6

Puzzle Test

Reasoning puzzles are a favourite question type in all aptitude examinations. In the scheme of chapters on reasoning contained in this book, we have created separate chapters for specific kinds of puzzles which are often asked (like arrangements, rankings etc., which constituted the chapters prior to this one).

All other categories of puzzles—which cannot be specifically categorised as any of the foregoing chapters—you will get to see and practice in this chapter.

As the name suggests, questions on puzzles challenge you to match multiple factors (like name, colour of shirt, place of living, car model driven, etc.).The key skills involved in solving questions on puzzles include but are not limited to:

(i) The ability to make a relevant tabular structure for using the clues seamlessly: For example, suppose you have 5 people A, B, C, D, E wearing 5 colour of shirts red, yellow, green, blue and white drinking 5 kinds of soft drinks Coke, Pepsi, Mirinda, Thums Up and Seven Up—the solution table structure would look like this:

	Red	Yellow	Green	Blue	White	Coke	Pepsi	Mirinda	Thums Up	Seven Up
A										
B										
C										
D										
E										
Coke										
Pepsi										
Mirinda										
Thums UP										

Seven Up					

In the table above, you can see clearly that there is a direct correlation structure between each of the three 'variables' in the problem. More of this you would get to see and experience as you move through the solved illustrations and the exercises that follow it.

(ii) The ability to order the clues in the correct order of usage (as explained in the theory of logical reasoning): This includes the ability to perceive the direct clues and use them first to set up the 'framework' of problem solving.

(iii) The ability to perceive what indirect clues are talking about – and how to use them;

(iv) The ability to convert clues written in language form into visual cues so that you do not need to read the text again and again. Also, converting the language clues to visual cues is critical for the purpose of being able to 'see' all the clues at one go.

Illustrated below are the solutions to a few typical questions on puzzles. We would advise you to first have a look at the questions and try to solve the same on your own before looking at the step-by-step process of solving the same.

ILLUSTRATION 1

At a fancy dress party people were asked to dress as an object that represented their professions.

Mr. Abhijit, Mrs. Banerjee, Mrs. Chatterjee, Mr. Dipanjan De and Mr. Elangovan were among the guests. The costumes included a leaf, a pen, a fork, a camera reel, and a stethoscope. The professions included a photographer, a gardener, a compounder, a teacher, and a cook.

- Mr. Abhijit is a teacher.
- Neither Mrs. Banerjee nor Mrs. Chatterjee was dressed as a fork.
- None of the men is a compounder.
- Mr. Dipanjan De is dressed as a camera reel.
- Mrs. Chatterjee is a gardener.

1. Which person is dressed as a stethoscope?

   (a) Abhijit (b) Banerjee

   (c) Chatterjee (d) Dipanjan

2. What is Elangovan's profession?

   (a) Cook (b) Gardener

   (c) Compounder (d) Teacher

Solution:

Putting the direct Clues 1 and 4 in the table we get:

Male	Female	Female	Male	Male
Abhijit	Banerjee	Chatterjee	Dipanjan De	Elangovan
Pen			Camera reel	
Teacher			Photographer	

From Clue 1 From Clue 4

At this point if we use Clue 2, it is evident that it must be Elangovan who is dressed as a fork. Alsc using clue 5 (Mrs. Chatterjee is a gardener) completes the solution.

Male	Female	Female	Male	Male
Abhijit	Banerjee	Chatterjee	Dipanjan De	Elangovan
Pen		Leaf	Camera reel	Cook
Teacher		Gardener	Photographer	Fork
		From Clue 5		From Clue 2 once we know the details of Dipanjan and Abhijit.

Obviously, Mrs. Banerjee would be the compounder.

The solutions are: 1. Banerjee Option (b)

2. Elangovan is the cook. Option (a) is correct.

ILLUSTRATION 2

Directions for questions 3 to 6: Answer the following questions based on the information below:

For admission into vacant seats of higher secondary classes, most schools prescribe an admission test. There is no uniformity in the nature of these tests, however. Anuja Sinha, Amit Agnihotri, Himesh Reshammiya, Mahima Sharma and Sonit Kala,whose parents had been transferred to Lucknow this summer and who were all seeking admission into Class 9, appeared in entrance tests of different schools. The number of questions in all these tests happened to be different. Amit wrote an entrance test containing exactly twice as many questions as the test that Himesh wrote, Sonit wrote a test that contained 160 questions but it was neither for admission into City Montessori School's nor for Scindia School. Delhi Public School test contained 200 questions but neither Himesh nor Mahima wrote this test. City Montessori School test had 120 questions but it was not written by Himesh.The test that Mahima Sharma wrote had 25% less questions than the test Amit Agnihotri wrote but it was not for City Montessori School and Scindia School.

Anuja did not write Millennium School's or Saint Mary's Convent's test. When all the tests are compared with regard to number of questions in them, St. Mary's Convent falls exactly in the middle of the list. Each of the five students wrote exactly one of the tests – the longest one of which contained 200 questions. There is no penalty for wrong answers.

3. Anuja Sinha wrote the test for admission into which school?

   (a) Scindia

   (b) Sanskar Valley

   (c) City Montessori School

   (d) Delhi Public School

4. If Amit Agnihotri secured only 50 per cent marks in the test, each question carrying one mark, how many marks did he secure in this test?

   (a) 50 (b) 60

(c) 100 (d) None of these

5 If both Sonit and Amit secured equal marks in their respective tests and the test Sonit wrote carried 5 marks per question, how many marks did each question in Amit's test carry? It is given that both Amit and Sonit answered 75% questions of their respective tests correctly. Wrong answers did not fetch any marks.

(a) 1 (b) 2.5

(c) 3 (d) 4

6. Which of the following combinations is true?

(a) Anjua Sinha – City Montessori School – 180 Questions

(b) Amit Agnihotri – Millennium School – 160 Questions

(c) Himesh Reshammiya – Scindia School – 100 Questions

(d) Mahima Sharma – Scindia School – 150 Questions

Solution: Reaction Tracker

With respect to the number of questions in each test it can be inferred that the number of questions are 200,120,160. Two values are unknown and to compensate for them we have been given that the number of questions in the tests of Amit Agnihotri would be (2x), Himesh Reshammiya (x) and Mahima Sharma (1.5x). The starting table for this situation would be:

	Anuja Sinha	**Amit Agnihotri (2x)**	**Himesh R (x)**	**Mahima Sharma (1.5 x)**	**Sonit Kapoor**	**CMS**	**Scindia**	**Millenium**	**St. Marys**	**DPS**
200			NO	NO	NO	NO	NO	NO	NO	YES
160	NO	NO	NO	NO	YES	NO	NO			NO
120			NO		NO	YES	NO	NO	NO	NO
??					NO	NO				NO
??					NO	NO				NO
CMS			NO	NO	NO					
Scindia				NO	NO					
Millennium	NO									
St. Mary's	NO									
DPS			NO	NO	NO					

From the table it is clear that DPS (200) and CMS (120) are shared between Anuja and Amit. Thi means two possibilities – Anuja 120 and Amit 200 or Amit 120 and Anuja 200. If we take the second possibility into account things would not work out because:

If Amit is 120, the missing numbers are 90 (25% less for Mahima) and 60 (Amit's test had twice Himesh's test). Then the number of questions placed in ascending order would be: 60, 90, 120 (CMS), 160, 200 (DPS). This situation contradicts the condition that when all the tests are compared as to number of questions in them, St. Mary's Convent falls exactly in the middle of the list.

