

1. FLOOR BASED PUZZLES

Directions (1-5): Study the following information carefully and answer the given questions-

M, N, O, P, Q, R, and S are seven people living on seven different floors of a building but not necessarily in the same order. The lowermost floor of the building is numbered 1, the one above that is numbered 2 and so on till the topmost floor is numbered 7. Each one of them have different income i.e. 3500, 15000, 7500, 9000, 11000, 13500 and 5000. (But not necessarily in the same order.)

M lives on an odd numbered floor but not on the floor numbered 3. The one who has income of 11000 lives immediately above M. Only two people live between M and the one who has income of 7500. The one who has income 15000 lives on one of the odd numbered floors above P. P lives on odd numbered floor. Only three people live between O and the one who has income of 15000. The one, whose income is 7500 lives immediately above O. The one, who has income of 3500 lives immediately above the one, who has income of 5000. S lives on an odd numbered floor but not on 3rd floor. Only one person lives between N and Q. N lives on one of the floors above Q. Neither O nor M has income of 9000. Q does not has income of 7500.

Q1. How much income M has?

- (a) 13500
- (b) 5000
- (c) 7500
- (d) 15000
- (e) 3500

Q2. Which of the following combinations is true with respect to the given arrangement?

- (a) 13500-O
- (b) 15000-R
- (c) 5000-S
- (d) 11000-P

(e) 9000-N

Q3. If all the people are made to sit in alphabetical order from top to bottom, the positions of how many people will remain unchanged?

- (a) Four
- (b) none
- (c) Two
- (d) one
- (e) Three

Q4. Which of the following statement is true with respect to the given arrangement?

- (a) The one who has income of 5000 lives immediately below M.
- (b) R has income of 1500.
- (c) None of the above
- (d) Only four people live between P and S.
- (e) S live immediately below Q.

Q5. Who amongst the following lives on the floor numbered 2?

- (a) N
- (b) The one who has income of 3500
- (c) The one who has income of 5000
- (d) P
- (e) R

Directions (6-10): Study the following information carefully and answer the following questions-

Eight persons P,Q,R,S,T,U,V and W live on eight different floors of a building. The ground floor is numbered one and the topmost is numbered eight. Each of them likes a different games i.e. Cricket, Hockey, Table Tennis, Rugby, Chess , Badminton, Football and Kabaddi.

Only one person lives between R and the one who likes Cricket. P lives immediately above U, who lives on an odd numbered floor. The one who likes

Football lives on an even numbered floor but not on floor no. 8. Only two persons live between U and the one who likes Football. Only one person lives between U and the one who likes Chess. Neither R nor T lives on floor numbered 1. Only two persons live between P and T. the one who likes chess does not live on floor numbered 1st. Q lives on an even numbered floor and immediately above R. The one who likes Kabaddi lives on an even numbered floor and lives immediately above the person who likes Rugby. W lives just below the one who likes Rugby. R does not like Chess or Rugby. Only two person live between the one who likes Badminton and the one who likes Hockey. The one who likes Badminton does not live on an odd numbered floor. S does not live on an odd numbered floor.

Q6: Who likes Table Tennis?

- a) V
- b) R
- c) S
- d) T
- e) can not be determined

Q7: Who lives on floor numbered 5?

- a) T
- b) U
- c) W
- d) V
- e) None of these

Q8: Which of the following does not belong to the group?

- a) P
- b) U
- c) V
- d) T
- e) R

Q9: If W is related to Rugby and T is related to Badminton. Following the similar pattern, V is related to?

- a) Cricket
- b) Hockey
- c) Table tennis
- d) Badminton
- e) Kabaddi

Q10: How many floors are there between U and person who likes Badminton?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Directions(11-15): Study the following information carefully and answer the questions given below:

Six People – A, C, D, E, F, and G live in eight different floors of building (but not necessarily in the same order). Two of the floors in the building are vacant. The lowermost floor of the building is numbered one, the one above that is numbered two, and so on till the topmost floor is numbered eight. Each one of them likes a different brands of shoes, namely Adidas, Liberty, Puma, Bata, Nivea and NIKE (but not necessarily in the same order). All have a different number of books 2, 3, 4, 5, 6 and 8 but not in same order.

The difference of books of C and G is equal to the number of books hold by F. The number of floors above F is same as the number of floors between F and D. F lives an odd numbered floor above the floor numbered four. There are three people live between the two vacant floors. Only three floors between D and the one who likes Bata. The one who likes Nivea lives immediately above G. The difference of books of D and A is equal to the number of books hold by E. Only three floors between G and A. The one who likes NIKE lives immediately above the one who likes Adidas. C has more books than G. C lives immediately above the one who likes Puma. D has more books than A. The number of floors between F and the one who likes LIBERTY is only one. The one who likes LIBERTYShoes immediately below one of the vacant floors. The floor number

of the vacant floors are even – number. Only two floors are there between the one who likes NIKE and Bata. C lived immediately below one of the vacant floors and not on the ground floor. C neither lived on floor number 5 nor floor number 3. A has more than 3 books. The one who likes Liberty lives on one of the floors below the floor number 4. G does not have 4 books. A has neither 2 nor 6 books. The number of books hold by C, G and F together is “4” less than the number of books hold by E, A and D together.

Q11. Which of the following Statements is true with respect to the given information?

- a) G has 2 books
- b) E lives immediately above C
- c) Only three people live between F and the one who has 5 books.
- d) D likes Puma.
- e) All the given statements are true.

Q12. Who amongst the following lives exactly between the fourth floor and the one who has 8 books?

- a) B, C
- b) G, D
- c) F, G
- d) A, B
- e) E, A

Q13. Which of the following pair represents vacant floors?

- a) 4, 6
- b) 2, 6
- c) 4, 8
- d) 2, 8
- e) 6, 8

Q14. Four of the following five are alike in a certain way and so form a group. Which one of the following does not belong to the group?

- a) G – Nivea
- b) C – Bata
- c) F – Nivea
- d) E – Adidas
- e) D – LIBERTY

Q15. The number of books hold by F is?

- a) Four
- b) Three
- c) None
- d) Five
- e) Two

DIRECTIONS(16-20) : Study the following information carefully and answer the given questions:

In a 8- storey building, ground floor being numbered 1, next floor being numbered 2 and so on , there lives 8 persons- A, B, C, D, E, F, G and H along with their wives – P, Q, R, S, T, U, V and W. They have different cars- Alto, Breeza, Desire, Ferrari, Mercedes, Santro, Scorpio, and Zen not necessarily in the same order. Each couple has a unique car.

H lives with his wife, P on an even numbered floor but not on the top most floor. H does not have Santro. The one having Alto lives immediately below the one in which W lives. The one who has Breeza lives on an odd numbered floor. U has Scorpio. D lives on an odd numbered floor. B does not live on floor numbered 1. The one who has Ferrari lives on one of the floors below the one who has Santro. D is not married to U. T is wife of neither B nor E. F lives on an odd numbered floor but above floor number 3. Only one person lives between H and G. The one who has Breeza lives immediately above the one who has Ferrari. D's wife is not among T, Q and S. Q is not married to E. T has Breeza car. Three person live between F and E, who has Desire car. R has Mercedes. C is married to W and he lives immediately above B who lives on an odd numbered floor. B and F are not neighbourers to each other (can not live immediately above or below each other). More than 3 persons live between B and one having Mercedes. The one having Mercedes does not live on floor numbered 2. F and the one who has Mercedes does not live on floor numbered 7. C does not live on the top most floor. T lives 2 floors below D.

Q16: Who among the Following has Santro car?

- a) Q
- b) S
- c) P
- d) E
- e) None of the above

Q17: Who lives on Floor numbered 2?

- a) H
- b) F
- c) E
- d) A
- e) None of the above

Q18: How many persons live between the having Zen and T?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q19: Who among the following is wife of B?

- a) U
- b) Q
- c) V
- d) S
- e) None of the above

Q20: Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to the group?

- a) R – D
- b) P – C
- c) W – B
- d) U – E

e) V – H

DIRECTIONS (21-25): Study the following information carefully and answer the given questions:

7 persons – A, B, C, D, E, F and G live on 7 different floors in such a way that lowermost floor is numbered 1 and topmost floor is numbered 7. They are born in different months – January, March, April, June, July, August, September but not necessarily in the same order. Person born in a month having odd number of days lives on odd numbered floor while person born in a month having even number of days lives on even numbered floor.

A was born in July. E is an immediate neighbor of person who was born in August. The one who lives on floor numbered 6 was not born in June. D was born in a month having less than 31 days. Only 2 persons live between C and the one born in July. Equal number of floors are there between the floors on which person born in January and March lives as there are months in January and March according to calendar. There is only 1 floor between F and G, who was born before F. C was born neither in April nor in June. D was born after April. F was born neither in August nor in January. Equal number of persons live between A and C as that in C and person born in August. B was born neither in March nor in August.

Q21: Who was born in April?

- a) B
- b) C
- c) E
- d) F
- e) G

Q22: Which of the following does not belong to the group?

- a) A
- b) B
- c) E
- d) F
- e) G

Q23: How many floors are there between floors of C and person born in January?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q24: Who was born in March?

- a) E
- b) F
- c) G
- d) B
- e) can not be determined

Q25: If A is related to January, C is related to April. In the similar way, B is related to?

- a) March
- b) July
- c) August
- d) June
- e) September

SOLUTION(1-5):

- i) M lives on an odd numbered floor but not on floor numbered 3.
- ii) One whose income is 11000 lives immediately above M.

(so, we get 2 possible cases here).

Case 1:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7		
6		11000
5	M	
4		
3		
2		
1		

Case 2:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7		

6		
5		
4		
3		
2		11000
1	M	

iii) Only 2 persons live between M and one whose income is 7500.

iv) One who earns 7500 lives immediately above O.

v) Only 3 persons live between O and one whose income is 15000.

vi) One whose income is 15000 lives on an odd numbered floor somewhere above P, who lives on an odd numbered floor.

Case 1:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7		
6		11000
5	M	15000
4		
3	P	
2		7500
1	O	

Case 2:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
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7		15000
6		
5	P	
4		7500
3	O	
2		11000
1	M	

vii) S lives on an odd numbered floor.

viii) One whose income is 3500 lives immediately above the one whose income is 7000.

Case 1:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7	S	
6		11000
5	M	15000
4		3500
3	P	5000
2		7500
1	O	

Case 2:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7	S	15000

6		3500
5	P	5000
4		7500
3	O	
2		11000
1	M	

ix) Neither O nor M earns 9000.

(so, case 2 gets eliminated as it does not satisfy the condition).

Case 1:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7	S	9000
6		11000
5	M	15000
4		3500
3	P	5000
2		7500
1	O	

x) Q does not earn 7500.

xi) Only 1 person lives between N and Q, where N lives above Q.

