

CAT Logical REASONING Test 09

No. of Questions - 25

DIRECTIONS for questions 1 to 3: Study the information below to answer these questions.

For the promotion of "World Peace and Understanding", five topmost Bollywood heroines of India have been requested to participate in a forum to which they have agreed. They have arrived at the function and the photographer is having a tough time getting them to stand in a straight line because Priyanka refuses to stand next to Bipasha as Bipasha had spoken something about her in a leading gossip magazine. Karina and Vidya Balan want to stand together because they are "such good friends" as we all know. Katrina, on the other hand, can't get along well with Karina, because there is some talk about Karina getting a film contract which was almost awarded to Katrina. Vidya Balan believes her astrologer who has asked her to stand at the extreme right for all group photographs. Finally, the photographer has managed to pacify the Bollywood heroines and got a beautiful picture of the five beautiful heroines smilingly standing in a row, promoting world peace and understanding.

- If Priyanka is standing to the extreme left, which heroine is in the middle?
1. Katrina 2. Bipasha 3. Karina 4. Vidya Balan
- If Priyanka is standing to the extreme left, which heroine stands second from left?
1. Bipasha 2. Katrina 3. Karina 4. Vidya Balan
- If Vidya Balan's astrologer tells her to interchange her position and stand second from left and Priyanka decides to interchange her position and stand second from right, who is the girl standing on the extreme right now ?
1. Vidya Balan 2. Bipasha 3. Katrina 4. Karina

DIRECTIONS for questions 4 to 6: Study the information below to answer these questions.

There are ten animals in a zoo — two each of Lions, Panthers, Elephants, Bears and Deer. There are **five** enclosures namely A, B, C, D, and E in which **these** animals **are** to be housed. Each enclosure is to be looked after by one of the five attendants namely Jyoti, Madan, Suraksha, Samresh, and Raman meeting the following conditions:

- Two animals of different species are to be housed in each enclosure.
 - A Lion can't be together with a Deer.
 - A Panther can't be with either a Deer or an Elephant.
 - Samresh can attend to Elephant, Deer and Panther only.
 - Madan attends to Lion and Panther.
 - Jyoti does not attend to Deer, Lion or Elephant.
 - Enclosures A, B, C are allocated to Madan, Jyoti and Raman respectively.
 - A and E enclosures do have one animal of the same Species.
 - C and D enclosures have the same pair of animals.
- The animals attended by Suraksha are
1. Panther and Bear 2. Deer and Elephant 3. Lion and Bear 4. Lion and Panther
 - Which animals are put up in enclosure 'C'?

1. Lion and Panther 2. Panther and Bear 3. Deer and Elephant 4. Lion and Bear

6. Which pair of animals is housed in enclosure 'E'?

1. Elephant and Lion 2. Lion and Bear 3. Panther and Bear 4. Lion and Panther

DIRECTIONS for questions 7 to 9: Study the information below to answer these questions.

Awareness of management studies is spreading fast among the present generation of students and rightly so because management principles, methods and techniques are required these days in each and every field of economics, business and trade activity. Even the employed persons are going in for evening classes and distance learning mode. As per one estimate, there would be a requirement of 50,000 qualified managers in the next couple of years.

A survey was carried out to find the discipline or area of management the students are keen to specialize in. Their responses were:

Respondent A : HRD, Retail Management, Project Management & Hospitality.

Respondent B : Marketing Management, Finance, International Trade & Information Technology.

Respondent C : Marketing, HRD, International Trade & Project Management.

Respondent D : Retail Management, Finance, Hospitality & Information Technology.

Respondent E : Information Technology, Project Management, HRD & Finance.

7. Which pair is keen for Finance and Information Technology, but not Retail and Hospitality?

1. A and B 2. B and C 3. C and D 4. B and E

8. Who is not keen for Finance and Retail, but keen on HRD and Project Management?

1. B 2. C 3. D 4. E

9. Which pair is not keen for Marketing and International Trade, but is keen for Project Management and HRD?

1. B and C 2. B and D 3. C and E 4. A and E

DIRECTIONS for questions 10 to 12: Study the information below to answer these questions.

