
 (1) Rs. 630 (2) Rs. 680 (3) Rs. 710 (4) Rs. 655
79. A child can do a piece of work 15 hours slower than woman. The child works, for 18 hours on the job and then the woman takes charge for 6 hours. In this manner, $\frac{3}{5}$ of the work can be completed. To complete the job now, how much time the woman take?
 (1) 24 hours (2) 18 hours (3) 12 hours (4) 30 hours
80. A culprit was spotted by the police from a distance of 250 m. When the police men started . Running towards the culprit at a speed of 10 km/h, the culprit also fled. If his speed was 8 km/h, find out how far the culprit had run before he was overpowered.
 (1) 2 km (2) 1 km (3) 1.5 km (4) 0.8 km

Directions: Questions 81 to 83.

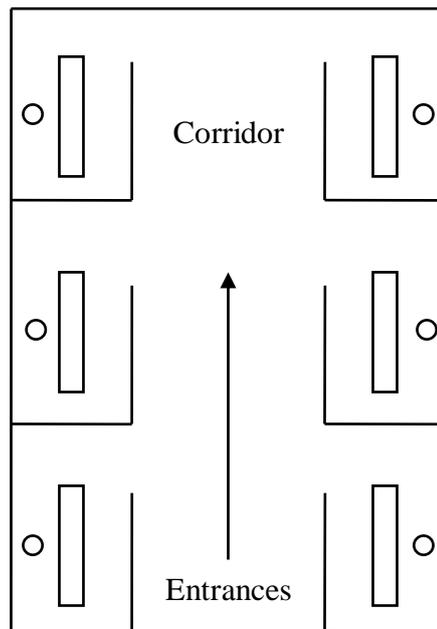
The following sketch shows the pipeline carrying material from one location to another. The capacity of each pipeline is 2000. The demand for the material at B is 800, at C is 800, at D is 1400 and at E is 400. The arrow indicates the direction of material flow through pipeline. The flow through pipelines meets exactly the demand at each location, flow from B to C is 600.



81. The quantity moved from A to E is
 (1) 400 (2) 1600 (3) 1400 (4) 2000
82. The free capacity available in the A-B pipeline is
 (1) 0 (2) 200 (3) 400 (4) 600
83. What is the free capacity available in the E-C pipelines ?
 (1) 600 (2) 400 (3) 200 (4) 0

Directions: Questions 84 to 87.

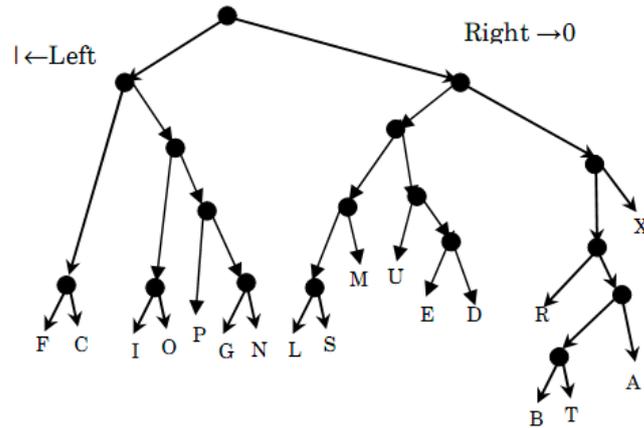
The plan given below, shows office for six officers namely A, B, C, D, E and F. Both B and C occupy offices to the right of the corridor (as one enters the office block) and A occupies the office to the left of the corridor. E and F occupy offices on opposite sides of the corridor but their offices do not face each other. The offices of C and D face each other. E does not have a corner office. F's office is further down the corridor than A's, but on the same side.



84. If E sits in his office and faces the corridor, whose office is to his left?
 (1) A (2) B (3) C (4) D
85. Whose office faces A's office?
 (1) B (2) C (3) D (4) E
86. Who is/are F's neighbour(s)?
 (1) A only (2) A and D (3) C only (4) B and C
87. D was heard telling someone to go further down the corridor to the last office on the right. To whose room was he trying to direct that person?
 (1) A (2) B (3) C (4) F

Direction : Questions 88 to 91.