Case 1:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
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7	S	9000
6	N	11000
5	M	15000
4	Q	3500
3	P	5000
2		7500
1	O	

After filling the remaining data, we get:

<u>Floor No.</u>	<u>Person</u>	<u>Income</u>
7	S	9000
6	N	11000
5	M	15000
4	Q	3500
3	P	5000
2	R	7500
1	O	13500

- 1) Option d) is the correct answer as M earns 15000.
- 2) Option a) is the correct answer.
- 3) Option c) is the correct answer as only 2 persons remain at same place when arranged alphabetically.
- 4) Option c) is the correct answer as none of the given statement is true.
- 5) Option e) is the correct answer as R lives on floor numbered 2.

SOLUTION(6-10):

- i) P lives immediately above U and U lives on an odd numbered floor.
- ii) There are 2 floors between P and T. And T does not live on lowermost floor.
(so, we get following possible cases here).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	
7	U	
6		
5	T	
4		
3		
2		
1		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7		
6	P	
5	U	
4		
3	T	
2		
1		

Case 3:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7	T	
6		
5		
4	P	

3	U	
2		
1		

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7		
6		
5	T	
4		
3		
2	P	
1	U	

iii) There are 2 floors between U and one who likes Football and it is also given that person who likes Football, does not live on the top most floor.

iv) There is only 1 floor between U and chess.

v) Person who like Chess does not live on lowermost floor.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	
7	U	
6		
5	T	Chess
4		Football
3		
2		
1		

Case 2(a):

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7		
6	P	
5	U	

4		
3	T	Chess
2		Football
1		

Case 2(b):

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7		Chess
6	P	
5	U	
4		
3	T	
2		Football
1		

Case 3:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7	T	
6		Football
5		Chess
4	P	
3	U	
2		
1		

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7		
6		
5	T	
4		Football
3		Chess
2	P	

1	U	
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vi) Q lives on an even numbered floor and immediately above R. And it is also given that R does not like Chess.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	
7	U	
6		
5	T	Chess
4	Q	Football
3	R	
2		
1		

Case 2(a):

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	Q	
7	R	
6	P	
5	U	
4		
3	T	Chess
2		Football
1		

Case 2(b):

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	Q	
7	R	Chess
6	P	
5	U	
4		
3	T	
2		Football
1		

Case 3:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7	T	
6	Q	Football
5	R	Chess
4	P	
3	U	
2		
1		

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	Q	
7	R	
6		
5	T	
4		Football
3		Chess
2	P	
1	U	

vii) Only 1 floor is between R and Cricket. One who likes Kabaddi lives on an even numbered floor immediately above the one who likes Rugby and W lives immediately below the one who likes Rugby.

viii) It is also given that R does not like Rugby.
(so, case 2(a) and case 4 gets eliminated here).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	Kabaddi
7	U	Rugby
6	W	
5	T	Chess
4	Q	Football

3	R	
2		
1		Cricket

Case 2(b):

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	Q	
7	R	Chess
6	P	
5	U	Cricket
4		Kabaddi
3	T	Rugby
2	W	Football
1		

Case 3:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8		
7	T	Cricket
6	Q	Football
5	R	Chess
4	P	Kabaddi
3	U	Rugby
2	W	
1		

ix) Only 2 floors are between Badminton and Hockey.

(so, case 2(b) and case 3 gets eliminated here).

x) One who likes badminton lives on an even numbered floor.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	Kabaddi
7	U	Rugby

6	W	Badminton
5	T	Chess
4	Q	Football
3	R	Hockey
2		
1		Cricket

xi) S does not live on an odd numbered floor.

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	Kabaddi
7	U	Rugby
6	W	Badminton
5	T	Chess
4	Q	Football
3	R	Hockey
2	S	
1		Cricket

After filling the remaining data, we get:

<u>Floor</u>	<u>Person</u>	<u>Game</u>
8	P	Kabaddi
7	U	Rugby
6	W	Badminton
5	T	Chess
4	Q	Football
3	R	Hockey
2	S	Table Tennis
1	V	Cricket

6) Option c) is the correct answer as S likes Table Tennis.

7) Option a) is the correct answer as T lives on floor numbered 5.

8) Option a) is the correct answer as P lives on an even numbered floor while others (given in the options) live on odd numbered floors.

9) Option c) is the correct answer as V is related to Table Tennis.

10) Option a) is the correct answer as there is no floor between U and one who likes Badminton.

SOLUTION(11-15):

i) F lives on an odd numbered floor above floor numbered 4.

(so, there are 2 possible cases- either F lives on floor numbered 5 or 7).

ii) The no of floors above F are equal to number of floors between F and D.

iii) Only 3 floors are between D and Bata.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7			
6			
5	F	Bata	
4			
3			
2			
1	D		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7	F		
6			
5	D		
4			
3			
2			
1		Bata	

iv) Only 2 floors are between Bata and Nike.

(so, we get another possible cases here).

Case 1(a):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8		Nike	
7			
6			
5	F	Bata	

4			
3			
2			
1	D		

Case 1(b):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7			
6			
5	F	Bata	
4			
3			
2		Nike	
1	D		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7	F		
6			
5	D		
4		Nike	
3			
2			
1		Bata	

v) The one who likes Nike lives immediate above Adidas.

vi) There is one floor between F and liberty. And it is also given that one who likes Liberty lives somewhere below floor numbered 4.
(so, case 2 gets eliminated here).

Case 1(a):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8		Nike	
7		Adidas	
6			

5	F	Bata	
4			
3		Liberty	
2			
1	D		

Case 1(b):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7			
6			
5	F	Bata	
4			
3		Liberty	
2		Nike	
1	D	Adidas	

vii) Floor immediately above one who likes Liberty is vacant.

Case 1(a):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8		Nike	
7		Adidas	
6			
5	F	Bata	
4	.....	.....	.....
3		Liberty	
2			
1	D		

Case 1(b):

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8			
7			
6			
5	F	Bata	
4	.....	.....	.....

3		Liberty	
2		Nike	
1	D	Adidas	

viii) 3 people live between 2 vacant floors and vacant floors are even numbered floors.

(so, case 1(a) gets eliminated here as it does not satisfy the condition).

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8	.....	.....	.....
7			
6			
5	F	Bata	
4	.....	.....	.....
3		Liberty	
2		Nike	
1	D	Adidas	

ix) C lives immediately above the one who likes Puma.

x) G lives immediately below the one who likes Nivea.

xi) Only 3 floors are between G and A.

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8	.....	.....	.....
7	C	Nivea	
6	G	Puma	
5	F	Bata	
4	.....	.....	.....
3	E	Liberty	
2	A	Nike	
1	D	Adidas	

xii) A has more than 3 books. And A has not 6 books. It is also given that D has more books than A.

xiii) Difference between D and A books is equal to number of books E has.

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8	.....	.....	.....
7	C	Nivea	
6	G	Puma	

5	F	Bata	
4	.....	.....	.....
3	E	Liberty	3
2	A	Nike	5
1	D	Adidas	8

xiv) C has more books than G and difference between books of C and G is equal to books that F is having.

xv) G does not have 4 books.

<u>Floor</u>	<u>Person</u>	<u>Shoes</u>	<u>No. of books</u>
8	.....	.....	.....
7	C	Nivea	6
6	G	Puma	2
5	F	Bata	4
4	.....	.....	.....
3	E	Liberty	3
2	A	Nike	5
1	D	Adidas	8

11) Option a) is the correct answer.

12) Option e) is the correct answer as E and A lives exactly between the fourth floor and the one who has 8 books.

13) Option c) is the correct answer as floor numbered 4 and 8 are vacant.

14) Option a) is the correct answer as there is no floor between G and Nivea whereas, others (given in the options) there is one floor between them.

15) Option a) is the correct answer as F has 4 books.

SOLUTION (16-20):

1. F lives on an odd numbered floor above floor no 3.

(so, either on floor no. 5 or on floor no. 7).

Therefore, Case – 1 and Case – 2 arise because position of books having 33mm and 55mm is not clear.

Case - 1

Floor	Person	Wife	Car
8			
7			
6			
5	F		
4			
3			
2			
1			

Case - 2

Floor	Person	Wife	Car
8			
7	F		
6			
5			
4			
3			
2			
1			

2. 3 persons live between F and E.

3. Ehas Desire.

4. C lives immediately above B,who lives on an odd numbered floor.

5. C does not live on the top most floor.

6. C is married to W.

7. The one having Alto lives immediately below W.

Case - 1

Floor	Person	Wife	Car
8			
7			
6			
5	F		
4	C	W	
3	B		Alto
2			
1	E		Desire

Case - 2

Floor	Person	Wife	Car
8			
7	F		
6	C	W	

5	B		Alto
4			
3	E		Desire
2			
1			

8. More than 3 persons live between B and one having Mercedes and the one living on floor numbered 7 does not have Mercedes. Therefore, Case – 2 is eliminated as it does not satisfy this condition.

Floor	Person	Wife	Car
8			Mercedes
7			
6			
5	F		
4	C	W	
3	B		Alto
2			
1	E		Desire

9. R has Mercedes.

10. Only 1 person lives between H and G and H does not live on the top most floor. (so, H must live on floor numbered 6).

11. H is married to P.

12. D lives on an odd numbered floor.

Floor	Person	Wife	Car
8	G	R	Mercedes
7	D		
6	H	P	
5	F		
4	C	W	
3	B		Alto
2			
1	E		Desire

13. T lives 2 floors below D.

(so, T lives on Floor numbered 5).

14. T has Breeza.

15. The one having Ferrari lives immediately below the person having Breeza.

16. D is not married to U.

17. U has Scorpio.

(so, only possibility is U lives on floor numbered 2).

Floor	Person	Wife	Car
8	G	R	Mercedes
7	D		
6	H	P	
5	F	T	Breeza
4	C	W	Ferrari
3	B		Alto
2		U	Scorpio
1	E		Desire

18. H does not have Santro.

(so, only possibility is H has Zen).

19. D is married to neither Q nor S.

(so, only possibility is D being married to V).

20. E is not married to Q.

(so, only possibility is S being married to E).

Floor	Person	Wife	Car
8	G	R	Mercedes
7	D	V	
6	H	P	Zen
5	F	T	Breeza
4	C	W	Ferrari
3	B		Alto
2		U	Scorpio
1	E	S	Desire

After filling the remaining data we get,

Floor	Person	Wife	Car
8	G	R	Mercedes
7	D	V	Santro
6	H	P	Zen
5	F	T	Breeza
4	C	W	Ferrari
3	B	Q	Alto
2	A	U	Scorpio
1	E	S	Desire

16) Option e) is the correct answer as D has Santro car.

17) Option d) is the correct answer as A lives on floor numbered 2.

18) Option a) is the correct answer as no one lives between T and person having Zen.

19) Option b) is the correct answer as Q is wife of B.

20) Option b) is the correct answer as P and C are not immediate neighbors while others (given in the options) are immediate neighbors to each other.

SOLUTION (21-25):

i) Person born in a month having odd number of days lives on odd numbered floor while person born in a month having even number of days lives on even numbered floor.

(so, Persons born in January, March, July and August live on odd numbered floor while persons born in April, June and September live on even numbered floor).

ii) A was born in July.