Thus, we must consider the other option, i.e., Amit had 200 questions and Anuja 120. Then the number of questions is 200, 160, 150 (Mahima), 120, 100. The table would now look as follows:

	Anuja Sinha	Amit Agnihotri (2x)	Himesh R (x)	Mahima Sharma (1.5 x)	Sonit Kapoor	CMS	Scindia	Millenium	St. Marys	DPS
200	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES
160	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO
120	YES	NO	NO	NO	NO	YES	NO	NO	NO	NO
150	NO	NO	NO	YES	NO	NO	NO	NO	YES	NO
100	NO	NO	YES	NO	NO	NO	YES	NO	NO	NO
CMS	YES	NO	NO	NO	NO					
Scindia	NO	NO	YES	NO	NO					
Millennium	NO	NO	NO	NO	YES					
St. Mary's	NO	NO	NO	YES	NO					
DPS	NO	YES	NO	NO	NO					

The solutions are:

3. CMS. Option (c) is correct.
4. He would score 100 marks. Option (c) is correct.
5. Sonit & Amit would score 600 marks out of 800 (The total marks would be 800 because Sonit's test has 160 questions of 5 marks each totaling 800). Hence, Amit's score would also be out of 800 marks—4 marks per question. Option (d) is correct.
6. Option (c) is correct.

ILLUSTRATION 3

Directions for Question 7: Read the information and answer the question.

Four engineers, designated as CE, SE, EE and AE, read a certain number of newspapers early in the morning. One of them reads four newspapers, another reads three newspapers, the third reads two newspapers while the fourth one reads one newspaper. Below are some additional facts regarding the names of these officers:

i. Nahiri is not the EE.
ii. Hari is the AE.
iii. Nahiri is not the CE and he reads more number of newspapers than Lahiri.
iv. The one who is the CE reads more number of newspapers than Lahiri.
v. The person who is the SE reads the maximum number of newspapers.
vi. Bahiri does not read two newspapers.

7. Which of the following statements is necessarily true?
   (a) Hari is the AE and reads two newspapers.
   (b) Lahiri is the EE and reads one newspaper.

(c) Bahiri is the CE and reads three newspapers.

(d) Nahiri is the EE and reads four newspapers.

Solution

From statement (ii), Hari is AE. From Statements (i) and (iii), Nahiri is not the CE or the EE. Henc Nahiri is the SE and reads 4 newspapers as from Statement (v). From Statement (iv), Lahiri is not th CE; this obviously means that Lahiri is the EE and Bahiri is the CE. From Statement (iv) and (vi Bahiri reads three newspapers. As he reads more than at least one person, we cannot allocate one newspaper to him. Hence Bahiri must read three newspapers. Hence the final distribution is as follows:

Engineer	Name	No. of Newspapers
AE	Hari	2/1
CE	Bahiri	3
SE	Nahiri	4
EE	Lahiri	1/2

Hence, option (c) is the correct answer.

ILLUSTRATION 4

Four brothers Rohan, Sohan, Mohan and Ganesh are at their annual family property fight sitting acros a circular table. Their occupations are— author, biologist, chemist and doctor, but not necessarily in that order. Ganesh starts by setting the agenda of the meeting and after him the doctor gives a long discourse of what is right and what is wrong. Rohan is sitting across the doctor and next to the chemist. Mohan is silent throughout the meeting and the chemist speaks only at the very end.

8. The profession of Rohan is

(a) Author (b) Biologist

(c) Doctor (d) Cannot be determined

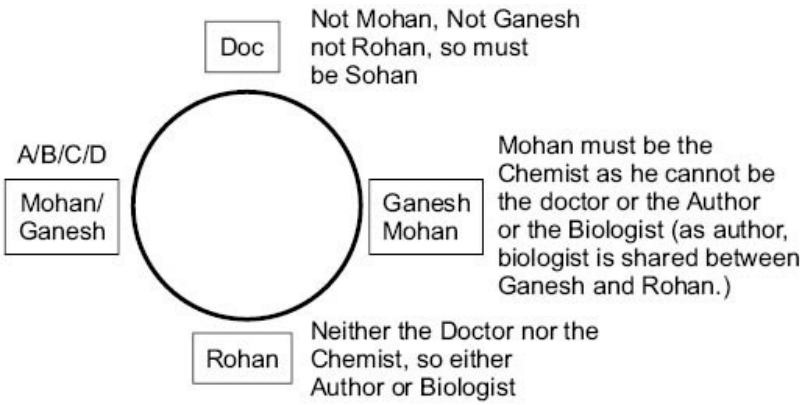
9. Who among the following is the chemist?

(a) Sohan (b) Mohan

(c) Ganesh (d) Cannot be determined

Solution

The solution of the above question can be seen in the figure below. (Note the interpretation of the last statement – Mohan was silent throughout the meeting is that Mohan spoke only at the end.)



Based on the interpretations of the figure above we can answer the questions as:

8. Rohan could be the Author or the biologist. Hence, we cannot determine his profession. Option (d) is correct.

9. Mohan was the Chemist. Option (b) is correct.

ILLUSTRATIONS 5 and 6

Directions for Questions 10 to 12: Study the following information carefully and answer the questions given below:

Four people were being interviewed for the same job. They were all interviewed on the same day, but in different rooms (Dharti, Prithvi, Akash and Agni), at different times and by different persons. Determine the name of each candidate, which room they were interviewed in and their appointment time and answer the questions.

(i) Aishwarya's appointment was just after Mr. Sharma's, which was just after that of the person in room Prithvi.

(ii) Mr Narurkar's appointment was at least two hours later in the day than Bhagat's.

(iii) Mr Joshi's appointment was just after the person who had an interview in room Agni, who had an appointment just after Chiranjeev.

(iv) Three of the four interviewees were: Dhanush, the one with the interview in room Dharti, and the person who had an appointment at 1 pm.

(v) The four people were interviewed at 11 am, 12 noon, 1 pm and 2 pm.

(vi) Joshi, Narurkar, Zaidi and Sharma were the interviewers whereas Aishwarya, Bhagat Chiranjeev and Dhanush were the interviewees.

10. Sharma's appointment was with
    (a) Aishwarya
    (b) Bhagat
    (c) Chiranjeev
    (d) Can't be determined

11. Dhanush's appointment was in the room
    (a) Dharti
    (b) Prithvi
    (c) Akash

(d) Agni
(e) Can't be determined

12. Zaidi's appointment was in the room
(a) Dharti
(b) Prithvi
(c) Akash
(d) Agni
(e) Can't be determined

Solution

In order to solve this question the starting table should be like this.

			A/B/C/D	A/B/C/D	A/B/C/D	A/B/C/D
			J/N/Z/S	J/N/Z/S	J/N/Z/S	J/N/Z/S
			11 am	12 noon	1 pm	2 pm
A/B/C/D	J/N/Z/S	Dharti				
A/B/C/D	J/N/Z/S	Prithvi				
A/B/C/D	J/N/Z/S	Akash				
A/B/C/D	J/N/Z/S	Agni				

The first clue gives us: Prithvi–Mr. Sharma–Aishwarya. This means that these three can only be a 11,12 and 1 pm or 12,1 or 2 pm.