There are five students staying in a hostel and pursuing higher studies in a college, namely Maneesh, Raman, Lalit, Rajender and Narender. They belong to poor families and need financial assistance to meet out their expenses. They have agreed to work together on a part-time job offered by a local restaurant. The restaurant is open from Monday to Friday in a week and the group has the following schedules when they can work together.

- Narender and Raman can work on Monday, Tuesday and Wednesday.
- Raman and Rajender can work on Monday, Wednesday and Thursday.
- Rajender and Lalit can work on Monday, Thursday and Friday.
- Lalit and Maneesh can work on Tuesday, Thursday and Friday.
- Narender and Maneesh can work on Tuesday, Wednesday and Friday.

10. Which one of the friends can't work on Thursdays?

1. Maneesh 2. Rajender 3. Narender 4. Raman

11. Which one among the group can't work on Mondays?

1. Rajender 2. Maneesh 3. Narender 4. Lalit

12. Name the person who can't work on Wednesdays.

1. Narender 2. Raman 3. Maneesh 4. Lalit

DIRECTIONS for questions 13 to 15: Study the information below to answer these questions. Delhi, the capital of India is an attractive destination for tourists. Visitors from foreign lands feel their visit to India is incomplete if they do not visit and stay in Delhi for a few days. Indians from other towns visit Delhi either for business or for sightseeing. There is a special rush of visitors on international exhibitions and sports events. To cater for these special visitors for their boarding and lodging, there are very nice star hotels spread over all parts of the city. A few visitors were interviewed to find out their preferences of hotels for comfort, cost and catering. Their views:

- Visitor A : Grand, Samrat, Radisson and Ashoka
 Visitor B : Taj Palace, Ashoka, Hyatt and Oberoi
 Visitor C : Centaur, Taj Palace, Radisson and Hyatt
 Visitor D : Grand, Taj Palace, Samrat and Oberoi
 Visitor E : Hyatt, Centaur, Oberoi and Samrat

13. Who prefers to stay at Oberoi and Hyatt and not at Radisson and Samrat?

1. A 2. D 3. B 4. E

14. Who does not want to stay at Ashoka and Radisson but prefers Taj Palace and Oberoi ?

1. A 2. C 3. D 4. E

15. Who likes to stay at Taj Palace but not at Oberoi?

1. B 2. D 3. A 4. C

DIRECTIONS for questions 16 to 20: In each of these questions, choose the missing terms out of the given alternatives.

16.

	A			
	9			
J	10	52	4	D
		5		
	G			

	M			
	12			
V	15	85	8	P
		6		
	S			

	Y			
	13			
H	18	?	16	?
		10		
	E			

1. C and 12 2. B and 198 3. D and 11 4. A and 130

17.

7	A	5
G	47	C
4	E	3

8	I	4
O	44	K
64	M	2

5	Q	1
W	?	?
4	U	2

1. V and 9

2. T and 3

3. S and 6

4. Y and 5

18.

	A	E	I	
A	20	30	40	M
W	14	18	15	Q
?	2	?	5	U
O	140	90	120	Y
	K	G	C	

1. T and 5

2. L and 4

3. S and 6

4. Q and 10

19.

	3	5	7	
3	D	G	K	1
7				1
3				3
5	E	M	R	?
3	B	J	?	?
1				
	9	3	9	

1. N and 19

2. L and 17

3. P and 21

4. T and 15

20.