(so, must live on an odd floor).

iii) Only 2 persons live between C and the one born in July.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7		
6		
5		
4	C	
3		
2		
1	A	July

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7		
6	C	
5		

4		
3	A	July
2		
1		

Case 3:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7		
6		
5	A	July
4		
3		
2	C	
1		

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6		
5		
4	C	
3		
2		
1		

iv) C was born neither in April nor in June.

(so, must be born in September as lives on even numbered floor).

v) Equal number of persons live between A and C as that in C and person born in August.

(so, case 2 and case 3 gets eliminated here as it does not satisfy the condition).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7		August
6		
5		
4	C	september
3		
2		
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6		
5		
4	C	September
3		
2		
1		August

vi) E is an immediate neighbor of person born in August.

vii) Equal number of floors are there between the floors on which person born in January and March lives as there are months in January and March according to calendar.

(so, there must be 1 floor between persons who were born in January and March).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7		August
6	E	
5		January/ March
4	C	september

3		January/ March
2		
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6		
5		January/ March
4	C	September
3		January/ March
2	E	
1		August

viii) Only 1 person lives between F and G and F was born neither in January nor in August.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	G	August
6	E	
5	F	March
4	C	september
3		January
2		
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July

6		
5		January
4	C	September
3	F	March
2	E	
1	G	August

ix) the person who lives on floor numbered 6 was not born in June.

(only possibility is person born in June lives on floor numbered 2).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	G	August
6	E	
5	F	March
4	C	september
3		January
2		June
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6		
5		January
4	C	September
3	F	March
2	E	June
1	G	August

x) D was born in a month having less than 31 days.

(i.e. D lives on an even numbered floor).

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	G	August
6	E	
5	F	March
4	C	september
3		January
2	D	June
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6	D	
5		January
4	C	September
3	F	March
2	E	June
1	G	August

After filling the remaining data, we get:

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	G	August
6	E	April
5	F	March
4	C	september
3	B	January
2	D	June
1	A	July

Case 4:

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	A	July
6	D	April
5	B	January
4	C	September
3	F	March
2	E	June
1	G	August

xi) D was born after April.

(so, case 4 gets eliminated here).

Therefore,

<u>Floor</u>	<u>Person</u>	<u>Month</u>
7	G	August
6	E	April
5	F	March
4	C	September
3	B	January
2	D	June
1	A	July

21) Option c) is the correct answer as E was born in April.

22) Option c) is the correct answer as E lives on an even numbered floor while others (given in the options) live on odd numbered floors.

23) Option a) is the correct answer as there is no floor between C and the one born in January.

24) Option b) is the correct answer as F was born in March.

25) Option a) is the correct answer as B is related to March (there is 1 floor between B and the one born in March).

2. DAYS BASED PUZZLES

DIRECTIONS (1-5): Study the following information carefully and answer the given questions:

14 exams are held on different days of a week starting from Sunday. Each day 2 exams are held in 2 different slots – 10am, 4pm.

Chemistry exam is scheduled immediately on the next day when Punjabi exam is held. Only 4 exams are held between English and Maths. Biology exam is scheduled immediately before Maths. Only 2 exams are held between Punjabi and Social Science. Geography and GK exams are held in same slot. 7 exams are held between History and Geography. Hindi exam is scheduled on Wednesday. Computer and GK exams are scheduled on the same day. Science exam is held immediately after Maths exam. One of the exam conducted is of Sanskrit. There are 2 exams between exams of Biology and Physics. Number of exams held before Science exam is equivalent to number of exams held after Punjabi exam. English exam is scheduled immediately after Hindi exam and both are scheduled on the same day.

Q1: Which of the following exam(s) is scheduled on Saturday?

- a) Chemistry
- b) Social Science
- c) Science
- d) Both a) and b)
- e) Both a) and c)

Q2: How many exams are held between Social Science and GK?

- a) None
- b) 1

- c) 2
- d) 3
- e) More than 3

Q3: Which of the following statement(s) is/are definitely true?

- a) Chemistry exam is scheduled immediately after Geography exam.
- b) English exam is held one day before GK exam.
- c) Punjabi exam is held after Biology exam.
- d) Physics exam is immediately before Geography exam.
- e) None of these

Q4: Which of the following does not belong to the group?

- a) Sanskrit
- b) Computer
- c) Punjabi
- d) Geography
- e) Maths

Q5: How many exams are held between Geography and Physics?

- a) 1
- b) 2
- c) 3
- d) 4

e) can not be determined

DIRECTIONS(6-10) : Study the following information carefully and answer the given questions:

Four friends – Sajal, Shivangi, Suhail and Sujata conduct seminars at 4 different places – Chandigarh, Delhi, Lucknow and Meerut in 4 different slots – 10:00am, 2:00pm, 6:00pm and 10:00pm on first 4 days of week starting from Monday. Neither a friend conducts more than 1 seminar in a day nor a friend conducts a seminar more than once at the same place.

Seminar at Chandigarh is scheduled at 10:00pm daily. Sajal attends seminar in Meerut at last among his friends. Sujata conducts seminar in Delhi and Lucknow on Monday and Thursday respectively. Suhail is first among his friends to conduct seminar in Meerut. Seminar in Meerut on all days of week are scheduled neither at 10:00am nor at 2:00pm. Shivangi conducted seminar in Chandigarh neither on Monday nor on Thursday. Sajal attends 2 seminars consecutively (i.e one is conducted in last slot of the day and other one is conducted in the first slot of next day). Seminar in Lucknow is scheduled after seminar in Delhi on each day. Sujata does not attend seminar in Meerut on Tuesday.

Q6: Who attends seminar in Delhi on Tuesday?

a) Sajal

b) Shivangi

c) Suhail

d) Sujata

e) Can not be determined

Q7: How many seminars are conducted between Suhail's seminar in Delhi and Sajal's seminar in Lucknow?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q8: Which of the following statement(s) is false?

- a) Suhail attends seminar at 10:00 am on Tuesday.
- b) Sajal's seminar is scheduled immediately before Suhail's seminar on Wednesday.
- c) Shivangi attended seminar in Chandigarh on Monday.
- d) All the given statements are true.
- e) All the given statements are false.

Q9: How many seminars are conducted between seminar of Shivangi in Meerut and her seminar in Lucknow?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q10: Who attends seminar at 2:00pm on Wednesday?

- a) Sajal
- b) Shivangi
- c) Suhail
- d) Sujata
- e) Can not be determined

DIRECTIONS (11-15) : Study the following information carefully and answer the given questions:

In a sports meet, different teams – Black, Blue, Brown, Green, Mustard, Orange, Pink, Purple, Red, Violet, White and Yellow play different games – Archery, Badminton, Basketball, Cricket, Javelin Throw, Kabaddi, Kho Kho, Long jump, Ludo, Table tennis, Tambola and Volleyball in different time slots – 8:00am, 12:00pm and 3:00pm on different days of week – Monday, Wednesday, Friday and Sunday.

Kabaddi is played before Volleyball. Team pink plays Kho Kho. Tambola is played on the same day on which Long Jump is organized. Archery is played by neither Brown nor violet team. Team purple plays Basketball at 12:00pm. Only 2 teams play between Green and white teams. There are 3 teams which play between Yellow and Green team. Team yellow does not play Ludo. Badminton is played by Mustard team. Ludo is played in the last slot of last day of week. Number of games played between Table Tennis and Long jump is equivalent to the number of games played between Badminton and Javelin Throw. Both Table tennis and Long jump are played before Cricket. Archery is played immediately before Tambola. Team Black plays Table Tennis. Team Red plays Cricket on Wednesday in third slot. Number of teams playing before Long jump is equivalent to number of teams playing after Team yellow. Javelin Throw is

played by team blue immediately before Ludo. Number of games played before Cricket is equivalent to number of games played after Badminton.

Q11: Which team plays Tambola?

- a) Violet
- b) Yellow
- c) White
- d) Brown
- e) can not be determined

Q12: How many teams play between the teams which play Volleyball and Kho-kho?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q13: Which of the following does not belong to a group?

- a) Long jump
- b) Volleyball
- c) Team Purple
- d) Team Yellow
- e) Javelin Throw

Q14: Which of the following statement(s) is true with respect to team which plays Basketball?

- a) Basketball is played on Monday.
- b) Only 3 teams play between Volleyball and Cricket teams.
- c) Team orange plays immediately before volleyball team.
- d) There are 2 games which are played between Basketball and Tambola.
- e) All the given statements are true.

Q15: Team pink plays on which day and which slot?

- a) Wednesday at 8:00am
- b) Friday at 3:00pm
- c) Monday at 3:00pm
- d) Friday at 12:00pm
- e) None of these

SOLUTION (1-5):

- i) Hindi exam is scheduled on Wednesday.
- ii) English exam is scheduled immediately after Hindi and both the exams are held on the same day.
- iii) Only 4 exams are held between English and Maths.

So, we get 2 possible cases here.

Case 1:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday		

Monday	Maths	
Tuesday		
Wednesday	Hindi	English
Thursday		
Friday		
Saturday		

Case 2:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday		
Monday		
Tuesday		
Wednesday	Hindi	English
Thursday		
Friday		
Saturday	Maths	

iv) Biology exam is held immediately before Maths exam.

v) Only 2 exams are held between Biology and Physics.

vi) Science exam is held immediately after Maths exam.

vii) Number of exams before Science is equivalent to number of exams after Punjabi.

Case 1:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday		Biology
Monday	Maths	Science
Tuesday	Physics	
Wednesday	Hindi	English
Thursday		
Friday	Punjabi	
Saturday		

Case 2:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday	Punjabi	
Monday		
Tuesday		
Wednesday	Hindi	English
Thursday	Physics	
Friday		Biology
Saturday	Maths	Science

viii) Only 2 exams are held between Social Science and Punjabi exams.

ix) Chemistry exam is held on the next day of Punjabi exam.

x) Computer and Gk exams are scheduled on the same day.

Case 1:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday		Biology
Monday	Maths	Science
Tuesday	Physics	
Wednesday	Hindi	English
Thursday	Computer/GK	Computer/GK
Friday	Punjabi	
Saturday	Chemistry	Social Science

Case 2:

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday	Punjabi	
Monday	Chemistry	Social Science
Tuesday	Computer/GK	Computer/GK
Wednesday	Hindi	English

Thursday	Physics	
Friday		Biology
Saturday	Maths	Science

xi) 7 exams are held between History and Geography.

(therefore, case 1 gets eliminated as it does not satisfy the condition).

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday	Punjabi	History/Geography
Monday	Chemistry	Social Science
Tuesday	Computer/GK	Computer/GK
Wednesday	Hindi	English
Thursday	Physics	History/Geography
Friday		Biology
Saturday	Maths	Science

xii) Geography and Gk exams are held in same slot.

(so, Gk exam must be held at 4:00pm).

xiii) one of the exam held is of Sanskrit.

<u>Day/ Time Slot</u>	<u>10:00 am</u>	<u>4:00pm</u>
Sunday	Punjabi	History/Geography
Monday	Chemistry	Social Science
Tuesday	Computer	GK
Wednesday	Hindi	English
Thursday	Physics	History/Geography
Friday	Sanskrit	Biology
Saturday	Maths	Science

1) Option c) is the correct answer as Science exam is held on Saturday.