The table evolves to:

			B/C/D	B/C/D	A/B/C/D	B/C/D
			J/N/Z	J/N/Z/S	J/N/Z/S	J/N/Z
			11 am	12 noon	1 pm	2 pm
A/B/C/D	J/N/Z/S	Dharti				
A/B/C/D	J/N/Z/S	Prithvi			X	x
A/B/C/D	J/N/Z/S	Akash				
A/B/C/D	J/N/Z/S	Agni				

The second clue tells us that Narurkar's appointment is at least 2 hours after Bhagat's appointment. This could only mean that Bhagat is at either 11 am or 12 noon and Narurkar could only be at 1 or 2 PM. The table evolves to:

	B/C/D	B/C/D	A/C/D	C/D

			J/Z	J/Z/S	J/N/Z/S	J/N/Z
			11 am	12 noon	1 pm	2 pm
A/B/C/D	J/N/Z/S	Dharti				
A/B/C/D	J/N/Z/S	Prithvi			x	x
A/B/C/D	J/N/Z/S	Akash				
A/B/C/D	J/N/Z/S	Agni				

Clue (iii) gives us that the sequence Chiranjeev – Agni – Joshi. This again means that this sequence could only be at 11,12 and 1 PM or 12, 1 and 2 PM. Thus, Chiranjeev can only be at 11 or 12, Agni only at 12 or 1 and Joshi only at 1 or 2 pm. Introducing these deductions into the existing table we get:

			B/C/D	B/C/D	A/D	D
			Z	Z/S	J/N/Z/S	J/N/Z
			11 am	12 noon	1 pm	2 pm
A/B/C/D	J/N/Z/S	Dharti				
A/B/C/D	J/N/Z/S	Prithvi			x	X
A/B/C/D	J/N/Z/S	Akash				
A/B/C/D	J/N/Z/S	Agni	x			X

Note: In the above table we are now sure about Zaidi's position at 11 am and Dhanush's position at 2 pm. Thus we can also remove D and Z from the other possibilities. When we do that, notice thatat 1 pm Aishwarya remains the only possibility left and for 12 noon Sharma remains the only possibility left. The table then becomes:

			B/C	B/C	A	D
			Z	S	J/N	J/N
			11 am	12 noon	1 pm	2 pm
A/B/C/D	J/N/Z/S	Dharti				
A/B/C/D	J/N/Z/S	Prithvi			x	x
A/B/C/D	J/N/Z/S	Akash				
A/B/C/D	J/N/Z/S	Agni	x			x

Clue (iv) tells us that: Dhanush, the person in Dharti and the 1 pm person are different people. So Dhanush is not in Dharti and Dharti is also not at 1 pm.

The table changes to:

		B/C	B/C	A	D

			Z	S	N	J
			11 am	12 noon	1 pm	2 pm
B/C	Z/S	Dharti			x	X
B/C	Z/S	Prithvi			x	X
D	J	Akash	x	x	x	definite
A	N	Agni	x	x	definite	X

From this point if we go back to Clue (iii) we get: Joshi would be at 2 pm (as he is just after the person who had an interview in Agni— which is fixed at 1 pm). Also, Chiranjeev must be at 12 noon as he is just before Agni. The table evolves to:

			B	C	A	D
			Z	S	N	J
			11 am	12 noon	1 pm	2 pm
B/C	Z/S	Dharti			x	x
B/C	Z/S	Prithvi			x	x
D	J	Akash	x	x	x	definite
A	N	Agni	x	x	definite	X

The only thing left at this stage is: Prithvi was just before Sharma. So Prithvi is at 12 noon.
The table closes to:

			B	C	A	D
			Z	S	N	J
			11 am	12 noon	1 pm	2 pm
C	S	Dharti	x	Definite	X	x
B	Z	Prithvi	Definite	x	X	x
D	J	Akash	X	x	X	Definite
A	N	Agni	X	x	Definite	x

The answers become:

10. Sharma's appointment was with Chiranjeev. Option (c) is correct.
11. Akash. Option (c) is correct.
12. Prithvi. Option (b) is correct.

EXERCISE

Directions for Questions 1 to 5: Six friends A, B, C, D, E, and F work in different companies namely—Pentasoft, Quark, Raymond's, Sunmet, Trump & Gates and Udupi, and each wears different coloured, company-sponsored shirts, viz., blue, green, pink, yellow, purple and red though not necessarily in the same order.

i. The one wearing the blue shirt works in Sunmet and the one wearing a green shirt works in Pentasoft.

ii. F does not work in Raymond's or Trump and Gates.

iii. A wears pink shirt and works in Quark.

iv. D does not work in Trump & Gates and purple coloured shirt is not sponsored by Raymond's.

v. E works in Udupi and neither D nor B works in Sunmet.

vi. Trump & Gates does not sponsor purple or yellow coloured shirts and C works in Pentasoft.

1. Which colour shirt is sponsored by Raymond's?

   (a) Yellow (b) Blue

   (c) Pink (d) Cannot be determined

2. Which pair is correctly matched?

   (a) Red–Raymond's–A

   (b) Red–Trump & Gates–B

   (c) Green–Raymond's–C

   (d) None of these

3. Which of the following is true?

   (a) Udupi sponsors green shirts.

   (b) D is working in Trump & Gates.

   (c) E wears red shirt.

   (d) Red shirt is sponsored by Trump & Gates.

4. What is the sequence of companies representing A, B, C, D, E and F?

   (a) Quark, Pentasoft, Trump & Gates, Raymond's, Udupi, Sunmet

   (b) Quark, Trump & Gates, Pentasoft, Raymond's, Udupi, Sunmet

   (c) Quark, Pentasoft, Trump & Gates, Sunmet, Udupi, Raymond's

   (d) None of these

5. If Raymond's and Sunmet decide to interchange the colours of sponsored shirts, then which two persons will have to interchange their shirts?

   (a) D and F (b) A and C

   (c) D and E (d) B and D

Directions for Questions 6 to 8:

(i) Five friends Amar, Kapil, Sarvesh, Rohan, and Nagesh wear trousers of different colours—red, yellow, blue, white and green (not necessarily in this order).

(ii) Each one of them has different likings, *viz.*, reading, playing, travelling, singing and writing.

(iii) Kapil, who has a liking for singing does not wear yellow trousers. Sarvesh wears red trousers and does not like reading or writing. Nagesh likes to play and does not wear blue or yellow trousers. Amar has liking for writing and Rohan does not wear yellow or green trousers.

6. What is the colour of Kapil's trousers?

(a) White (b) Blue

(c) Green (d) Data inadequate

7. What is the liking of Sarvesh?

(a) Writing (b) Travelling

(c) Reading (d) Data inadequate

8. Which of the following combinations of person–colour-liking is correct?

(a) Rohan-Blue-Reading

(b) Nagesh-White-Playing

(c) Amar-Yellow-Writing

(d) None of these

Directions for Question 9 to 11:

i. Five students—Sujit, Randhir, Neena, Mihir, and Vinay have total five books on subjects—Physics, Chemistry, Maths, Biology and English written by authors Gupta, Khanna, Harish Sharma and Edwin. Each student has only one book on one of the five subjects.

ii. Gupta is the author of the Physics book which is not owned by Vinay or Sujit. Mihir owns the book written by Edwin.

iii. Neena owns the Maths book. Vinay has the English book which is not written by Khanna. The Biology book is written by Sharma.