	3	3	
	1	7	
	Z	N	M
6	?	7	F
1			
	W	J	R
?			
	5	4	
	3	7	

1. 10 and 56

2. 12 and 59

3. 8 and 46

4. 18 and 52

21. A, B, C, D, E, F and G are seven members of a family. Each one of them has a different profession — doctor, teacher, lawyer, engineer, architect, CA and banker and their incomes are different. There are two married couples in the group. C is the doctor and earns more than the engineer and the lawyer. E is married to

the CA and she earns the least. No lady is either lawyer or engineer. B, the teacher, earns less than A, the banker. G the Engineer is married to B and he earns more than D and A. F is not the lawyer. The CA earns less than the lawyer but more than the banker. Which of the following is a pair of married couple?

1. F and E 2. D and E 3. C and E 4. None of these

22. There is a family of seven persons representing three generations. There are two married couples. Both the wives are housewives and both have two children each. Ramcharan, the lawyer, is the father of Rohit and has two grandchildren. Monica, the doctor, is the sister of the teacher. Sudha's daughter-in-law Asha is married to a teacher. Shikha, the grand-daughter of one of the housewives, is studying in the 8th standard. How many female members are there in the family?

1. 2 2. 4 3. 5 4. Can't Say

23. Raja is son of Varun's father's sister. Sameer is son of Ganga, who is mother of Jai and grandmother of Varun. Nitin is father of Varsha and grandfather of Raja. Ganga is wife of Nitin. How is Jai's wife related to Varsha?

1. Sister-in law 2. Niece 3. Sister 4. None of these

24. Rashmi leaves her house and moves 50 meters southwards. She then turns to the left and goes another 20 metres. Then turning to the North, she moves another 30 metres and then starts walking towards her house. In which direction is she walking now?

1. North 2. North-East 3. South-East 4. North-West

25. Ajanta, Bhowmick, Chander, Devika, Imli and Faulad are six friends sitting around a round table for a discussion. Ajanta is to the right of Imli and between Imli and Faulad. Imli is positioned opposite to Devika. Chander is not in the neighbouring seats of Imli, but is a close neighbour of Bhowmick. Who is opposite to Bhowmick?

1. Devika 2. Ajanta 3. Faulad 4. Chander

MAT Dec. 2011



ANSWER KEY

1.	2
2.	2
3.	4
4.	2
5.	3
6.	2
7.	4
8.	2
9.	4
10.	3
11.	2
12.	4
13.	3
14.	3
15.	4
16.	2
17.	3
18.	3
19.	2
20.	2
21.	1
22.	4
23.	1
24.	4
25.	3