2) Option b) is the correct answer as only 1 exam is held between Social Science and GK.

3) Option e) is the correct answer as none of the statements is definitely true.

4) Option d) is the correct answer as Geography exam is held at 4:00pm, rest all others (given in the options) are held at 10:00am.

5) Option e) is the correct answer as Geography exam is either held on Monday or Thursday, so we can not determine the number of exams held between Geography and Physics .

SOLUTION (6-10):

i) Seminar at Chandigarh is scheduled at 10:00pm.

ii) Seminar in Meerut on all days of week are scheduled neither at 10:00am nor at 2:00pm. (So, it must be held at 6:00pm).

iii) Seminar in Lucknow is scheduled after seminar in Delhi on each day. (so, seminar in Delhi is scheduled at 10:00am whereas seminar in Lucknow is scheduled at 2:00pm).

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday				
Tuesday				
Wednesday				
Thursday				

iv) Sajal attends seminar in Meerut at last among his friends.

v) Sujata conducts seminar in Delhi and Lucknow on Monday and Thursday respectively.

vi) Suhail is first among his friends to conduct seminar in Meerut.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata		Suhail	

Tuesday				
Wednesday				
Thursday		Sujata	Sajal	

vii) Sujata does not attend seminar in Meerut on Tuesday.

(so, Sujata must attend seminar in Meerut on Wednesday) and only place left for Sujata to conduct seminar is Chandigarh, she must attend seminar in Chandigarh on Tuesday.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata		Suhail	
Tuesday				Sujata
Wednesday			Sujata	
Thursday		Sujata	Sajal	

viii) All others except Shivangi have attend seminar in Meerut, so Shivangi must conduct in Meerut on Tuesday.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata		Suhail	
Tuesday			Shivangi	Sujata
Wednesday			Sujata	
Thursday		Sujata	Sajal	

ix) It is given that, Shivangi conducted seminar in Chandigarh neither on Monday nor on Thursday.

(so, Shivangi must attend seminar in Chandigarh on Wenesday).

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata		Suhail	
Tuesday			Shivangi	Sujata

Wednesday			Sujata	Shivangi
Thursday		Sujata	Sajal	

x) we can see that Sujata and Suhail have attended seminar in Delhi and Meerut respectively. Shivangi has attended seminar in Chandigarh on Wednesday.

(so, only possibility is Sajal attending seminar in Chandigarh on Monday) and therefore, Shivangi must attend seminar in Lucknow (left over place) on Monday.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata	Shivangi	Suhail	Sajal
Tuesday			Shivangi	Sujata
Wednesday			Sujata	Shivangi
Thursday		Sujata	Sajal	

xi) Therefore, we can clearly see that only Suhail has not attended seminar in Chandigarh yet. Therefore, Suhail will attend seminar in Chandigarh on Thursday. And Shivangi will attend the seminar in Delhi (only possible place) on Thursday.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata	Shivangi	Suhail	Sajal
Tuesday			Shivangi	Sujata
Wednesday			Sujata	Shivangi
Thursday	Shivangi	Sujata	Sajal	Suhail

Filling the remaining data, we get:

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata	Shivangi	Suhail	Sajal
Tuesday	Suhail/Sajal	Suhail/Sajal	Shivangi	Sujata

Wednesday	Suhail/Sajal	Suhail/Sajal	Sujata	Shivangi
Thursday	Shivangi	Sujata	Sajal	Suhail

xii) But, it is given that Sajal attends 2 seminars consecutively but on different days.

<u>Day/ Slot</u> <u>(Place)</u>	<u>10:00am</u> <u>(Delhi)</u>	<u>2:00pm</u> <u>(Lucknow)</u>	<u>6:00pm</u> <u>(Meerut)</u>	<u>10:00pm</u> <u>(Chandigarh)</u>
Monday	Sujata	Shivangi	Suhail	Sajal
Tuesday	Sajal	Suhail	Shivangi	Sujata
Wednesday	Suhail	Sajal	Sujata	Shivangi
Thursday	Shivangi	Sujata	Sajal	Suhail

6) Option a) is the correct answer as Sajal attends seminar in Delhi on Tuesday.

7) Option a) is the correct answer as no seminar is conducted between Suhail's seminar in Delhi and Sajal's seminar in Lucknow.

8) Option e) is the correct answer as all the given statements are false.

9) Option e) is the correct answer as 4 seminars are conducted between seminar of Shivangi in Meerut and her seminar in Lucknow.

10) Option a) is the correct answer as Sajal attends seminar at 2:00pm on Wednesday.

SOLUTION(11-15):

i) Ludo is played in last slot of last day.

ii) Team Red plays Cricket on Wednesday in third slot.

iii) Javelin Throw is played by team blue immediately before Ludo.

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday			
Wednesday			Red(Cricket)

Friday			
Sunday		Blue(Javelin throw)	(Ludo)

iv) Number of games played before Cricket is equivalent to number of games played after Badminton.

v) Number of games played between Table Tennis and Long jump is equivalent to the number of games played between Badminton and Javelin Throw. Both Table tennis and Long jump are played before Cricket.

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Tabletennis/Long jump		
Wednesday		Tabletennis/Long jump	Red(Cricket)
Friday	(Badminton)		
Sunday		Blue(Javelin throw)	(Ludo)

vi) Number of teams playing before Long jump is equivalent to number of teams playing after Team yellow. And it is also given that Ludo is not played by team yellow.

(so, Long jump can not organized in first slot of first day).

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Tabletennis		
Wednesday		Long jump	Red(Cricket)
Friday	(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	(Ludo)

vii) Only 3 teams play between team yellow and green.

(so, we get 2 possible cases here as position of green is not confirmed).

Case 1:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	(Tabletennis)		
Wednesday		(Long jump)	Red(Cricket)
Friday	(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	Green(Ludo)

Case 2:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	(Table tennis)		
Wednesday	Green	(Long jump)	Red(Cricket)
Friday	(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	(Ludo)

viii) Team black plays Table tennis.

ix) Team Purple plays Basketball at 12:00pm.

(so, only possibility is team purple playing on Monday).

Case 1:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	
Wednesday		(Long jump)	Red(Cricket)
Friday	(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	Green(Ludo)

Case 2:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Table tennis)	Purple(Basketball)	

Wednesday	Green	(Long jump)	Red(Cricket)
Friday	(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	(Ludo)

x) Only 2 teams play between Green and white teams.

Case 1:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	
Wednesday		(Long jump)	Red(Cricket)
Friday	(Badminton)	Yellow	White
Sunday		Blue(Javelin throw)	Green(Ludo)

Case 2:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Table tennis)	Purple(Basketball)	
Wednesday	Green	(Long jump)	Red(Cricket)
Friday	White(Badminton)	Yellow	
Sunday		Blue(Javelin throw)	(Ludo)

xi) Team Mustard plays Badminton.

(So, case 2 gets eliminated as it does not satisfy the condition).

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	
Wednesday		(Long jump)	Red(Cricket)
Friday	Mustard(Badminton)	Yellow	White
Sunday		Blue(Javelin throw)	Green(Ludo)

xii) Long jump and Tambola are played on the same day.

(so, Tambola must be played on Wednesday).

xiii) Archery is played immediately before Tambola.

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	(Archery)
Wednesday	(Tambola)	(Long jump)	Red(Cricket)
Friday	Mustard(Badminton)	Yellow	White
Sunday		Blue(Javelin throw)	Green(Ludo)

xiv) Team pink plays kho-kho.

(only possible place is Kho-kho is played on Sunday).

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	(Archery)
Wednesday	(Tambola)	(Long jump)	Red(Cricket)
Friday	Mustard(Badminton)	Yellow	White
Sunday	Pink(kho-kho)	Blue(Javelin throw)	Green(Ludo)

xv) Archery is played by neither Brown nor Violet team.

(so, only possibility is archery is played by orange team).

xvi) Kabaddi is played before volleyball.

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	Orange(Archery)
Wednesday	(Tambola)	(Long jump)	Red(Cricket)
Friday	Mustard(Badminton)	Yellow(kabaddi)	White(Volleyball)
Sunday	Pink(kho-kho)	Blue(Javelin throw)	Green(Ludo)

After filling the remaining data, we get:

<u>Days/Slot</u>	<u>8:00am</u>	<u>12:00pm</u>	<u>3:00pm</u>
Monday	Black(Tabletennis)	Purple(Basketball)	Orange(Archery)
Wednesday	Brown/Violet(Tambola)	Brown/violet(Long jump)	Red(Cricket)
Friday	Mustard(Badminton)	Yellow(kabaddi)	White(Volleyball)
Sunday	Pink(kho-kho)	Blue(Javelin throw)	Green(Ludo)

11) Option e) is the correct answer as Tambola is played by either Brown or Violet team.

12) Option a) is the correct answer as no team plays between the teams which play Volleyball and Kho-kho.

13) Option b) is the correct answer as Volleyball is played in different slot other than those (given in other options). All others are played in second slot.

14) Option a) is the correct answer

15) Option e) is the correct answer as Team pink plays on Sunday at 8:00am.

3. BOX BASED PUZZLES

DIRECTIONS (1-5): Study the following information carefully and answer the given questions:

A certain number of boxes are kept one above the other in such a way that the box at bottom is numbered 1 and above it is numbered 2 and so on.

Box B is kept at the top and is placed immediately above J. Box Q is placed immediately above R. Number of boxes that can be kept between T and S is equal to that of boxes that can be kept between T and U. There are atmost 3 boxes that can be kept between P and T. Box J is placed above S. Only 3 boxes are kept between S and J. There are 4 boxes that can be kept between R and T. Only 1 box is kept between R and H. H is placed below R. Equal Number of boxes are kept between R and I as that in P and T. Both Q and R are placed adjacent to neither S nor U. Only 2 boxes can be kept between A and B. Only 4 boxes can be kept between P and Q. Not more than 7 boxes are kept between S and U. There are not more than 15 boxes in the arrangement.

Q1: Which among the following boxes is kept at bottom?

- a) U
- b) H
- c) S
- d) I
- e) can not be determined

Q2: How many total boxes can be there?

- a) 11
- b) 12
- c) 13

d) 14

e) 15

Q3: How many boxes are kept between P and T?

a) none

b) 1

c) 2

d) 3

e) can not be determined

Q4: Which of the following statement is true?

a) Box I is placed at bottom.

b) Only 5 boxes are between S and U.

c) Box U is placed above box S.

d) Box H is placed between R and I.

e) None of the statements is true.

Q5: How many boxes can be kept between box U and H?

a) None

b) 1

c) 2

d) 3

e) More than 3

DIRECTIONS (6-10) : Study the following information carefully and answer the given questions:

A certain number of boxes are kept one above the other in such a way that the box at bottom is numbered 1 and above it is numbered 2 and so on. Each box has some eatable item in it. Some boxes can be empty too.