9. Which of the following is the correct combination of subject-student and author?

(a) Maths–Neena–Harish

(b) Physics–Mihir–Gupta

(c) English–Vinay–Edwin

(d) Biology–Sujit–Sharma

10. The Chemistry book has been penned by whom?

(a) Gupta (b) Edwin

(c) Harish (d) Data inadequte

11. Who is the owner of the book written by Harish?

(a) Randhir (b) Vinay

(c) Sujit (d) Mihir

Directions for Questions 12 to 15:

i. Seven friends A, B, C, D, E, F and G are in Patna to attend a seminar at Mindworkzz. Five o them have to go back to five different places—Delhi, Chennai, Lucknow, Bangalore, and Kolkata.

ii. Five of them are executives, each specialising in Administration, Human Resource Management (HRM), Marketing, Systems and Finance.

iii. E, an executive is going to Chennai, is neither from Finance nor Marketing. G is a systen specialist and is leaving for Delhi. F is an executive but is not going to one of the five places.

iv. B is an executive from HRM but has come at the airport to see off his friends.A is an executive but not from Marketing and is flying to one of the destinations but not to Bangalore or Kolkata.

12. The one who is going to fly to Chennai is:

(a) Not an executive (b) From Administration

(c) From Systems (d) From Finance

13. Who among the following specialises in Marketing?

(a) D (b) A

(c) F (d) G

14. C has specialised in which field?

(a) Finance

(b) Marketing

(c) Either Finance or Marketing

(d) None

15. Who is flying to Bangalore?

(a) A (b) C

(c) D (d) Data inadequate

Direction for Questions 16 to 20: P, Q, R, S, T, U, and V are seven persons who travel to office everyday in a particular train which stops at five stations—Andheri, Bandra, Vile-Parle, Elphinstor and Chinchpokli res-pectively— after it leaves the base station.

i. Three among them get in the train at the base station.

ii. S gets down at the station next to the station at which U gets down.

iii. Q does not get down either with P or T.

iv. V alone gets in at Vile-Parle and gets down with R after having passed one station.

v. P travels between only two consecutive stations and gets down at Chinchpokli.

vi. None of them gets in at Bandra.

vii. R gets in with U but does not get in with either Q or S.

viii. T gets in with two others and gets down alone after S.

ix. Q and S work in the same office and they get down together at Vile-Parle.

x. None of them gets down at Andheri.

16. At which station does T get down?

(a) Bandra (b) Vile-Parle

(c) Elphinston (d) Data inadequate

17. At which station do R and U get in?

(a) Andheri (b) Bandra

(c) Vile-Parle (d) Data inadequate

18. At which station do Q and S get in?

(a) Andheri (b) Base station

(c) Vile-Parle (d) Data inadequate

19. After how many stations does T get down?

(a) One (b) Two

(c) Four (d) None of these

20. T gets down how many stations after U gets down?

(a) Next station (b) One

(c) Two (c) None of these

Directions for Questions 21 to 24: Five friends went to an exhibition. At a shooting stall there are three things to be shot at— balloons, coins and needles. The number of balloons shot are 1, 4, 5, 6 and 8, while the number of coins shot are 0, 1, 2, 4 and 6.

i. The number of coins shot by A is three times the number of coins shot by the person who shot 4 balloons.

ii. Three persons, including the one who shot four coins, did not shoot any needle.

iii. B did not shoot any needle.

iv. The one who shot one balloon did not shoot any needle or coin. Further he was not (c).

v. D shot balloons and coins but no needle.

vi. C who did not shoot any needle, shot half as many coins as the person who shot twice as many balloons as he did.

vii. E shot two more balloons than A, but A shot two more coins than E.

21. Which of the following is true?

(a) C shot 8 balloons and 4 coins but no needles.

(b) The person who shot 5 balloons and one coin shot some needles.

(c) The person who shot an equal number of balloons and coins also shot needles.

(d) The person who shot 4 balloons and 2 coins also shot needles.

22. Which of these is correct?

(a) D shot 5 balloons (b) A shot 8 balloons

(c) E shot 1 balloon (d) E shot 6 balloons

23. Which of the following is true?

(a) B shot 2 coins (b) C shot 4 coins

(c) A shot 6 coins (d) D shot 4 coins

24. The person who shot an equal number of coins and balloons is:

(a) A (b) B

(c) C (d) D

Directions for Questions 25 and 26: The jailor of XYZ jail had 6 fruits—3 oranges, 2 apples and one pineapple. Four prisoners—101, 102, 103 and 104 are lined up one behind the other; the jailor helps them put the fruit on their head so that they cannot see the fruit kept on their head. Prisoner number 101 can see the fruit kept on the heads of 102, 103 and 104. Prisoner number 102 can see the fruit kept on 103's and 104's head. 103 can see the fruit kept on 104's head. 104 cannot see any of the fruits since he is at the front of the line.

Now, the jailor asks the prisoners to tell the name of the fruit kept on their head. Neither of them could reply.

25. What was the fruit on prisoner number 104's head?

(a) Orange (b) Apple

(c) Pineapple (d) Cannot be determined

26. Which of the following is definitely false?

(a) Prisoner number 101 did not see two apples and one pineapple.

(b) Prisoner number 102 did not see one apple and one pineapple or two apples.

(c) Prisoner number 103 did not see pineapple or apple on prisoner number 104's head

(d) All are true.

Directions for Questions 27 and 31: Four couples decided to play Holi. Each couple used three different colours. No two couples used the same combination of colours.

Asha, Bhavna, Chanchal and Divya are females whereas Pradeep, Qartar, Rajeev and Sanjay are males.

The colours they use are red, green, yellow and black.

i. Chanchal, who is not the wife of Sanjay, used red colour.

ii. Pradeep's wife used yellow and black colours but Qartar's wife used only one of these colours.

iii. Asha is not the wife of Pradeep or Sanjay.

iv. Bhavna and Sanjay's wife both used red and yellow colours.

27. Who among the following is Asha's husband?

(a) Pradeep (b) Qartar

(c) Rajeev (d) Data inadequate

28. Who is Qartar's wife?

(a) Asha (b) Chanchal

(c) Divya (d) Data inadequate

29. Which of the following is not correctly paired?

Person	**Colours**
(a) Qartar	Green, Yellow, and Black
(b) Pradeep	Red, Yellow and Black
(c) Rajeev	Green, Yellow and Black

(d) All of the above

30. Which of the following couples are incorrectly matched?

i. Asha & Rajeev

ii. Bhavna & Pradeep

iii. Chanchal & Sanjay

iv. Divya & Qartar

(a) Both (i) & (ii) (b) All (i), (ii) & (iii)

(c) Both (iii) & (iv) (d) All (ii), (iii) & (iv)

31. Which of the following is correctly matched?

Person	**Colours**
(a) Asha	Red, Yellow and Black
(b) Bhavna	Green, Yellow and Black
(c) Chanchal	Red, Green and Black
(d) Divya	Yellow, Red and Black

Directions for Questions 32 to 36: Abhay, Balbir, Chandan, Dinesh and Eklakh are alumni of the IAS academy in Mussoorie. They are in Mussoorie to attend an alumni meet along with their wives Priya, Quindal, Riya, Shailja and Tulsi, (not necessarily in the given order). They stay in the guest room of the academy in rooms numbered from 101 to 105. One interesting thing is that each couple's wedding anniversary is on the coming Friday.

i. No two married couples were married in the same year.

ii. Balbir whose wife is not Shailja was married three fourths of as many years ago as Dinesh.

iii. Eklakh is staying in room number 103.

iv. Priya was married five years before Abhay and three years before Eklakh.

v. Only Shailja's room is in-between Abhay's and Eklakh's room.

vi. Abhay, who was married before Shailja, was married five years after Chandan got married.

vii. The couple staying in room number 101 got married 10 years before the couple staying in room 104.

viii. Quindal is staying in room number 102.

ix. Tulsi was married before Riya and she was married 12 years before Quindal got married.