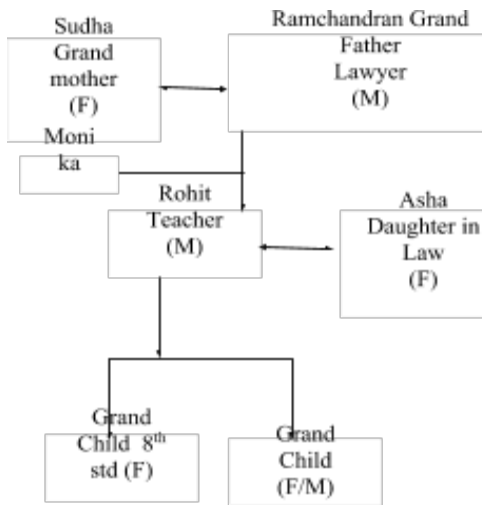
MAT Dec. 2011

EXPLANATIONS

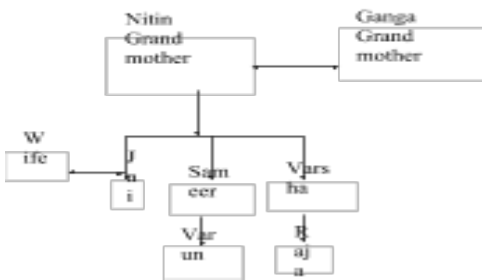
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16.	<p>A - - D - - G - - J ; M - - P - - S - - V ; Y - - B - - E - - H</p> <p>Also: $(9+5-1)(5-1) = 52$; $(12+6-1)(6-1) = 85$ $(13+10-1)(10-1) = 198$ Therefore B and 198</p>																																																						
17.	<p>A - C - E - G ; I - K - M - O ; Q - S - U - W</p> <p>$7 \times 5 + 4 \times 3 = 47$; $8 \times 4 + 6 \times 2 = 44$; $5 \times 1 + 4 \times 2 = 13$</p>																																																						
18.	<p>A --- E --- I --- M --- Q --- U --- Y --- C --- G --- K --- O --- (S) --- W --- A</p> <div style="text-align: center; border: 1px solid gray; width: 100px; height: 40px; margin: 10px auto;"> </div>																																																						
19.	<p>3, 5, 7, 11, 13, (17), 19, 23, 29, 31, 35, 37 All prime</p> <p>$D + G = K$; (4) (7) (11) $E + M = R$ (5) (13) (18) $B + J = L$ (2) (10) (12) It is L & 17</p>																																																						
20.	<p>31, 37, 41, 43, 47, 53, (59), 61 All Prime</p> <p>$Z - N =$ (26) (14) (12) $W - J$ (23) (10) = (13) $R - D$ (18) (4) = (14)</p> <p>$M - F$ (13) (6) = (7)</p>																																																						
21.	<p>Based on the inputs the following is the grid</p> <table border="1"> <tr> <td>A</td> <td>Banker</td> <td>Female</td> </tr> <tr> <td>B</td> <td>Teacher</td> <td></td> </tr> <tr> <td>C</td> <td>Doctor</td> <td></td> </tr> <tr> <td>D</td> <td>Lawyer</td> <td></td> </tr> <tr> <td>E</td> <td>Arch</td> <td>Female</td> </tr> <tr> <td>F</td> <td>CA</td> <td></td> </tr> <tr> <td>G</td> <td>Engineer</td> <td>Male</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>E & F are married</p>	A	Banker	Female	B	Teacher		C	Doctor		D	Lawyer		E	Arch	Female	F	CA		G	Engineer	Male																																	
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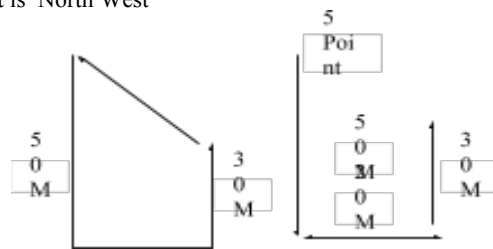
22. It can be three or four



23. It is Sister in law

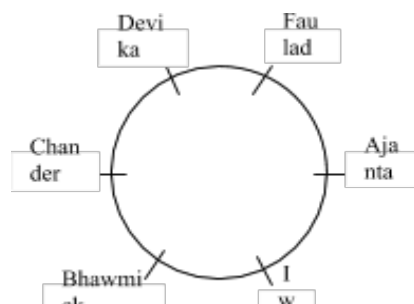


24. It is North West



It is North West

25. It is Faulad.
Based on the Inputs the seating plan is as



	Obviously Opposite to Bhawmick is faulad
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Logical Reasoning Section 06

INTELLIGENCE AND CRITICAL REASONING

Number of questions: 40

DIRECTIONS for questions 1 to 3: Study the information below to answer these questions.

Seven friends namely Anand, Deepak, Varun, Ujjawal, Pritam, Kadir and Jasmeet live in three different buildings namely Ashiana, Top-Hill and Ridge. Each person is flying a kite of his choice with a different colour like red, green, blue, white, black, yellow, and pink, not necessarily in that order.

- Kadir is flying a pink kite and lives in the same building where Jasmeet stays, i.e., 'Ashiana'.
- Varun is flying a black kite and does not live in Ridge building.
- Ujjawal does not live in the same building where Anand or Pritam are living and is flying a Yellow coloured kite.
- Deepak lives in Ridge building with one more person and is flying a green kite.
- None living in Top-Hill building flies a white kite.
- Only two persons are staying in Ridge building while three of them are staying in Top-Hill building.
- Pritam does not fly a blue kite and stays in Top-Hill.