There are 2 boxes kept between B and E, which contains Eclairs. There are 3 boxes between box of Sugar and Elaichi and both are kept below C. There are atmost 5 boxes between E and C, which has Kurkure in it. Box of Maggi is placed at bottom. Box H contains Lays. None of the box is placed adjacent to C. Number of boxes kept between B and C is same that of boxes kept between B and D. Both G and H are placed somewhere below B. Box E is placed below B. Only 2 boxes are kept between box of Maggi and Eclairs. Box B is not kept adjacent to Box C. Number of boxes kept between D and G is equivalent to the number of boxes between E and H. Box D is placed below C. Only box A, containing Chocolates is placed between box of Sugar and Dairy Milk. Box I is placed below H. Box containing dairy milk is placed adjacent to box of Eclairs.

Q6: Which of the following box contains Maggi?

- a) B
- b) D
- c) G
- d) I
- e) can not be determined

Q7: How many boxes are kept between E and box which contains Elaichi?

- a) None

- b) 1
- c) 2
- d) 3
- e) More than 3

Q8: How many places of boxes are there between E and C?

- a) 1
- b) 2
- c) 3
- d) 4
- e) 5

Q9: Which of the following statement is false?

- a) Box G contains Elaichi.
- b) only 3 boxes are kept between A and G.
- c) Only 1 box is placed between D and box of Elaichi.
- d) All the given statements are true.
- e) All the given statements are false.

Q10: Which of the following boxes are adjacent to box D?

- a) E and B
- b) B and A
- c) E and G

d) E and A

e) None of these

DIRECTIONS (11-15) : Study the following information carefully and answer the given questions:

A certain number of boxes are kept one above the other in such a way that the box at bottom is numbered 1 and above it is numbered 2 and so on. Each box is of different color.

More than 1 empty box is placed in the arrangement. Box U is not placed at the top. A is placed below T but above S. Brown coloured box is placed immediately above Red coloured box. Neither S nor R is silver coloured. Box W is not red coloured. Brown box is placed immediately below box S. Silver coloured box is placed at top. Equal number of boxes are kept between P and Q as that in R and S. More than 7 boxes can be kept between Q and silver coloured box. Box Q is green coloured. There are 5 boxes between P and silver coloured box. Box T is white colored. Blue coloured box is placed above Brown colored. Box which is of white color is placed between R and the top most box. Box P is placed immediately above Red colored. Boxes that can be placed above P are 1 more than boxes that can be placed below P. Yellow colored box is placed at the bottom. Equal number of boxes are kept between T and A as in R and U. Box A is pink colored. Only Mustard and Magenta colored boxes are placed between A and P. One of the box placed is V. Box Y is yellow colored.

Q11: How many empty boxes are there in the arrangement?

a) 1

b) 2

c) 3

d) more than 3

e) can not be determined

Q12: Which of the following box is placed between S and A?

a) Magenta

b) Mustard

c) Brown

d) Green

e) can not be determined

Q13: Which among the following box is kept immediately above W?

a) T

b) S

c) V

d) Q

e) None of these

Q14: Which one of the following is Red colored box?

a) W

b) V

c) S

d) U

e) can not be determined

Q15: Box R is of which color?

- a) Red
- b) Brown
- c) Blue
- d) Mustard
- e) can not be determined

DIRECTIONS (16-20) : Study the following information carefully and answer the given questions:

7 books are stacked one above the other in such a way that the box at bottom is numbered 1 and top most box is numbered 7. These books are of different subjects - Biology, English, Hindi, Literature, Maths, Punjabi and Science. Each book has a thickness – 11mm, 22mm, 33mm, 44mm, 55mm, 66mm and 77mm. These are covered by different colored papers – Black, Blue, Brown, Green, Pink, Red and Violet.

There are 2 books between Violet and Blue colored books. Biology book is placed at top of the stack having thickness 77mm and is covered by pink paper. There are 2 books between Science and book having 11mm thickness. Science book is placed above book having 11mm thickness. 1 book is placed between Hindi and book having 44mm thickness. Hindi book is placed somewhere above 44mm book. Punjabi book is placed somewhere below the book having 55mm thickness. There are 2 books between Punjabi and book having 55mm thickness. Book having 33mm thickness is placed immediately above book having 55mm thickness, which is covered by violet paper. The book covered by a black paper is placed at the bottom of the stack. There are 2 books between English and Literature. Literature book having 22mm thickness is covered by Green paper. Science book is kept immediately above Literature book.

Q16. Which subject book is covered by Black colored paper?

- a) English
- b) Literature
- c) Science
- d) Maths
- e) None of these

Q17. How many books are kept between Hindi and Literature books?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q18. Which of the following book have thickness equal to 66mm thickness?

- a) Maths
- b) Science
- c) Hindi
- d) English
- e) None of the above

Q19. Which of the following book is covered by Brown paper?

- a) Maths
- b) Science
- c) Hindi
- d) English
- e) Can not be determined

Q20: Which of the following book is definitely false?

- a) English book is placed in the mid of the stack
- b) Maths book has thickness equal to 33mm.
- c) Hindi book is placed below Maths book.
- d) English book is kept immediately below the book covered by Blue paper.
- e) None of the above

SOLUTION(1-5):

Lets start this question by box P and Q.

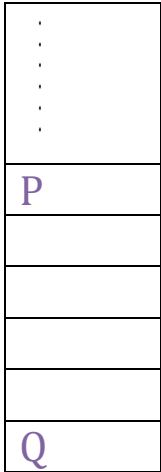
i) Only 3 boxes can be kept between P and Q.

(so, we get 2 possibilities as P can be placed either above or below Q).

Case 1:



Case 2:



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.
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- ii) Box Q is placed immediately above R.
- iii) Only one box is placed between R and H. R is placed above H.
- iv) There are 4 boxes between R and T.
- v) Atmost 3 boxes can be kept between P and T.

Case 1:

.
.
.
.
.
Q
R
H
P
T
.
.
.
.
.

Case 2:

.
.
.
.
.
P
T

Q
R
H
.
.
.
.
.

- vi) Equal Number of boxes are kept between R and I as that in P and T.
- vii) Both Q and R are placed adjacent to neither S nor U.
- viii) Number of boxes that can be kept between T and S is equal to that of boxes that can be kept between T and U.

Case 1:

.
.
.
.
Q
R
I
H
S/U
P
T
S/U
.
.
.
.
.

Case 2:

.
.
.
.
S/U
P
T
S/U
Q
R
I
H
.
.
.
.
.

ix) There are 3 boxes between S and J. J is placed above S.

(so, Case 1 gets eliminated here as no place for J).

x) Box B is kept at top. J is placed immediately below B.

xi) There are not more than 15 boxes in the arrangement.

15.	B
14.	J
13.	
12.	
11.	
10.	S
9.	P
8.	T
7.	
6.	U
5.	

4.	Q
3.	R
2.	I
1.	H

xi) Only 2 boxes are placed between A and B.

15.	B
14.	J
13.	
12.	A
11.	
10.	S
9.	P
8.	T
7.	
6.	U
5.	
4.	Q
3.	R
2.	I
1.	H

1) Option b) is the correct answer as box H is placed at bottom.

2) Option e) is the correct answer as total 15 boxes are there.

3) Option a) is the correct answer as no box is placed between P and T.

4) Option e) is the correct answer.

5) Option e) is the correct answer as more than 3 boxes can be kept between U and H.

SOLUTION (6-10):

- i) Box of Maggie is placed at bottom.
 - ii) Only 2 boxes are kept between box of Maggi and Eclairs.
 - iii) Box E contains Eclairs.
 - iv) Box containing dairy milk is placed adjacent to box of Eclairs.
- (so, we get 2 possible cases here).

Case 1:

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
4.	E	Eclairs
3.		Dairy Milk
2.		
1.		Maggi

Case 2:

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
5.		Dairy Milk
4.	E	Eclairs
3.		
2.		
1.		Maggi

- v) Only box A, containing Chocolates is placed between box of Sugar and Dairy Milk.

(so, case 1 gets eliminated as it does not satisfy the condition).

Case 2:

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
7.		Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		
2.		
1.		Maggi

vi) There are 3 boxes between sugar and Elaichi.

(so, we get 2 possible cases here, as sugar can be placed either above or below Elaichi box).

Case 2(a):

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
7.		Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		Elaichi
2.		
1.		Maggi

Case 2(b):

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
-------------	------------	---------------------

11.		Elaichi
10.		
9.		
8.		
7.		Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		
2.		
1.		Maggi

vii) Only 2 boxes are kept between B and E. B is placed above E.

Case 2(a):

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
7.	B	Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		Elaichi
2.		
1.		Maggi

Case 2(b):

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
-------------	------------	---------------------

11.		Elaichi
10.		
9.		
8.		
7.	B	Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		
2.		
1.		Maggi

viii) Number of boxes kept between B and C is same that of boxes kept between B and D. B is not kept adjacent to C.

ix) C is placed above D.

x) There are atmost 5 boxes between E and C. It is also given that C is kept above Elaichi box.

(so, case 2(b) gets eliminated as if we place box C above Elaichi , there will be more than 5 boxes between E and C, which can not be possible).

Case 2(a.1): → 5 boxes between E and C

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
10.	C	
9.		
8.		
7.	B	Sugar
6.	A	Choclates

5.		Dairy Milk
4.	E	Eclairs
3.		Elaichi
2.		
1.		Maggi

Therefore, no place for D, so Case 2(a.1) gets eliminated.

Case 2(a.2): → 4 boxes between E and C

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
9.	C	
8.		
7.	B	Sugar
6.	A	Choclates
5.		Dairy Milk
4.	E	Eclairs
3.		Elaichi
2.		
1.		Maggi

xi) Box C has Kurkure.

xii) Number of boxes between B and C is equivalent to number of boxes between B and D.

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
9.	C	Kurkure
8.		
7.	B	Sugar
6.	A	Choclates

5.	D	Dairy Milk
4.	E	Eclairs
3.		Elaichi
2.		
1.		Maggi

xiii) Number of boxes between D and G is equivalent to number of boxes between E and H.

xiv) H is placed below I.

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
9.	C	Kurkure
8.		
7.	B	Sugar
6.	A	Choclates
5.	D	Dairy Milk
4.	E	Eclairs
3.	G	Elaichi
2.	H	
1.	I	Maggi

xv) Box H contains Lays and no box is placed adjacent to box C.

<u>S.no</u>	<u>Box</u>	<u>Eatable Item</u>
9.	C	Kurkure
8.		
7.	B	Sugar
6.	A	Choclates
5.	D	Dairy Milk
4.	E	Eclairs
3.	G	Elaichi
2.	H	Lays
1.	I	Maggi

6) Option d) is the correct answer as box I contains Maggi.

7) Option a) is the correct answer as no box is placed between E and Elaichi box.

8) Option d) is the correct answer as 4 boxes can be kept between E and C.

9) Option b) is the correct answer.

10) Option d) is the correct answer as boxes E and A are placed adjacent to box D.

SOLUTION(11-15):

i) Box which is of Silver colour is placed at top.

ii) Only white box is placed between Topmost box and R.

iii) Box T is White colored.

iv) There are 5 boxes between P and Silver colored box.

v) S is placed immediately above Brown colored box.

vi) Red colored box is placed immediately below Brown colored, which is P.

vii) Number of boxes above P is 1 more than number of boxes below P.