Based on the above information, answer questions 32 to 36:

32. Who is the husband of Riya?

(a) Chandan (b) Abhay

(c) Balbir (d) Data inadequate

33. Who is celebrating the silver jubilee of his marriage anniversary?

(a) Chandan (b) Abhay

(c) Balbir (d) Data inadequate

34. Who is the wife of Balbir?

(a) Riya (b) Quindal

(c) Shailja (d) Data inadequate

35. If rooms are allotted on the basis of their married years, then which room number does not need shifting of its occupants? (105 is allotted to couples of maximum married years and 101 is allotted to couples of least married years).

(a) 101 (b) 103

(c) 104 (d) All rooms need a shift

36. For how many years has Eklakh enjoyed his married life?

(a) 30 (b) 27

(c) 25 (d) Data inadequate

37. Persons X, Y, Z and Q live in red, green, yellow or blue coloured houses which are 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 colour of the house X lives in is:

(a) Blue

(b) Green

(c) Red

(d) Not possible to determine

38. Five persons with names P, M, U, T and X live separately in any one of the following: in a palace, a hut, a fort, a house or a hotel. Each one likes two different colours from among the following: blue, black, red, yellow and green. U likes red and blue, T likes black. The person living in a palace does not like black or blue. P likes blue and red M likes yellow. X lives in a hotel. M lives in a:

(a) Hut (b) Palace

(c) Fort (d) House

39. The Banerjees, the Sharmas, and the Pattabhiramans each have a tradition of eating Sunday lunch as a family. Each family serves a special meal at a certain time of day. Each family has a particular set of chinaware used for this meal. Use the clues below to answer the following questions.

i. The Sharma family eats at noon.

ii. The family that serves fried brinjal uses blue chinaware.

iii. The Banerjee family eats at 2 o'clock.

iv. The family that serves sambar does not use red chinaware.

v. The family that eats at 1 o'clock serves fried brinjal.

vi. The Pattabhiraman family does not use white chinaware.

vii. The family that eats last likes makkai-ki-roti.

Which one of the following statement is true?

(a) The Banerjees eat makkai-ki-roti at 2 o'clock, the Sharmas eat fried brinjal at 12 o' clock and the Pattabhiramans eat sambar from red chinaware.

(b) The Sharmas eat sambar served in white chinaware, the Pattabhiramans eat fried brinjal at 1 o'clock, and the Banerjees eat makkai-ki-roti served in blue chinaware.

(c) The Sharmas eat sambar at noon, the Pattabhiramans eat fried brinjal served in blue chinaware, and the Banerjees eat makkai-ki-roti served in red chinaware.

(d) The Banerjees eat makkai-ki-roti served in white chinaware, the Sharmas eat fried brinal at 12 o'clock and the Pattabhiramans eat sambar from red chinaware.

Directions for Questions 40 to 41: Read the information and answer the questions.

Amitabh, Bhagyashree, Chunky, Dharmendra, Ekta, Farhan and Govinda are students of a class. Each of them has a different favourite subject, *viz*., Economics, Commerce, Zoology, Sociology, Statistics, Urdu and Computers but not necessarily in the same order. There are two such students whose one sister each is there in the group. There is no other relation among the students. No boy likes Commerce or Urdu. Dharmendra, who does not like Sociology and Statistics, is the brother of tha

student who likes Computers. The student who likes Sociology is the sister of that boy student who likes Economics. F is a boy student, B is sister of A.

40. Which of the following is a pair of brother-sister other than Amitabh and Bhagyashree?
    (a) Dharmendra and Govinda
    (b) Dharmendra and Chunky
    (c) Dharmendra and Ekta
    (d) Data Inadequate
41. Which of the following is true?
    (a) Dharmendra likes Commerce.
    (b) Chunky, Bhagyashree and Dharmendra are girl students.
    (c) The number of girls is more than that of the number of boys in the group.
    (d) None of these

Directions for Question 42 to 43: Answer the questions by studying the information given below.

Five colleagues met at the party. While chatting that night they discovered that each of them has a favourite TV show that airs one night during the week. By coincidence, each of them loves a different show, each of which airs on a different night and channel. Given below are a few clues about the full name of each colleague, the genre their favourite show is in, the night each show airs, and the channel the show airs on (one of the channel is Channel 6).

(a) Manmohan didn't watch a show on Friday night. Mr. Obama watched his favourite show on Channel 21, the highest numbered channel. The favourite shows airing on Tuesday and Thursday night were on channels one number apart.

(b) The man who watched the western show on Channel 7 didn't watch TV on Wednesday night. Mark watched a channel one digit lower than the man who watched the sports show.

(c) Mr. Singh watched the show on Channel 5, the lowest-numbered channel. The science fiction show aired on Channel 12.

(d) Barack didn't watch TV on Monday night. Mr. Twain didn't watch the action show. Manmohan didn't watch the sports show.

(e) Gordon's favourite show aired on a channel higher than the Tuesday night show but lower than the show that Charles watched.

(f) The five colleagues watched their favourite shows during the week in the following order: Mark, the man who watched Channel 7, the man who watched the mystery, Mr. Brown, and Mr. Babbage.

42. What is the full name of Barack?
    (a) Barack Babbage
    (b) Barack Singh
    (c) Barack Brown
    (d) Barack Obama
43. Channel 5 is viewed by whom, on which day and which is his favourite program genre?
    (a) Mark Twain, Monday and Western
    (b) Charles Singh, Monday and Action

(c) Barack Babbage, Thursday and Sports

(d) Mark Singh, Monday and Action

Directions for Questions 44 to 45: Read the following information and answer the questions that follow.

Houses numbered 1A to 4D situated east to west in that order, are each occupied by College of Commerce professors. They all teach different subjects, possess different makes and different models (years) of bikes:

(i) Anurag Kesarwani does not own a Suzuki (owner of which is professor of Gujrati language).

(ii) Anshul has a Honda bike.

(iii) Mr. Khanduja lives in House No. 3.

(iv) Mr. Singh is the professor of Sanskrit language.

(v) 2001 model of bike owned by the Urdu language professor is not of BMW make.

(vi) Vivek is the professor of Bengali language.

(vii) Mr. Saxena is not the owner of 2004 model bike, owner of which lives next to in a house westward of one owning 2002 model bike.

(viii) Siddhartha's is House No. 4.

44. Prof. Singh owns which make and model (year) of bike?

(a) Suzuki of 2001 (b) BMW of 2004

(c) Honda of 2002 (d) BMW of 2003

45. If Urdu and Sanskrit language professors exchange their bikes, who could be the owner of the latest model?

(a) Anurag only

(b) Siddhartha only

(c) Vivek only

(d) Siddhartha or Vivek only

Directions for Questions 46 to 48: Study the following information carefully and answer the questions given below:

Five friends Michael, Mark, Lewis, Karan and Jenson are students of five different disciplines—medical, engineering, architecture, arts, management and each plays a different musical instrument—sitar, tabla, sarod, guitar and violin.

Lewis, a medical student, does not play sarod or sitar nor guitar.

Jenson is neither a student of Engineering nor Management.

Karan, who plays tabla, is an Arts student.

Neither Jenson nor Michael plays sarod.

46. Who among the following plays Sarod?

(a) Michael (b) Mark

(c) Jenson (d) Data inadequate

47. The guitarist is a student of which of the following disciplines?
    (a) Engineering
    (b) Either Engineering or Management
    (c) Architecture
    (d) Data inadequate

48 Who among the following plays Sitar?
    (a) Michael (b) Mark
    (c) Jenson (d) Data inadequate

Directions for Questions 49 to 51: Read the information and answer the questions that follow.