Given below is a binary tree, where every letter has been coded with a string of digits 0 and 1. At any node going left is denoted by 1; at any node going right is denoted by 0. Thus N is denoted as: 10000. All the codes are in Binary notation.



88. What will be the code for S:
 (1) 01011 (2) 01110 (3) 01111 (4) None of these
89. Which letter is represented by 11001?
 (1) G (2) L (3) U (4) None of these
90. What is the value of C + R in binary notation?
 (1) 11101 (2) 1101 (3) 1001 (4) none of these
91. If all the codes are converted into decimal notation, then how many letters have their values greater than L?
 (1) 1 (2) 2 (3) 3 (4) None of these

Directions: Questions 92 to 94.: Read the following information carefully and answer the questions that follow

- (1) There is group of five persons - P, Q, R, S and T.
- (2) One of them is a horticulturist, one is a physicist, one is a journalist, one is an industrialist and one is an advocate.
- (3) Three of them - P, R and advocate prefer tea to coffee and two of them –Q and the journalist prefer coffee to tea.
- (4) The industrialist, S and P are friends to one another but two of these prefer coffee to tea.
- (5) The horticulturist is R's brother.

92. Who is a horticulturist?
 (1) P (2) Q (C) R (4) S
93. Who is an industrialist?
 (1) T (2) R (3) Q (4) S
94. Which of the following groups include a person who likes tea but is not an advocate?
 (1) PRT (2) ST (3) QRT (4) None of these
95. If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?
 (1) 6 (2) 8 (3) 9 (4) 10

Directions: Questions 96 and 97: In the following questions, select one alternative in which the third statement is implied by the first two statements.

96. (1) All elephants are wild. All lions are wild. So all lions are elephants.
 (2) All mangoes are red. Some apples are mangoes. So all apples are red.
 (3) All roads are boxes. All foxes are roads, So all boxes are foxes.
 (4) All XYZ can run. All ABC are XYZ. So all ABC can run.

97. (1) All dogs are mad. All sick persons are mad. So all sick persons are dogs.
 (2) All oranges are black. All figs are oranges. So all figs are black.
 (3) All windows are dogs. Some doors are dogs. So all windows are doors.
 (4) No man can fly. No kite can fly. So all men are kites.

Directions; Questions 98 to 100.

In each of the following three questions, four numbers are given. Out of these, three are alike in a certain way but the rest one is different. Choose the one which is different from the rest three.

98. (1) 2384 (2) 3629 (3) 3756 (4) 4298
 99. (1) 325 (2) 236 (3) 178 (4) 639
 100. (1) 5698 (2) 4321 (3) 7963 (4) 4232
 101. If finger is called toe, toe is called foot, foot is called thumb, thumb is called ankle, ankle is called palm and palm is called knee, which one finger has a different name?
 (1) Thumb (2) Ankle (3) Knee (4) Palm
 102. In a certain code language, '617' means 'sweet' and 'hot' '735' means 'coffee is sweet' and '263' means 'tea is hot'. Which of the following would mean 'coffee is hot'?
 (1) 731 (2) 536 (3) 367 (4) 753
 103. If the direction North-East becomes South-East how will other directions change?
 (1) West to North (2) South to South-West
 (3) North-West to East (4) East to South-West

Directions: Questions 104 and 105.