<u>S.No</u>	<u>Box</u>	<u>Color</u>
12.		Silver
11.	T	White
10.	R	
9.		
8.		
7.	S	
6.	P	Brown
5.		Red
4.		
3.		
2.		

1.		
----	--	--

viii) Yellow colored box is placed at bottom.

ix) Number of boxes between P and Q is equivalent to that of between R and S.

x) There are more than 7 boxes between Q and silver colored box.

<u>S.No</u>	<u>Box</u>	<u>Color</u>
12.		Silver
11.	T	White
10.	R	
9.		
8.		
7.	S	
6.	P	Brown
5.		Red
4.		
3.	Q	
2.		
1.		Yellow

xi) Only Mustard and Magenta colored boxes are placed between A and P.

xii) A is Pink colored.

xiii) Boxes between T and A are equivalent to that of boxes between R and U.

xiv) Box U is not placed at top.

<u>S.No</u>	<u>Box</u>	<u>Color</u>
12.		Silver
11.	T	White
10.	R	
9.	A	Pink
8.	U	Mustard/Magenta
7.	S	Mustard/Magenta
6.	P	Brown

5.		Red
4.		
3.	Q	
2.		
1.		Yellow

xv) Box Q is green colored.

xvi) Box blue is placed somewhere above box Brown.

<u>S.No</u>	<u>Box</u>	<u>Color</u>
12.		Silver
11.	T	White
10.	R	Blue
9.	A	Pink
8.	U	Mustard/Magenta
7.	S	Mustard/Magenta
6.	P	Brown
5.		Red
4.		
3.	Q	Green
2.		
1.		Yellow

xvii) Box W is not Red colored.

(so , only possibility is W is silver colored).

xviii) More than 1 empty boxes are there.

xix) One of the box placed is V.

xx) Box Y is yellow colored.

<u>S.No</u>	<u>Box</u>	<u>Color</u>
12.	W	Silver
11.	T	White
10.	R	Blue

9.	A	Pink
8.	U	Mustard/Magenta
7.	S	Mustard/Magenta
6.	P	Brown
5.	V	Red
4.	-	-----
3.	Q	Green
2.	-	-----
1.	Y	Yellow

11) Option b) is the correct answer as there are 2 empty boxes in the arrangement.

12) Option e) is the correct answer as either Mustard or Magenta box are placed between S and A.

13) Option e) is the correct answer as box W is placed at top, so no other box can be placed above it.

14) Option b) is the correct answer as Box V is red colored.

15) Option c) is the correct answer as box R is blue colored.

SOLUTION(16-20):

i) Biology book is placed at the top of the stack having thickness 77mm and is covered by Pink color .

ii) The book covered by a black paper is placed at the bottom of the stack .

iii) There are 2 books between Punjabi and book having 55mm thickness. And Punjabi book is placed below book having 55mm thickness.

iv) Book having 33mm thickness is placed immediately above book having 55mm thickness, which is covered by violet colored paper.

Therefore, Case – 1 and Case – 2 arise because position of books having 33mm and 55mm is not clear.

Case - 1

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6		33mm	

5		55mm	Violet
4			
3			
2	Punjabi		
1			Black

Case - 2

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6			
5		33mm	
4		55mm	Violet
3			
2			
1	Punjabi		Black

v) There are 2 books between Violet and Blue colored books. Therefore, Case – 2 is eliminated as it does not satisfy this condition.

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6		33mm	
5		55mm	Violet
4			
3			
2	Punjabi		Blue
1			Black

vi) There are 2 books between English and Literature books.

vii) Literature book is covered by Green colored, having thickness 22mm.

viii) There are 2 books between Science book and book having 11mm thickness. Science book is place above the book having 11mm thickness.

Therefore, Case – 1(a) and Case – 1(b) arise because position of English book is not clear.

Case – 1(a)

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6	English	33mm	
5		55mm	Violet
4			
3	Literature	22mm	Green
2	Punjabi		Blue
1			Black

Case – 1(b)

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6		33mm	
5	Science	55mm	Violet
4	Literature	22mm	Green
3			
2	Punjabi	11mm	Blue
1	English		Black

ix) There is 1 book between Hindi and book having 44mm thickness. Hindi book is placed above than book having 44mm thickness. Therefore, Case – 1(a) is eliminated as it does not satisfy this condition.

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
7	Biology	77mm	Pink
6		33mm	
5	Science	55mm	Violet
4	Literature	22mm	Green
3	Hindi		
2	Punjabi	11mm	Blue
1	English	44mm	Black

After filling the remaining data we get,

<u>Stack</u>	<u>Subject</u>	<u>Thickness</u>	<u>Covered by</u>
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7	Biology	77mm	Pink
6	Maths	33mm	Red/Brown
5	Science	55mm	Violet
4	Literature	22mm	Green
3	Hindi	66mm	Red/Brown
2	Punjabi	11mm	Blue
1	English	44mm	Black

16) Option a) is the correct answer as English book is covered by black colored paper.

17) Option a) is the correct answer as there is no book kept between Hindi and Literature book.

18) Option c) is the correct answer as Hindi book have 66mm thickness.

19) Option e) is the correct answer as Either Hindi or Maths book is covered by Brown paper.

20) Option a) is the correct answer.

4. MONTHS BASED PUZZLES

DIRECTIONS (1-5) : Study the following information carefully and answer the given questions:

Some students of class X appears for a test of different subjects either on 5th or 12th of different months – March, April, June and October. No two tests are of same subjects.

A and D appears for the test of Reasoning and Maths respectively. C appears for the test before G. Only 4 persons can appear between the ones who are appearing for Biology and Social Science. E appears for the test of Science on 5th in the month having 30 days. D does not appear in April. Only 2 persons appear between B and D. Only one person who appears for the test of English appears between C and H. Only 3 persons can appear between A and H, who appears for the test of Hindi. The one who appears on 12th March appears for test of Biology. Both B and G appears on the same date. 3 persons can appear for the test between E and F. B does not appear for Biology. One of the student appears for Punjabi.

Q1: Who appears for the test of Punjabi?

- a) C
- b) B
- c) F
- d) G
- e) can not be determined

Q2: How many tests are scheduled between tests of B and E?

- a) None

- b) 1
- c) 2
- d) 3
- e) More than 3

Q3: Which of the following does not belong to the group?

- a) A
- b) B
- c) C
- d) D
- e) H

Q4: G appears for the test of?

- a) Science
- b) Social science
- c) Biology
- d) English
- e) None of these

Q5: Which among the following appears for the exam in month having more than 30 days?

- a) B
- b) G

- c) E
- d) D
- e) H

DIRECTIONS(6-10) : Study the following information carefully and answer the given questions:

12 friends – A, B, C, D, G, H, I, J, P, Q, S and Z celebrate their birthdays on 5th, 15th and 25th of 4 different months – January, February, March and April.

Atleast 5 persons celebrate their birthdays between I and J. D celebrated his birthday after A. P celebrates his birthday after both Q and S. Both B and C celebrate their birthday in a month having 31 days but there is a gap of 20 days between the birthdays of B and C. Only 2 persons celebrate their birthday between A and D. 4 persons celebrate their birthday between Q and S. Number of people celebrating their birthday before Z is equivalent to number of people celebrating their birthday after H. Person who celebrates his birthday on 15th March celebrates immediately after G. J attends his birthday before A. Only 3 persons celebrated their birthday between A and Z. Number of persons celebrating their birthday before C is equivalent to number of persons celebrating their birthday after I. A celebrated his birthday on 15th of a month having less than 30 days.

Q6: On which date P celebrates his birthday?

- a) 5th April
- b) 25th April
- c) 25th February
- d) 5th February
- e) can not be determined

Q7: Who celebrates his birthday on 15th of April?

- a) P
- b) Q
- c) S
- d) I
- e) can not be determined

Q8: Which of the following does not belong to a group?

- a) A
- b) B
- c) G
- d) H
- e) I

Q9: How many persons celebrate their birthday between P and Z?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q10: Who among the following celebrate their birthdays immediately before and immediately after D?

- a) Both Q and S
- b) Both Q and G
- c) Both Z and S
- d) Both G and Z
- e) None of these

DIRECTIONS (11-15) : Study the following information carefully and answer the given questions:

A certain number of people celebrate different festivals in 4 various months having exactly 30 days. They celebrate the festivals on different dates which are exactly divisible by 7. No 2 persons celebrate same festival. Each person celebrates only a single festival in a year. There are atleast 2 days (in this given arrangement) on which no festival is celebrated.

D and R celebrates their festivals on same dates of different months. K celebrates Lohri in last week of a month. Dussehra is celebrated by G fourteen days prior to Diwali. One of the person is W. Both J and B do not celebrate their festivals consecutively (i.e there is a gap of atleast 1 festival between them). Durga Puja is celebrated either immediately before or immediately after Navratre. Christmas is celebrated by J. Both Pongal and Shivratri are celebrated on same dates. Only 5 festivals can be celebrated between the festivals of S and H, who celebrates Raksha Bandhan. Number of persons celebrating after J is equivalent to number of persons celebrating before A, who celebrates Ashtami. Eid is celebrated in third week of April by M. J and B celebrate their festivals in same months but no one else celebrates their festival in that month. No festival is celebrated between Dussehra and Diwali. Holi is celebrated in 2nd week of April. B celebrates Bhai Dooj on 14th of a month. 2

people celebrate their festivals between K and P, who celebrates Navratre. S celebrates Diwali in last week of September. X does not celebrate Holi.

Q11: When is Durga Puja celebrated?

- a) 28th April
- b) 28th June
- c) 21st June
- d) 21st April
- e) can not be determined

Q12: which of the following festival W celebrates?

- a) Durga Puja
- b) Raksha Bandhan
- c) Holi
- d) Bhai Dooj
- e) can not be determined

Q13: Who celebrates festival immediately after K?

- a) D
- b) H
- c) R
- d) M
- e) can not be determined

Q14: How many festivals are celebrated in the given months?

- a) 11
- b) 12
- c) 13
- d) 14
- e) More than 14

Q15: Which of the following does not belong to the group?

- a) Ashtami
- b) Eid
- c) Pongal
- d) Holi
- e) Lohri

SOLUTION(1-5):

- i) The one who appears on 12th March appears for test of Biology.
- ii) E appears for the test of Science on 5th in the month having 30 days. (so, we get 2 possible cases here E appears in either April or June).

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April	E(Science)	
June		
October		

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April		
June	E(Science)	
October		

iii) Only 4 persons can appear between the ones who are appearing for Biology and Social Science.

iv) 3 persons can appear for the test between E and F.

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April	E(Science)	
June		
October	(Social Science)	

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April		
June	E(Science)	
October	(Social science)	

v) Only 2 persons appear between B and D. And D does not appear in April.

(so, we get 2 possible sub cases for case 1).

vi) D appears for Maths.