Five friends—Ramesh, Suresh, Tanveer, Umesh, and Vikram—each present one paper to their class on mathematics, history, biology, chemistry, or dermatology—one day a week, Monday through Friday.

(i) Vikram does not do chemistry and does not give his presentation on Tuesday.
(ii) Suresh makes the dermatology presentation, and does not do it on Monday or Friday.
(iii) The mathematics presentation is made on Thursday.
(iv) Tanveer presents his presentation, which is not on Chemistry, on Wednesday.
(v) The biology presentation is on Friday, and not by Umesh.
(vi) Ramesh makes his presentation on Monday.

49. What day is the Chemistry presentation made?
    (a) Friday (b) Monday
    (c) Tuesday (d) Wednesday

50. What presentation does Vikram do?
    (a) Chemistry (b) Dermatology
    (c) Mathematics (d) Biology

51. What day does Umesh make his presentation on?
    (a) Monday (b) Tuesday
    (c) Wednesday (d) Thursday

Answer Key

1. (a)	2. (b)	3. (d)	4. (c)
5. (a)	6. (d)	7. (b)	8. (c)
9. (d)	10. (b)	11. (b)	12. (b)

13. (c)	14. (d)	15. (d)	16. (c)
17. (d)	18. (d)	19. (c)	20. (c)
21. (c)	22. (a)	23. (c)	24. (a)
25. (a)	26. (d)	27. (c)	28. (b)
29. (a)	30. (c)	31. (c)	32. (b)
33. (b)	34. (b)	35. (d)	36. (b)
37. (a)	38. (b)	39. (c)	40. (d)
41. (c)	42. (c)	43. (d)	44. (c)
45. (d)	46. (b)	47. (d)	48. (d)
49. (b)	50. (d)	51. (d)	

Solutions

Questions 1 to 5

The direct clues give you the following linkages—green – Pentasoft, Blue– Sunmet

A– Pink – Quark, E – Udupi, C – Pentasoft

Combining these clues will give you the following table:

A	B	C	D	E	F
Quark		Pentasoft	Udupi		
Pink		Green			

At this point use Clue no. (ii) [about F]. This will give you that the correct pairing for Sunmet is with F. Also use Clue (iv) at this stage.

The table would evolve to:

A	B	C	D	E	F
Quark	Trump & Gates	Pentasoft	Raymonds	Udupi	Sunmet
Pink	Green				Blue

Now using Clue (vi), you will get that Trump & Gates is red and since purple is not with Raymonds, the final table will be

A	B	C	D	E	F
Quark	Trump & Gates	Pentasoft	Raymonds	Udupi	Sunmet
Pink	Red	Green	Yellow	Purple	Blue

From this point, you need to just read off the respective answers to the questions asked from the completed table.

The answers are:

1. Yellow. Option (a)
2. Option (b) is correct.
3. Option (d) is correct.
4. Option (c) is correct.
5. Option (a) is correct.

Questions 6 to 8

Reaction Tracker

	Reaction
Clue 1	5 People and 5 Trouser Colours
Clue 2	5 Different Likings
Clue 3 Statement 1	Kapil-Sing-Not Yellow
Statement 2	Sarvesh – Red–Not Read or Write
Statement 3	Nagesh – Play – Not Blue or Yellow
Statement 4	Amar–Write
	Rohan – Not Yellow or Green

At this stage, combining Statements 1, 2, 3 and 4 of Clue (iii) you will get the following table:

Amar	**Kapil**	**Sarvesh**	**Rohan**	**Nagesh**
Write	Sing	Travel*	Read *	Play
Yellow#	Blue/White/ Green		Blue/ White	White/ Green

* Since Sarvesh does not read, Rohan must like reading and Sarvesh must like travelling.

\# Amar must be yellow, since Kapil, Rohan and Nagesh are not yellow.

Further we are not able to define the exact colours of Kapil, (who can be blue/white or green), Rohan (blue or white) or Nagesh (white/green). Hence the above table is the final one.

Thus, Kapil's trouser colours cannot be answered. (Question 6) Sarvesh likes travel (Question 7) and Amar–yellow–write is the correct combination.

The answers are:

6. Option (d)
7. Option (b)
8. Option (c)

Questions 9 to 11

Reaction Tracker

	Reaction
Clue 1	5 students, 5 books and 5 authors
Clue 2 Statement 1	Gupta – Physics – Not Vinay or Sujt

Statement 2	Edwin–Mihir
Clue 3 Statement 1	Maths –Neena
Statement 2	English – Vinay–not Khanna
Statement 3	Sharma – Biology

On the basis of the reaction to Clue (ii) and (iii) as shown above, you should realise that the maximum numbers of direct links are between the author and the subject. Hence, your solution table should first give a structural placement of authors and subjects. When you do so, the following table shall emerge.

Solution Table 1:

Sharma	**Edwin**	**Gupta**		
Biology		Physics	Maths	English
	Mihir		Mihir	Vinay

Reacting to the above the table, you will immediately see that Edwin must be Chemistry. Further using Sentence (ii) of Clue (iii) you will get that since Vinay is not using a book authored by Khanna, he must be using Harish and consequently Khanna must have authored Maths.

We also know from Clue (ii), Sentence 1 that Gupta and Physics is not owned by Vinay or Sujit Hence, Sujit must be Biology and Randhir must be Physics. The final table then becomes:

Sharma	**Edwin**	**Gupta**	**Khanna**	**Harish**
Biology	Chemistry	Physics	Maths	English
Sujit	Mihir	Randhir	Neena	Vinay

Consequently the correct answers are:

9. Biology–Sujit–Sharma
10. Edwin
11. Vinay

Questions 12 to 15

From Clues (i), (ii), and (iii):

7 people–A, B, C, D, E, F & G

5 cities – Delhi, Chennai, Lucknow, Bangalore and Kolkata

5 specialisations – Admin, HRM, Marketing, Systems, Finance

From Clues (iii) and (iv) we have:

D	
E – Chennai	X Fin, X Marketing
G – Delhi	Systems
F – No place	?

B – No place	HRM
A – X Bangalore, X Kolkata	X Marketing
C -	

Refining the above table, the following deduction can be made: E must be from Admin. The table evolves to:

D-	
E–Chennai G–Delhi F–No place B–No place A–Lucknow C-	Admin Systems Marketing HRM Finance

Hence the answers are:

12. (b)
13. (c)
14. (d)
15. (d)

Questions 16 to 20: The following table will emerge out of the given clues:

Station	Gets in	Gets down
Base Station	T RU/QS	_____
Andheri	QS/RU	_____
Bandra		U
Vile-Parle	V	QS
Elphinston	P	T
Chinchpokli		VRP

Start from the Statement (iv).

Then go through statement (v): P travels only two stations and gets down at Chinchpokli which means that he must have boarded at Elphinston.

Then go to Statement (ix), proceed through (viii) to Statement (ii) and proceed as said in the remaining statements.

The answers are:

16. Elphiston. Option (c) is correct.
17. Data inadequate as we do not know whether it is the base station or Andheri. Option (d) is correct.
18. Data inadequate as we do not know whether it is the base station or Andheri. Option (d) is correct.

19. T gets down after 4 stations. Option (c) is correct.
20. Option (c) is correct.

Questions 21 to 24:

Reaction Tracker

Opening Paragraph: 5 friends A, B, C, D and E

Balloons 1, 4, 5, 6 and 8

Clue (i)

Coins 0, 1, 2, 4 and 6 needles, means A must have shot 6 coins and somebody must have shot 4 balloons and 2 coins.