1. Who is flying the 'Blue' kite?

1. Anand 2. Pritam 3. Jasmeet 4. Deepak

2. Who are staying in Top-Hill building?

1. Anand, Varun and Pritam 2. Varun, Jasmeet and Pritam
3. Anand, Pritam and Deepak 4. Anand and Pritam

3. Who are living in Ridge building?

1. Deepak and Ujjawal 2. Varun, Anand and Pritam
3. Anand and Pritam 4. Deepak, Anand and Pritam

DIRECTIONS for questions 4 to 6: Study the information below to answer these questions.

There are five friends in a group, namely Arvind Mohan, Barkat Rai, Chandram Singh, Daya Singh and Arjun Singh. All of them are engaged in different professions like they are horticulturist, physician, journalist, industrialist, and an advocate, though not in this order.

- Three of them, i.e., Arvind Mohan, Chandram Singh and the advocate prefer tea to coffee and two of them, i.e., Barkat Rai and the journalist prefer coffee to tea.
- Daya Singh, Arvind Mohan and the industrialist are very close friends but two of them prefer coffee to tea.
- The horticulturist is physician's brother.
- Chandram Singh did his MBBS from Bhopal and Arjun Singh got his law degree from Indore.

4. Who is the Horticulturist?

1. Arvind Mohan 2. Barkat Rai 3. Chandram Singh 4. Daya Singh

5. Which of the following groups includes persons who like tea but none in the group is an advocate?
1. Barkat Rai, Chandram Singh and Arjun Singh
 2. Daya Singh and Arjun Singh
 3. Arvind Mohan, Chandram Singh and Arjun Singh
 4. Chandram Singh and Arvind Mohan
6. Who is the Physician?
1. Daya Singh
 2. Arjun Singh
 3. Arvind Mohan
 4. Chandram Singh

DIRECTIONS for questions 7 to 11: In each of these questions, two Statements numbered as I & II are provided. These may have a cause and effect relationship or may have independent causes or be the effects of independent causes. Head the statements and mark answer as

1. if both the statements are effects of independent causes.
2. if the statement II is the cause and statement I is its effect.
3. if the statement I is the cause and statement II is its effect.
4. if both the statements are effects of some common cause.

7. **Statement I** : Most of the private schools have increased the tuition fees in Delhi this year to meet their expenses.
- Statement II** : The tuition fees in government-run schools have not been hiked in spite of the unexpected price rise witnessed this year.
8. **Statement I** : The results of the students of science stream of class XII in the Kendriya Vidyalayas this year were excellent.
- Statement II** : Many teachers of Kendriya Vidyalayas have left these schools and joined private schools.
9. **Statement I** : If we incorporate fruits as part of our meals, we avoid excess calories in our daily intake. Fruits are wholesome and have a very high water content.
- Statement II** : Many fruits like watermelon or cucumber are calorie-burners as digesting them burns more calories than eating them.
10. **Statement I** : World Health Organization believes that one in 10 hospital admissions leads to an adverse event and one in 300 admissions in death. Unintended medical errors are a big threat to patient safety.
- Statement II** : American Medical Association claims and quantifies that there are nearly 2000 deaths due to unnecessary surgery. 7000 deaths from medication errors, 8000 deaths from infections and nearly 16,000 deaths due to adverse effects of medicines.
11. **Statement I** : A bone ossification test conducted by AIIMS doctors has led to the release of a man who spent 11 years behind bars on charges of murder despite being a juvenile at the time of offence.
- Statement II** : As per the calculation (done by a High Court Judge), Fahrooq must have been not more than 17 years when he committed the crime and should have been tried as per the Juvenile Justice Act, and should not have been imprisoned for over 3 years for crimes including murder.