Case 1(a):

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
-------------------	------------	-------------

March	D(Maths)	(Biology)
April	E(Science)	B
June		
October	(Social Science)	

Case 1(b):

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April	E(Science)	
June	D(Maths)	
October	(Social Science)	B

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		(Biology)
April	B	
June	E(Science)	D(Maths)
October	(Social science)	

vii) only 1 person appears for test of English between C and H.

(therefore, Case 1(a) and Case 1(b) gets eliminated as it does not satisfy the condition).

viii) H appears for the test of Hindi.

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March		C(Biology)
April	B(English)	H(Hindi)
June	E(Science)	D(Maths)
October	(Social science)	

ix) Only 3 persons appears between E and F.

x) Both B and G appears on a same date.

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March	F	C(Biology)
April	B(English)	H(Hindi)
June	E(Science)	D(Maths)
October	G(Social science)	

xi) A appears for test of Reasoning.

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March	F	C(Biology)
April	B(English)	H(Hindi)
June	E(Science)	D(Maths)
October	G(Social science)	A(Reasoning)

xii) One of the student appears for Punjabi.

<u>Month/Date</u>	<u>5th</u>	<u>12th</u>
March	F(Punjabi)	C(Biology)
April	B(English)	H(Hindi)
June	E(Science)	D(Maths)
October	G(Social science)	A(Reasoning)

1) Option c) is the correct answer as F appears for the test of Punjabi.

2) Option b) is the correct answer as only 1 test is scheduled between B and E.

3) Option b) is the correct answer as B appears on 5th whereas others appear on 12th of different months.

4) Option b) is the correct answer as G appears for the test of Social Science.

5) Option b) is the correct answer as G appears in the month having more than 30 days.

SOLUTION(6-10):

i) A celebrated his birthday on 15th of a month having less than 30 days.

(so, A celebrates on 15th February).

ii) Person who celebrates his birthday on 15th March celebrates immediately after G.

(so, G must celebrate on 5th March).

iii) A celebrates before D and it is also given that only 2 persons celebrate between A and D.

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January			
February		A	
March	G	D	
April			

iv) Both B and C celebrate in the month having 31 days but there is a gap of 20 days between their birthdays.

(Months having 31 days are either January and March, but there is no place in March, so both B and C celebrate their birthday in January, we get 2 possible cases here).

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	B		C
February		A	
March	G	D	
April			

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	C		B

February		A	
March	G	D	
April			

v) Only 3 persons celebrate between A and Z.

vi) Number of persons celebrating before C is equivalent to number of persons celebrating after I.

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	B		C
February		A	
March	G	D	Z
April	I		

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	C		B
February		A	
March	G	D	Z
April			I

vii) Number of persons celebrating before Z is equivalent to number of persons celebrating after H.

viii) J celebrates before A.

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	B	J	C
February	H	A	
March	G	D	Z
April	I		

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	C	J	B
February	H	A	
March	G	D	Z
April			I

ix) Only 4 persons celebrate between Q and S.

Case 1:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	B	J	C
February	H	A	Q/S
March	G	D	Z
April	I	Q/S	

Case 2:

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	C	J	B
February	H	A	Q/S
March	G	D	Z
April		Q/S	I

x) P celebrates his birthday after both Q and S. Therefore, Case 2 gets eliminated as it does not satisfy the given condition.

<u>Month/Date</u>	<u>5th</u>	<u>15th</u>	<u>25th</u>
January	B	J	C
February	H	A	Q/S
March	G	D	Z
April	I	Q/S	P

- 6) Option b) is the correct answer as P celebrates his birthday on 25th April.
- 7) Option e) is the correct answer as either Q or S celebrates his birthday on 15th April.
- 8) Option a) is the correct answer as A celebrates his birthday on 15th, whereas others (given in the options) celebrate on 5th of different months.
- 9) Option c) is the correct answer as 2 persons celebrate their birthday between P and Z.
- 10) Option d) is the correct answer as both G and Z celebrate their birthdays immediately before and after D.

SOLUTION (11-15):

4 months having exactly 30 days are – April, June, September and November.

Dates which are divisible by 7 – 7th, 14th, 21st and 28th.

- i) Eid is celebrated in third week of April by M.
- ii) Holi is celebrated in 2nd week of April.
- iii) S celebrates Diwali in last week of September.

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April		(Holi)	M(Eid)	
June				
September				S(Diwali)
November				

- iv) G celebrates Dussehra fourteen days prior to diwali and no festival is celebrated between diwali and dussehra.

(so, Dussehra must be celebrated on 14th September).

vi) Only 5 festivals can be celebrated between the festivals of S and H, who celebrates Raksha Bandhan.

(so, H must celebrate on 14th june).

v) J and B do not celebrate their festivals consecutively but celebrate in the same month and no one else celebrates his festival in the same month.

vi) B celebrates Bhai Dooj on 14th of a month.

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April		(Holi)	M(Eid)	
June		H(Raksha Bandhan)		
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

vii) Number of festivals celebrated before A is equivalent to that of celebrated after J.

(so, A must celebrate on 7th april).

viii) A celebrates Ashtami.

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	
June		H(Raksha Bandhan)		
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

ix) K celebrates Lohri on 28th of a month.

(so, we get 2 possible cases here).

Case 1:

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	K(Lohri)
June		H(Raksha Bandhan)		
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

Case 2:

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	
June		H(Raksha Bandhan)		K(Lohri)
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

x) Only 2 festivals are celebrated between K and P festival.

xi) P celebrates Navratre.

xii) Durga Puja is celebrated either immediately before or immediately after Navratre.

Case 1:

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	K(Lohri)
June		H(Raksha Bandhan)	P(Navratre)	Durga Puja
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

Case 2:

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	Durga Puja
June	P(Navratre)	H(Raksha Bandhan)		K(Lohri)
September		G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

xiii) D and R celebrate their festival on the same date.

(so, case 2 gets eliminated as no place for D and R).

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	K(Lohri)
June	D/R	H(Raksha Bandhan)	P(Navratre)	Durga Puja
September	D/R	G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

xiv) Pongal and Shivratri are celebrated on the same date.

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	(Holi)	M(Eid)	K(Lohri)
June	D/R(Pongal/Shivratri)	H(Raksha Bandhan)	P(Navratre)	Durga Puja
September	D/R(Pongal/Shivratri)	G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J

xv) X does not celebrate Holi.

xvi) One of the person is W.

xvii) J celebrates Christmas.

<u>Months/Date</u>	<u>7th</u>	<u>14th</u>	<u>21st</u>	<u>28th</u>
April	A(Ashtami)	W(Holi)	M(Eid)	K(Lohri)

June	D/R(Pongal/ Shivratri)	H(Raksha Bandhan)	P(Navratre)	X(Durga Puja)
September	D/R(Pongal/ Shivratri)	G(Dussehra)	----	S(Diwali)
November	----	B(Bhai Dooj)	----	J(Christmas)

11) Option b) is the correct answer as Durga Puja is celebrated on 28th June.

12) Option c) is the correct answer as W celebrates holi.

13) Option e) is the correct answer as either d or R celebrates immediately after K.

14) Option c) is the correct answer as total 13 festivals are celebrated in the given months.

15) Option c) is the correct answer as Pongal is celebrated either in June or September whereas, other festivals (given in the options) are celebrated in the month of April.

5. FLAT BASED PUZZLES

Directions (1-5): Study the following information carefully and answer the given questions-

11 persons A, B, C, D, E, F, G, H, I, J and K lives in a 4 storey building such that lowermost floor is numbered 1 and top most floor is numbered 4. Each floor has 3 flats – 1, 2 and 3 from left to right. One of the flats on a floor is vacant.

K lives in an even numbered flat on floor numbered 2. B and C live on same floors. B lives in an even numbered flat on lowermost floor. G and A lives on same floor. All the flats on the floor on which F lives are occupied. I lives to the immediate left of G. B lives on the floor on which 2 others live. There is 1 floor between G and F. E lives immediately above C. G lives immediately below a vacant flat. D lives somewhere above J and shares same flat number. A lives in flat 1.

Q1: vacant flat is on which floor?

- a) Floor 1
- b) Floor 2
- c) Floor 3
- d) Floor 4
- e) can not be determined

Q2: Who lives on same floor with K?

- a) only F
- b) Both F and B
- c) Both J and E
- d) only E

e) None of the given options

Q3: Which of the following does not belong to the group?

a) B

b) G

c) H

d) I

e) K

Q4: Who lives in flat 1 on lowermost floor?

a) F

b) B

c) C

d) J

e) D

Q5: Who lives adjacent to a vacant flat?

a) D

b) E

c) F

d) G

e) H

Directions (6-10): Study the following information carefully and answer the given questions-

8 persons A, B, C, D, E, F, G and H live on 3 different floors such that lowermost floor is numbered 1 and floor above it is numbered 2 and so on. There are 3 flats on each floor numbered 1, 2 and 3 from left to right. One of the flats is vacant. They like different colors – Black, Blue, Grey, Mustard, Orange, Pink, Red and Violet but not necessarily in the same order.

C lives in flat 1 on an even numbered floor but does not like grey. G lives immediately above H who likes orange. Both B and F live in even numbered flats. The one who likes orange does not live on same floor on which person who likes pink lives. D lives in flat 1. E lives in flat 1 on lowermost floor but does not like red and he lives on same floor on which B lives. H lives on an odd numbered floor in an odd numbered flat. B likes neither Blue nor Black. F likes violet. A and C live on same floor. Persons who like red and pink live on same floor. G likes Mustard.

Q6: Who likes Grey color?

- a) A
- b) B
- c) C
- d) D
- e) E

Q7: Who lives adjacent to vacant flat?

- a) D
- b) E
- c) F
- d) H
- e) G

Q8: Which of the following does not belong to the group?

- a) B
- b) G

- c) D
- d) E
- e) H

Q9: Who are immediate neighbors of B?

- a) Only A
- b) Both A and G
- c) Only H
- d) Both H and E
- e) None of the above

Q10: Which color does D likes?

- a) Blue
- b) Violet
- c) Black
- d) Grey
- e) can not be determined

Directions (11-15): Study the following information carefully and answer the given questions-

Nine persons – A, B, O, P, Q, R, S, T and W live on three different flats numbered Flat – 1, Flat – 2 and Flat – 3 in three different floors numbered floor – 1, floor – 2 and floor – 3 (From Left to Right). Each floor contains three flats and flat – 1 of floor – 2 exactly above the flat -1 of floor – 1 and exactly below the flat – 1 of floor – 3. Similarly flat – 2 and flat – 3 of each floors constructed. Each likes different colours namely viz. – Grey, Blue, Red, Yellow, White, Black, Brown, Orange, and Purple.

O lives in the same floor with A. S lives immediately below O. B lives immediately below A. R lives on even – numbered flat in even-numbered floor. P and W lives on even-numbered flats. W lives immediately below R. Q lives on odd numbered floor. Q lives on one of the same flat above S. The persons who like Blue, Red and White live in odd numbered floor on odd numbered flat. A lives on flat – 1. The persons who like Black, Grey and Yellow live in even

numbered floor. The person who likes Grey lives immediately below the one who likes Brown. The one who likes orange lives on even numbered flat. The person who likes Black lives immediately above the one who likes Red. The flat number of the person who likes Red is not more than 2. The persons who like White and Purple live on the same numbered flat. The one who likes White lives in the same floor with the one who likes Blue

Q11: Who lives immediately above the one who likes blue color?