Clue (ii)
Clue (iii)
Clue (iv)
Clue (v)

	Balloons	Coins	Needles
A		6	
B			0
C			
D	√	√	0
E			
Someone	4	2	
Someone Not C	1	0	0

Clue (vi)

C shot no needle. Further, someone shot twice as many coins and balloons as C. This means that C must have shot 4 balloons and someone else must have shot 8 balloons. But we also know that the person who shot 4 balloons shot 2 coins. Hence, someone else shot 8 balloons and 4 coins.

Clue (vii)

A shot 2 more coins than E, means that E must have shot 4 coins (and hence 8 balloons). Hence, A must have shot six balloons. The table now evolves to:

	Balloons	Coins	Needles
A	6	6	
B	1	0	0
C	4	2	0
D	5	1	0
E	8	4	

Hence the answers are:

21. Option (c) is true for A. Hence (c).
22. D shot 5 balloons is true. Hence Option (a) is correct.
23. Option (c) is again correct from the table.
24. A. Hence Option (a) is correct.

Questions 25 and 26: The following 19 possibilities emerge for what 101 could have seen. (Note: Be systematic while making this table.)

Possibility #	104	103	102
1	O	O	O

2	O	O	A
3	O	O	P
4	O	A	O
5	O	P	O
6	A	O	O
7	P	O	O
8	A	A	O
9	A	O	A
10	O	A	A
11	O	A	P
12	O	P	A
13	P	O	A
14	A	O	P
15	O	A	P
16	O	P	A
17	A	A	P
18	A	P	A
19	P	A	A

From the table above it is clear that if 101 had seen 2 apples and 1 pineapple he would have answered immediately. But since he doesn't answer, possibilities 17, 18 or 19 can be ruled out.

102 also realises that 101 is not answering and hence rules out possibilities 17, 18 and 19. He considers what he sees on 103 and 104 in the context of possibilities 1–16. It can be seen from the table that if he had seen 2 apples, he would know that there was only Possibility 8 to consider. In such a case he would know that there was definitely an orange on his head. However, he does not answer. Thus, we can conclude that Possibility 8 is not possible. 103 realises that 102 is not answering and considers only possibilities 1–7 and 9–16.

Of these, we can realise that if he had seen an apple or a pineapple on 104 he would know that he had an orange on his head. But, since he doesn't answer, we can eliminate Possibilities 6, 7, 9, 13 and 14. This leaves us with only Possibilities 1–5, 10–12 and 15–16. Hence:

25. (a) 104 must have an orange on his head.
26. (d) All statements are true.

Questions 27 to 31: The starting grid in random order would be:

Wives	Husbands	Colour Combinations

Asha (A)	Pradeep (P)	(1) Red, Green, Yellow
Bhavna (B)	Qartar (Q)	(2) Red, Green, Black
Chanchal (C)	Rajeev (R)	(3) Red, Yellow, Black
Divya (D)	Sanjay (S)	(4) Green, Yellow, Black

Using Clue (i) and Clue (iii), we can make some conclusions about Asha and Chanchal.

Asha– Q/R	Pradeep (P)	(1) Red, Green, Yellow
Bhavna-	Qartar (Q)	(2) Red, Green, Black
Chanchal–P/Q/R 1/2/3	Rajeev (R)	(3) Red, Yellow, Black
Divya	Sanjay (S)	(4) Green, Yellow, Black

Using Clues (ii) and (iv), we get some conclusions about the men and the colour combination they used. (Note: We know Bhavna is not Sanjay's wife because Clue (iv) mentions them as separate individuals).

Asha– Q/R	Pradeep 3/4	(1) Red, Green, Yellow
Bhavna– P,Q,R 1/3	Qartar 1/2	(2) Red, Green, Black
Chanchal– P/Q/R 1/2/3	Rajeev	(3) Red, Yellow, Black
Divya	Sanjay 1/3	(4) Green, Yellow, Black

From the above table (the wives column) it is clear that P, Q and R have to be shared amongst A, B and C in random order. Hence, Divya must be Sanjay's wife.

The table evolves to:

Asha– Q/R	Pradeep 3/4	(1) Red, Green, Yellow
Bhavna– P/Q/R 1/3	Qartar 1/2	(2) Red, Green, Black
Chanchal– P/Q/R 1/2/3	Rajeev	(3) Red, Yellow, Black
Divya– S 1/3	Sanjay 1/3	(4) Green, Yellow, Black

From the above table, it is evident that Color Combination 4 belongs to Asha (as Color Combinations 1/2/3 are shared between Bhavna, Chanchal and Divya). Also, Chanchal would get Color Combination 2 as it cannot go to any other woman.

The table now becomes:

Asha– Q/R 4	Pradeep 3/4	(1) Red, Green, Yellow
Bhavna– P/Q/R 1/3	Qartar 1/2	(2) Red, Green, Black
Chanchal– P/Q/R 2	Rajeev	(3) Red, Yellow, Black
Divya– S 1/3	Sanjay 1/3	(4) Green, Yellow, Black

At this stage Clue (ii) gives us that Qartar's wife used only one colour out of yellow and black.

Hence, Asha (Color Combination 4) cannot be Qartar's wife and thus must be Rajeev's wife.

This means that P and Q must be shared between B and C. Since we know that Pradeep's wife used yellow and black colours, Chanchal cannot be married to Pradeep (Chanchal's colour combination does not use both the colours yellow and black). Thus Pradeep must be married to Bhavana. Thus, the

table evolves to:

A – R – (4)
B – P – (3)
C – Q – (2)
D – S – (1)

Accordingly the answers are:

27. Rajeev (c)
28. Chanchal (b)
29. (a)
30. (c)
31. (c)

Questions 32 to 36 : The initial grid to start off would be something like:

	P	Q	R	S	T	101	102	103	104	105
A										
B										
C										
D										
E										

The following deductions would follow:

From Clues (ii), (iii), (iv) and (v) the grid would evolve to:

	P	Q	R	S	T	101	102	103	104	105
A	×			×				×		
B				×				×		
C								×		
D								×		
E	×			×		×	×	√	×	×

Besides, from these 4 clues we could also realise the following additional deductions:

(a) Order of marriage $P \xrightarrow{+3} E \xrightarrow{+2} A$ (From Clue iv)

(b) Shailja must be in either 102 or 104.

(c) Abhay's room must be either 101 or 105.

Using Clue (vi) we get that Shailja is not Abhay's wife and neither is she Chandan's wife. (Since Chandan was married before Abhay and Shailja was married after Abhay). Hence, she must be Dinesh's wife.

Also, Clue (viii) gives us that Quindal is in Room 102, hence from deduction (b) above Shailja must be in Room 104 and consequently Abhay must be in Room 105. The table would evolve to:

	P	Q (102)	R	S(104)	T	101	102	103	104	105
A	×	×		×		×	×	×	×	√
B				×				×	×	×
C				×				×	×	×
D	×	×	×	√	×	×	×	×	√	×
E	×	×		×		×	×	√	×	×

Note: One additional deduction we have drawn in the above table is that Quindal (being in Room 102) cannot be the wife of either Abhay (105) or Eklakh (103). Hence R and T would be the wives of A and E (in random order) as they have to be shared between A and E.

