MATRIX ARRANGEMENT – CLASS 3

CHALLENGER SET - 1

Mr. Sharma went to a fruit shop to buy fruits. He bought six packets – I, II, III, IV, V and VI, each packet having a different variety of fruit. In each packet, there is one or the other of six types of fruits – Mango, Orange, Apple, Guava, Peach and Grapes. The packets are identical and closed from all sides and no one can make out the type of fruit in the packets. Mr. Sharma has four children – Chintoo, Pintoo, Babloo and Dabloo. Each of the four children guessed the type of fruit in four of the packets, and each one of them correctly guessed the type of fruit in two of the four packets.

	I	II	III	V
Chintoo	Mango	Orange	Apple	Grapes

	II	IV	V	VI
Pintoo	Guava	Apple	Mango	Grapes

	I	III	IV	V
Babloo	Peach	Orange	Mango	Grapes

	II	III	V	VI
Dabloo	Guava	Apple	Orange	Peach

Q1. What is in packet I?

a. Mango b. Peach c. Orange d. Cannot be determined

Q2. Which packet has grapes? (Mention '0' if your answer is cannot be determined)

Q3. Which packet has guava? (Mention '0' if your answer is cannot be determined)

CHALLENGER SET - 2

In a factory, there are seven machines – A through G – arranged in a straight line, not necessarily in the same order. Material is transported among these machines in boxes. The speed of any box is inversely proportional to its weight. If the weight of a box is 10 kg, it moves at a speed of 2 m/sec. Further, it is known that:

(1) The time taken to transport 30 kg from C to A is the same as the time taken to transport 10 kg from C to E.

(2) The distance between two consecutive machines is 10 m.

(3) It takes less time to transport 20 kg from F to C than it takes to transport 10 kg from F to G.

(4) It takes 90 s to transport 30 kg from D to G.

(5) It takes the same time to transport 30 kg from B to G and 20 kg from B to A. A is to the left of B.

Q1. How much time will it take to transport 30 kg from A to F?

a 30 sec b 45 sec c 20 sec d 60 sec

Q2. Which machine is to the immediate left of B?

a E b C c F d A

Q3. If t1 = Time taken to transport 25 kg from D to B

t2 = Time taken to transport 20 kg from A to F

t3 = Time taken to transport 30 kg from F to E

t4 = Time taken to transport 30 kg from B to A

Then which of the following represents the correct order?

a $t2 < t3 = t4 < t1$ b $t1 > t4 > t3 > t2$

c $t4 = t1 > t2 > t3$ d $t4 > t1 > t3 > t2$

Q4. Which machine is fourth to the right of C?

a F b B c E d G

CHALLENGER SET - 3

All saints high school is organizing a parent - teacher meet for students of class V. For this purpose, every parent has been given a fixed 10 minute time slot to meet five different teachers, each of which teaches a different subject among maths, Science, Social Studies, English & Hindi. Mr Balu, Mr Lal, Mr. Johri, Mr Patnaik and Mr Ahmed are fathers of five children who studies in class V of all saints high school. Each of these five fathers meet all the teachers between 2 pm and 2:50 pm. Each parent can meet only one teacher in a slot and each teacher can meet only one parent in a slot. Each parent can meet the teachers only at the assigned slot.

Further, the following information is known to us.

1. Except for one teacher, Mr Johri met all the five teachers immediately after Mr Ahmed met them.
2. Mr Lal was the second parent to meet social studies teacher and Mr. johri was the first parent to meet the hindi teacher.
3. Mr balu met the English Teacher immediately before he met the social studies teacher and Mr Ahmed was the third parent to meet the social studies teacher.
4. Mr Johri was not the last parent to meet the science teacher and Mr Lal met the English teacher before he met the social studies teacher.

Q1. Who met the maths teacher just before Mr. Lal?

Q2. The hindi teacher was meeting which parent at 2:37 p.m?

Q3. Mr. johri met the maths teacher in the same time slot in which

a. Mr lal met the English teacher b. Mr balu met the Maths teacher

c. Mr lal met the Social Studies teacher d. Mr. Patnaik met the English Teacher

CHALLENGER SET - 4

Two tests of 8 marks each were conducted in a class. All scores were positive integers. The table below gives the ranks alloted in the basis of the scores in each test. When final ranks were alloted on the basis of the total score in both the tests, Rachit stood first and there were no ties

Student	Rank in test 1	Rank in test 2
Rachit	1	4
Nanu	2	1
Astha	3	5
Manav	4	2
Kartik	5	3

Q1. How much did Astha score in test 1?
Q2. What is the difference in Kartik and Nanu's scores in test 2?
Q3. By how much is Rachit's total score more than manav's?
Q4. What is Karthik's final rank?