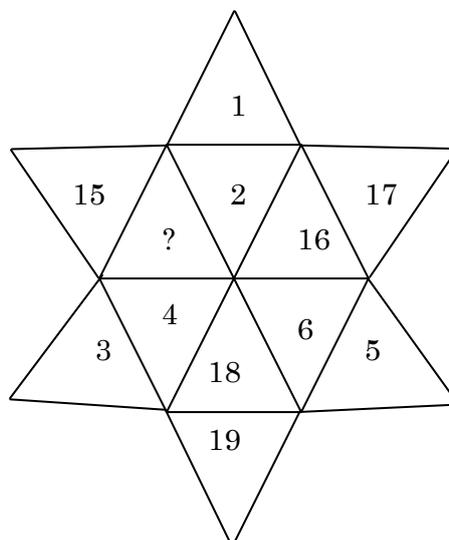
In each of the following questions, a number series is given with one term missing. Choose the Correct alternative that will continue the same pattern and fill in the blank spaces.

104. 3, 8, 13, 24, 41, (...)
 (1) 70 (2) 75 (3) 80 (4) 85
 105. 4, 23, 60, 111, (...)
 (1) 212 (2) 221 (3) 241 (4) 242

Directions: Questions 106 and 107.

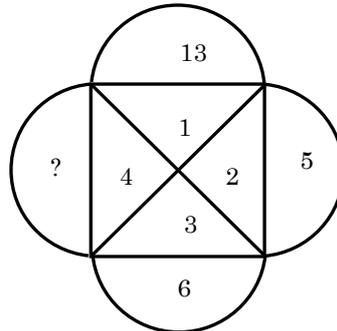
Find the missing number in each of the following questions;

106.



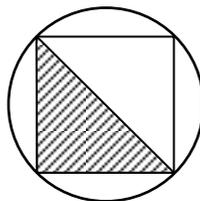
- (1) 13 (2) 14 (3) 20 (4) 21

107.



- (1) 10 (2) 11 (3) 12 (4) 13

108. If $\frac{3}{4}$ of a number is equal to $\frac{2}{3}$ of another number, what is the ratio between these two numbers
 (1) 3 : 4 (2) 5 : 6 (3) 8 : 9 (4) 9 : 10
109. Q is shorter than P, but taller than R, R is shorter than P but taller than A. If they stand in ascending order of their height the sequence is
 (1) ARQP (2) AQPR (3) QPAR (4) RPQA
110. A man starts walking towards south. After walking 5 km he again turns left at right angles in what direction is he finally walking in?
 (1) North (2) South (3) East (4) West
111. Find the missing number in the following series: 4, 6, 3, 5, 2 ?
 (1) 8 (2) 4 (3) 3 (4) 6
112. If UNDERSTAND is coded as 1234567823 how will START be coded?
 (1) 56781 (2) 83243 (3) 73652 (4) 67857
113. A cyclist goes 30 km to North and then turning of East he goes 40 km, Again he turns to his right and goes 20 km. After this he turns to his right and goes 40 km. How far is he from his straight point?
 (1) 0 km (2) 10 km (3) 25 km (4) 40 km
114. A one rupee coin is placed on a plain paper. How many coins of the same size can be placed round it so that each one touches the central and adjacent coins?
 (1) 9 (2) 8 (3) 4 (4) 6
115. A, B, C, D and E distribute some cards among themselves in a manner that A gets one less than B; C gets 5 more than D; E gets 3 more than B while D gets as many as B. Who gets the least cards?
 (1) A (2) C (3) D (4) E
116. If r is the radius of the circle given below, what is the area of the shaded region?



- (1) $4r^2$ (2) r^2 (3) $\frac{4}{3}r^2$ (4) $4r$

117. An elevator has a capacity of 12 adults or 20 children. How many adults can board the elevator with 15 children?
(1) 4 (2) 5 (3) 3 (4) 6
118. Which two months in a year have the same calendar?
(1) June – October (2) April – November
(3) April – July (4) October – December
119. How many numbers from 1 to 100 are such each of which is divisible by 8 and whose at least one digit is 8?
(1) Four (2) Zero (3) Eight (4) Six
120. In the following square, numbers have been filled according to some rule. One space has been left blank, Find the correct number out of those given below for the blank, space.

56	65	78
12		30
44	14	48

- (1) 14 (2) 44 (3) 62 (4) 51