This also means that P and Q must be shared between B and C. Thus the grid evolves to:

	P	Q	R	S	T	101	102	103	104	105
A	×	×		×		×	×	×	×	√
B			×	×	×			×	×	×
C			×	×	×			×	×	×
D	×	×	×	√	×	×	×	×	√	×
E	×	×		×		×	×	√	×	×

At this point use Clue (ix), along with the deduction $P \xrightarrow{+3} E \xrightarrow{+2} A$

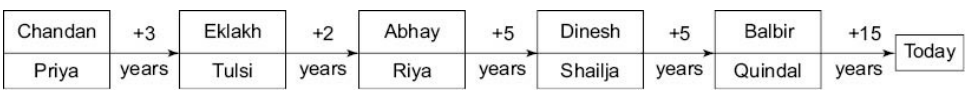
Since Tulsi and Riya have to be shared between Abhay and Eklakh and Eklakh has got married before Abhay, he must be married to Tulsi and Abhay to Riya. The grid would evolve to:

	P	Q	R	S	T	101	102	103	104	105
A	×	×	√	×	×	×	×	×	×	√
B			×	×	×			×	×	×
C			×	×	×			×	×	×
D	×	×	×	√	×	×	×	×	√	×
E	×	×	×	×	√	×	×	√	×	×

At this stage if you try to draw **a time line for their marriages,** you would get the following figure:

Existing figure $\text{Priya} \xrightarrow{+3} \text{Eklakh} \xrightarrow{+2} \text{Abhay}$

If we use the logic contained in Clue (vi), we get that Abhay married 5 years after Chandan. Hence Chandan and Priya must be married. Consequently Quindal and Balbir must be married. Also, since Balbir got married $3/4^{th}$ the number of years ago as Dinesh we can conclude that Balbir got married 15 years ago. Based on these deductions the timeline looks like:



The final table is:

	P	Q	R	S	T	101	102	103	104	105

A	×	×	√	×	×	×	×	×	×	√
B	×	√	×	×	×	×	√	×	×	×
C	√	×	×	×	×	√	×	×	×	×
D	×	×	×	√	×	×	×	×	√	×
E	×	×	×	×	√	×	×	√	×	×

The answers are:

32. Abhay. Option (b) is correct.
33. Abhay has been married for 25 years. Option (b) is correct.
34. Quindal. Option (b) is correct.
35. All the rooms would need to shift. Option (d) is correct.
36. 27 years. Option (b) is correct.
37. We have two possible combinations.

	Z		X
red	yellow	green	blue
X		Z	
blue	green	yellow	red

But from both combinations we get that X lives in the blue house. Option (a) is correct.

38. M would live in a palace as U,T and P like either black or blue and X lives in a hotel. Option (b) is correct.
39. The grid would be:

12	1	2
Sharma's	Pattabhiraman	Banerjee
White	Blue	Red
Sambar	Fried Brinjal	Makkai-ki-roti

Option (c) is correct.

Questions 40 and 41: Let us tabulate the given information to get a clear picture of the scenario.

The first piece of information that fills the blanks is that no boy likes Commerce or Urdu. Then next information that is useful is that Dharmendra does not prefer Sociology and Statistics and is a boy hence he does not like Urdu and Commerce also. He is also brother of the person who opts for Computers. (Thus the person opting for computers must be a girl). So he must be having either Economics or Zoology. Now we are given that Amitabh and Bhagyashree are brother and sister and, hence Amitabh and Bhagyashree both will not have computers. Also Farhan is given as a boy student hence, by default from previous information, he does not like Urdu and Commerce, and also since he is a boy he cannot be Dharmendra's sister and thus cannot have computers. Thus, we have covered all the possibilities for boys except for the pair of brother and sister having Economics and Sociology.

Clearly since Amitabh and Bhagyashree are the only brother and sister mentioned in the information, they must be the ones having those subjects. Consequently Dharmendra must be having Zoology and Farhan would have Statistics. Commerce, Urdu and Computers would be shared between Chunky Ekta and Govinda in some random order. Hence, they must be girls. The resultant table can be drawn as follows:

	Brother of Bhagyashree	Sister of Amitabh	Girl	Boy	Girl	Boy	Girl
	Amitabh	Bhagyashree	Chunky	Dharmendra	Ekta	Farhan	Govinda
Economics	√	X	X	X	X	X	X
Commerce	X	X	????	X	????	X	????
Zoology	X	X	X	√	X	X	X
Sociology	X	√	X	X	X	X	X
Statistics	X	X	X	X	X	√	X
Urdu	X	X	????	X	????	X	????
Computers	X	X	????	X	????	X	????

The answers are:

40. Option (d) is the correct answer as we do not know who Dharmendra's sister is.
41. Option (c) is the correct answer as there are 4 girls in the group.

Questions 42 and 43: From the given information a table can be formed which will give a clear picture of the scenario.

First Name	Last Name	Program	Day	Channel
Barack	Brown	Sports	Thursday	6
Gordon	Babbage	Science Fiction	Friday	12
Manmohan	Twain	Western	Tuesday	7
Mark	Singh	Action	Monday	5
Charles	Obama	Mystery	Wednesday	21

42. Option (c) is the correct answer.
43. Option (d) is the correct answer.

Questions 44 and 45: To solve the question, we have to decode the information step by step and hence interpret the information.

Anshul owns the Honda and Vivek teaches Bengali => Gujrati teacher owning Suzuki – who isn' Anurag Kesarwani – is Siddhartha in House No. 4D (Clues (ii), (vi), (i), (viii)).

Prof. Singh who teaches Sanskrit is Anshul (Clue (iv)). Anurag Kesarwani, who teaches Urdu owns 2001 model bike which is not BMW (Clue (v)), neither is it Suzuki nor Honda – an unknown make.

So, Vivek Khanduja owns BMW in House No. 3C and Siddhartha's surname is Saxena (Clue (iii)).

Since Siddhartha's vehicle is not a 2002 or 2004 model (Clue (vii)) and neither a 2001 model – it is model of an unknown year (which could be 2005 or an earlier year).

Now 2002 model belongs to House No. 2 and 2004 model to House No. 4.

Anshul Singh's is 2002 model and Vivek Khanduja's is 2003 model.

Remaining House No. 1A is Anurag Kesarwani's.

The summary is as under

Anurag – Kesarwani – Urdu –???? – 2001

Anshul – Singh – Sanskrit – Honda – 2002

Vivek – Khanduja – Bengali – BMW – 2003

Siddhartha – Saxena – Gujrati – Suzuki – ????

44. Option (c) is the correct answer.
45. Option (d) is the correct answer.

Questions 46 to 48: To understand the arrangement we need to tabulate all the clues and facts given in the question.

	DISCIPLINE					**MUSICAL INSTRUMENTS**				
NAME	**MEDICAL**	**ENGG.**	**ARCH.**	**ART**	**MGMT**	**SITAR**	**TABLA**	**SAROD**	**GUITAR**	**VIOLIN**
MARK	X	????	X	X	????	X	X	√	X	X
MICHAEL	X	????	X	X	????	????	X	X	????	X
LEWIS	√	X	X	X	X	X	X	X	X	√
KARAN	X	X	X	√	X	X	√	X	X	X
JENSON	X	X	√	X	X	????	X	X	????	X

46. Hence Option (b) is the correct answer.
47. There is a choice of Engineering, Architecture and Management. Hence Option (d) is the correct answer.
48. No clear clue provided hence Option (d) is the correct answer.

Questions 49 to 51: The following solution table would emerge out of these clues.

Day	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Person	Ramesh	Suresh	Tanveer	Umesh	Vikram
Presentation topic	Chemistry	Dermatology	History	Mathematics	Biology

Hence, the answers are:

49. Monday. Option (b)
50. Biology. Option (d)
51. Thursday. Option (d)