DIRECTIONS for questions 12 to 16: In each of these questions, choose the missing terms out of the given alternatives.

12.	A S 23	C U 29	E W 31
	G Y 37	I A 41	K C 43
	M E 47	???	Q I 59

1. O G 53

2. P Q 50

3. N O 49

4. N K 51

13.	K ₇	L ₅	M ₃
	L ₉	M ₇	K ₅
	M ₁₁	L ₉	?

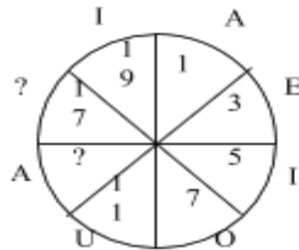
1. K₇

2. K₉

3. J₈

4. N₈

14.



1. E and 13

2. A and 16

3. U and 15

4. O and 14

15.

	A	D	G	J	
T	3	4	7	6	M
Q	2	6	5	8	P
N	1	8	9	2	S
?	14	116	?	104	V
	H	E	B	Y	

1. K and 155

2. L and 145

3. M and 125

4. N and 165

16.

	A	E	I	M	
I	81	18	62	26	Q
E	39	93	63	36	U
?	15	51	45	18	Y
W	105	60	?	44	C
	S	O	K	G	

1. A and 80

2. B and 90

3. E and 85

4. C and 70

DIRECTIONS for questions 17 to 19: Read the following information to answer these questions.

- There is a family of seven persons representing three generations.
- There are two married couples. Both the wives are housewives and both have only two children.

- Ramcharan, the lawyer, is the father of Rohit and has two grand children.
 - Monica, the doctor, is the sister of the teacher.
 - Sudha's daughter-in-law Asha is married to a teacher.
 - Shikha, the grand daughter of one of the housewives, is studying in the 8th standard.
17. What is the profession of Rohit?
1. Teacher 2. Lawyer 3. Student 4. Can't say
18. Which of the following groups is associated with all the three generations?
1. Rohit, Monica and Shikha 2. Ramcharan, Monica and Shikha
3. Rohit, Asha and Shikha 4. None of these
19. Which of the following statements is *not necessarily* true?
1. The teacher is the son of Sudha. 2. The doctor is the paternal aunt of Shikha.
3. Sudha has two grand daughters. 4. Ramcharan is the father-in-law of Asha.
20. Radhika moved a distance of 80 metres towards North. She then turned to the left and after walking for another 20 metres, turned to the left again. She walked for another 80 metres. Finally, she turned to the right at an angle of 45°. In which direction was she moving finally?
1. South-East 2. North-West 3. North-East 4. South-West
21. Raghubir drove 15 km northwards by his car. He then turned towards West and drove for 10 km. He then drove towards South for 5 km and then turned towards East and drove for the next 8 km. Finally he turned to the right and drove for the next 10 km. How far and in which direction is Raghubir from his starting point?
1. 2 km West 2. 6 km South 3. 5 km West 4. None of these
22. Krishna walks for 10 km towards North. From here he walks back 6 km towards South. Then he walks 3 km towards East. How far and in which direction is he with reference to his starting point?
1. 5 km East 2. 7 km West 3. 7 km East 4. 5 km North-East

DIRECTIONS for questions 23 to 25: Each of these questions has an assertion (A) and a reason (R).

Mark answer as

- (1) if (A) is true but (R) is false.
(2) if both (A) and (R) are true but (R) is *not* the correct explanation of (A).
(3) if both (A) and (R) are true and (R) is the correct explanation of (A).
(4) if (A) is false but (R) is true.
23. **Assertion (A)** : A person jumping out of the moving train falls forward because his feet suddenly come to rest, while his body is in motion with the train.
Reason (R) : This is based on Newton's first law of motion which states that a body continues to be in its state of rest or of uniform motion in a straight line unless compelled by an external force to change that state.
24. **Assertion (A)** : Gandhiji withdrew the Non-Cooperation Movement against British rule in India for some time.

Reason (R) : Gandhiji believed in non-violence but the protestations by people against the British rule at Chauri-Chaura turned violent. This event disappointed Gandhiji



25. **Assertion (A)** : A parachute enables a person to descend safely from a height in case of an accident.

Reason (R) : A parachute is made of a fabric with limited air permeability and has a very large frontal area. When it falls through air, it experiences heavy air resistance. The forces of lift and drag due to air flow balance the weight of the parachutist so that one descends at a constantly slow speed.

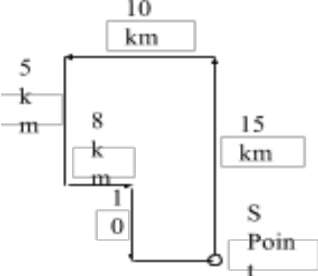
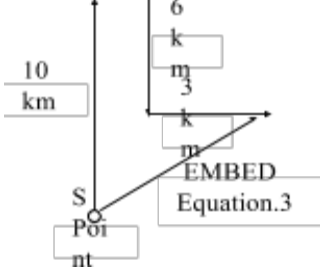
ANSWER KEY

1.	1
2.	1
3.	1
4.	1
5.	4
6.	4
7.	4
8.	1
9.	2
10.	4
11.	4
12.	1
13.	1
14.	1
15.	1
16.	1
17.	1
18.	2
19.	3
20.	4
21.	1
22.	4
23.	3
24.	3
25.	3

EXPLANATIONS

1-3.	<p>Based on the input the following grid is drawn</p> <table border="1" data-bbox="284 459 788 734"> <thead> <tr> <th>Name</th> <th>Place of Res</th> <th>Colour of Kite</th> </tr> </thead> <tbody> <tr> <td>Anand</td> <td>Top-Hill</td> <td>Blue</td> </tr> <tr> <td>Deepak</td> <td>Ridge</td> <td>Green</td> </tr> <tr> <td>Varan</td> <td>Top Hill</td> <td>Black</td> </tr> <tr> <td>Ujjawal</td> <td>Ridge</td> <td>Yellow</td> </tr> <tr> <td>Pritam</td> <td>Top Hill</td> <td>Red</td> </tr> <tr> <td>Kadir</td> <td>Ashiana</td> <td>Pink</td> </tr> <tr> <td>Jasmeet</td> <td>Ashiana</td> <td>White</td> </tr> </tbody> </table>	Name	Place of Res	Colour of Kite	Anand	Top-Hill	Blue	Deepak	Ridge	Green	Varan	Top Hill	Black	Ujjawal	Ridge	Yellow	Pritam	Top Hill	Red	Kadir	Ashiana	Pink	Jasmeet	Ashiana	White
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4-6.	<p>Based on input the following grid is drawn</p> <table border="1" data-bbox="284 824 777 1070"> <thead> <tr> <th></th> <th>Preference</th> <th>Profession</th> </tr> </thead> <tbody> <tr> <td>Arvind Mohan</td> <td>Tea of Coffee</td> <td>Horticulturist</td> </tr> <tr> <td>Barkat Rai</td> <td>Coffee to Tea</td> <td>Industrialist</td> </tr> <tr> <td>Chandram Singh</td> <td>Tea to Coffee</td> <td>Physician</td> </tr> <tr> <td>Daya Singh</td> <td>Coffee to Tea</td> <td>Journalist</td> </tr> <tr> <td>Arjun Singh</td> <td>Tea to Coffee</td> <td>Advocate</td> </tr> </tbody> </table>		Preference	Profession	Arvind Mohan	Tea of Coffee	Horticulturist	Barkat Rai	Coffee to Tea	Industrialist	Chandram Singh	Tea to Coffee	Physician	Daya Singh	Coffee to Tea	Journalist	Arjun Singh	Tea to Coffee	Advocate						
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7.	4. The common cause over here for both the effects is the price rise.																								
8.	<p>1. The causes of both the statements are independent. The fact that teachers have left cannot be a cause for good performance of students. (Some of our student friends may disagree on this□)</p>																								
9.	<p>2. The effect that is desired is stated in I – to make fruits a part of our meal to reduce calorie intake. The reason it happens is stated in II – we consume more calories in digesting fruits than that provided by the fruits themselves.</p>																								
10.	4. The common cause here is unintended medical errors.																								
11.	4. The judgment as well as the release are both based on the bone ossification test.																								
12.	<p>Moving Horizontally: Ist Alphabet Ist Row □ A – C – E, 2nd Row □ G – I – K 3rd Row □ M – O – Q. Again 2nd Alphabet Ist Row S – U – W, 2nd Row Y – A – C 3rd Row E – G – I. Therefore Missing term begins with OG. Only option (1) satisfies. There is no co-ordination of the number.</p>																								
13.	<p>Moving Horizontally □ Moving Horizontally □ Moving Horizontally □</p> <p>Arrangement of L, M, K Dec by 2</p> <p>Also</p>  																								

	Numbers are horizontally decreasing by 2. Therefore, Missing term = K7																				
14.	Moving Clockwise A, E, I, O Then A, E, I Missing term begin with E option (1) satisfies																				
15.	<table border="1"> <thead> <tr> <th>Moving Vertically</th> <th>1st Column</th> <th>2nd</th> <th>3rd</th> </tr> </thead> <tbody> <tr> <td>T (20) alphabet</td> <td>3</td> <td>4</td> <td>7</td> </tr> <tr> <td>(-3) Q (17) alphabet</td> <td>2</td> <td>6</td> <td>5</td> </tr> <tr> <td>(-3) N(14) alphabet</td> <td>1</td> <td>8</td> <td>9</td> </tr> <tr> <td>(-3) K (11) alphabet</td> <td>$3^2 + 2^2 + 1^2$</td> <td>$4^2 + 6^2 + 8^2$</td> <td>$7^2 + 5^2 + 9^2 = 155$</td> </tr> </tbody> </table> <p>i.e. K & 155</p>	Moving Vertically	1st Column	2nd	3rd	T (20) alphabet	3	4	7	(-3) Q (17) alphabet	2	6	5	(-3) N(14) alphabet	1	8	9	(-3) K (11) alphabet	$3^2 + 2^2 + 1^2$	$4^2 + 6^2 + 8^2$	$7^2 + 5^2 + 9^2 = 155$
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17-19.	Based on the inputs the family tree is as <pre> graph TD Ranchohri["Ranchohri (G-Father) Lawyer"] --- Sudha["Sudha (G-Mother) House wife"] Ranchohri --- Rohi["Rohi (Son) Teacher"] Rohi --- Asha["Asha Daughter in Law"] Rohi --- Shikha["Shikha (Sister) Gdaughter"] Rohi --- GrandChild["Grand Child"] </pre>																				
19.	Sudha has two grand children (The second could be Male or female)																				
20.																					

	She is walking South West.
21.	 <p>Raghubir is 2km west w.r.t. starting point</p>
22.	 <p>He is 5 km North East.</p>
23.	<p>Option 3 is correct as R is the correct explanation of A. We may need a little bit of science GK to understand Newton's first law – but we do know from experience that we do tend to fall forward when we jump out of a running train. Those who have not tried this, can take our word for it. □</p>
24.	<p>Option 3 is correct as both the assertion of his withdrawing the Non Cooperation Movement and the reason of the movement turning violent are true.</p>
25.	<p>Option 3 is correct. As a passenger aboard a commercial flight pilots and passengers are not provided parachutes, but fighter pilots are, and they use it in accidents. The physics of a slow descent are explained well in R – though even if you do not have a parachute you eventually move at a constant speed – albeit a very high one □</p>

□ □