- a) P
- b) Q
- c) R
- d) S
- e) None of these

Q12: Which of the following does not belong to the group?

- a) Q
- b) T
- c) W
- d) B
- e) S

Q13: If B is related to Orange, similarly A is related to Grey. In the similar way, T is related to?

- a) Blue
- b) Brown

- c) White
- d) Black
- e) None of these

Q14: How many flats are there between O's flat and person who likes Grey?

- a) None
- b) 1
- c) 2
- d) can not be determined as they live on different floors
- e) None of these

Q15: Who likes Orange color?

- a) B
- b) S
- c) W
- d) A
- e) P

SOLUTION (1-5):

- i) K lives in an even numbered flat on floor numbered 2.
- ii) B lives in an even numbered flat on lowermost floor.

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
-------------------------------	-----------------	-----------------	-----------------

4			
3			
2		K	
1		B	

iii) B and C lives on same floor.

(so, we get 2 possible cases here).

Case 1:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4			
3			
2		K	
1		B	C

Case 2:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4			
3			
2		K	
1	C	B	

iv) E lives immediately above C.

v) A lives in flat 1.

vi) Both A and G lives on same floor and I lives immediate left of G.

Case 1:

<u>Floor/</u>	<u>1</u>	<u>2</u>	<u>3</u>
----------------------	-----------------	-----------------	-----------------

<u>Flat</u>			
4			
3	A	I	G
2		K	E
1		B	C

Case 2:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4			
3	A	I	G
2	E	K	
1	C	B	

vii) G lives immediately below vacant flat.

viii) There is 1 floor between G and F.

Case 1:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4			-----
3	A	I	G
2		K	E
1	F	B	C

Case 2:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4			-----
3	A	I	G
2	E	K	
1	C	B	F

ix) D lives somewhere above J and shares same flat number.

(so, case 2 gets eliminated here).

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4	D		-----
3	A	I	G
2	J	K	E
1	F	B	C

After filling the remaining data, we get:

<u>Floor/ Flat</u>	<u>1</u>	<u>2</u>	<u>3</u>
4	D	H	-----
3	A	I	G
2	J	K	E
1	F	B	C

1) Option d) is the correct answer as vacant flat is on floor 4.

2) Option c) is the correct answer as both J and E lives on same floor with K.

3) Option b) is the correct answer as G lives in an odd numbered flat while others (given in the options) live in even numbered flat.

4) Option a) is the correct answer as F lives in flat 1 on lowermost floor.

5) Option e) is the correct answer as H lives adjacent to a vacant flat.

SOLUTION (6-10):

i) C lives in flat 1 on an even numbered floor.

ii) E lives in flat 1 on lowermost floor.

iii) H lives on an odd numbered floor in an odd numbered flat and H lives immediately below G .

iv) H likes orange.

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>
3			
2	C		G
1	E		H(Orange)

v) Both A and C live on same floor.

vi) Both E and B lives on same floor.

vii) Both B and F live in even numbered flats.

viii) F likes violet color.

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>
3		F(Violet)	
2	C	A	G
1	E	B	H(Orange)

ix) D lives in flat 1.

x) G likes Mustard.

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>
3	D	F(Violet)	
2	C	A	G (Mustard)
1	E	B	H(Orange)

xi) Persons who like red and pink live on same floor.

xii) The one who likes orange does not live on same floor on which person who likes pink lives.

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>

3	D	F(Violet)	-----
2	C(Red/Pink)	A(Red/Pink)	G (Mustard)
1	E	B	H(Orange)

xiii) B likes neither Blue nor Black.

(only possibility is B likes grey color).

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>
3	D	F(Violet)	-----
2	C(Red/Pink)	A(Red/Pink)	G (Mustard)
1	E	B (Grey)	H(Orange)

After filling the remaining data, we get:

<u>Floor/ Flat</u>	<u>1(Color)</u>	<u>2(Color)</u>	<u>3(Color)</u>
3	D(Black/ Blue)	F(Violet)	-----
2	C(Red/Pink)	A(Red/Pink)	G (Mustard)
1	E(Black/ Blue)	B (Grey)	H(Orange)

6) Option b) is the correct answer as B likes grey color.

7) Option c) is the correct answer as F lives adjacent to vacant flat.

8) Option a) is the correct answer as B lives in even numbered flat while others (given in the options) live in odd numbered flat.

9) Option d) is the correct answer as both E and H are neighbors of B.

10) Option e) is the correct answer as D likes either blue or black color.

SOLUTION(11-15):

i) R lives on even numbered floor in an even numbered flat.

(so, must live on floor numbered 2 in flat no 2).

ii) W lives immediately below R.

iii) Both P and W live in even numbered flats.

<u>Floor/ Flat</u>	<u>1 (Colour)</u>	<u>2 (Colour)</u>	<u>3 (Colour)</u>
3		P	
2		R	
1		W	

iv) Q lives on an odd numbered floor and S lives immediately below Q.

v) O lives immediately above S.

vi) Both O and A lives on same floor and A lives in flat numbered 1.

<u>Floor/ Flat</u>	<u>1 (Colour)</u>	<u>2 (Colour)</u>	<u>3 (Colour)</u>
3		P	Q
2	A	R	O
1		W	S

vii) A lives immediately above B.

<u>Floor/ Flat</u>	<u>1 (Colour)</u>	<u>2 (Colour)</u>	<u>3 (Colour)</u>
3		P	Q
2	A	R	O
1	B	W	S

viii) Persons who like Black, Grey and Yellow lives on even numbered floor.
(i.e. floor numbered 2)

ix) Person who like Blue, Red and White live on odd numbered floor in odd numbered flat.

x) Person who like Blue and White live on same floor.

xi) Person who likes Red lives immediately below the one who likes black and he lives in either flat numbered 1 or flat numbered 2.

xii) Person who likes orange lives in even numbered flat.

xiii) Person who likes White and purple lives in same numbered flat.

xiv) One who likes Grey lives immediately below the one who likes brown.

<u>Floor/ Flat</u>	<u>1 (Colour)</u>	<u>2 (Colour)</u>	<u>3 (Colour)</u>
3	(Blue)	P (Brown)	Q (White)
2	A (Black)	R (Grey)	O (Yellow)
1	B (Red)	W (Orange)	S (Purple)

After filling the remaining data, we get:

<u>Floor/ Flat</u>	<u>1 (Colour)</u>	<u>2 (Colour)</u>	<u>3 (Colour)</u>
3	T (Blue)	P (Brown)	Q (White)
2	A (Black)	R (Grey)	O (Yellow)
1	B (Red)	W (Orange)	S (Purple)

11) Option e) is the correct answer as no one lives immediately above the one who likes blue colour.

12) Option c) is the correct answer as W lives in an even numbered flat whereas others (given in the options) live in odd numbered flats.

13) Option b) is the correct answer as T is related to brown (as person who likes brown lives in adjacent flat of T).

14) Option a) is the correct answer as there is no flat between O and person who likes grey.

15) Option c) is the correct answer as W likes orange colour.

6. YEAR BASED PUZZLES

Directions (1-5): Study the following information carefully and answer the given questions-

8 persons – Raheja, Rajat, Ram, Ritvik, Rohan, Romit, Roshan and Ruhanika were born in different years – 1950, 1962, 1968, 1974, 1981, 1993, 2000 and 2007. Their age is considered as in 2018. They work in different companies – Adobe, Accenture, Hcl, Sasken, Samsung, TCS, TCIL and Wipro, but not necessarily in the same order.

Raheja is 19 years younger than Ruhanika. Roshan works in Sasken. Ruhanika is 12 years older than Rohan, who works in Wipro. The one who was born in 1968 works in Hcl. Rohan is 44 years old now. Ram who works in TCIL. The one working in Hcl is 18 years younger than the one working in TCS. The one working in Accenture is 56 years old now. Neither Raheja nor Rajat works in TCS. Ram is 7 years older than Roshan, who is 14 years younger than Rajat. Romit is older than Ritvik.

Q.1 Who was born in year 2000?

- a) Rajat
- b) Ram
- c) Roshan
- d) Romit
- e) Ritvik

Q.2 Who is 25 years old at present?

- a) Raheja
- b) Roshan
- c) Rajat
- d) Ruhanika
- e) None of these

Q.3 Which of the following statements is definitely true?

- a) Raheja works in Samsung.
- b) Rohan was born in 1974.
- c) The one who works in Adobe was born in the year 1993.
- d) All of the above.
- e) None of the above

Q.4 Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to the group?

- a) Romit - Accenture
- b) Ritvik - Wipro
- c) Rajat - TCIL
- d) Ruhanika - Samsung
- e) Ram - Sasken

Q.5 Who works in Adobe?

- a) Roshan
- b) Raheja
- c) Ruhanika
- d) Rajat
- e) Can not be determined

Directions (6-10): Study the following information carefully and answer the given questions-

7 persons A, B, C, D, E, F and G are born in 7 different years starting from year 1950. All are born after a gap of 5 years i.e. oldest is born in 1950 and second one is born in 1955 and so on. Their age is considered as in 2018.

Difference between ages of B and C is 10 years. Age of B is a prime number. Equal number of persons are born between A and D as in A and G. E is younger than C but older than B. A is younger to B but his age is not a multiple of 19.

Q6: Who among the following is oldest?

- a) C
- b) D

- c) E
- d) F
- e) A

Q7: Which of the following was born in year 1975?

- a) A
- b) B
- c) C
- d) D
- e) E

Q8: Which among the following does not belong to the group?

- a) D
- b) E
- c) F
- d) G
- e) B

Q9: Which of the following statements is true?

- a) B was born after G
- b) F was born after C
- c) C was born in year 1965
- d) Only 2 persons were born after A
- e) None of these

Q10: How old will be D after 2 years?

- a) 45
- b) 50
- c) 40
- d) 42
- e) can not be determined

Directions (11-15): Study the following information carefully and answer the given questions-

There are seven people A, B, C, D, E, F, and G. They all were born in different years viz. 1948, 1951, 1963, 1972, 1975, 1992 and 2002 but not necessarily in same order. All of them likes different cars such as Swift, Creta, Honda city, Duster, BMW, Audi and Bugatti. But the date and month of birth of all these persons are same. The calculation is done with respect to the present year 2017 and assuming months and date to be same. The person who likes Honda city born after G and before the person who born in 1972. A was born in an even year and his age is multiple of 5, but A is not the youngest person. Age of F is equal to double the difference between A and G. Age of E is equal to the difference between the age of B and C, but E is not the youngest among all of them. C was not oldest among all of them. Oldest person likes Audi. The youngest person likes Swift. G does not like BMW. The person who, likes Bugatti was born in an odd year and his age is multiple of 14. A likes Creta.

Q11: Who has BMW car?

- a) B
- b) C
- c) D
- d) G
- e) None of these

Q12: Who is 54 years old?

- a) E
- b) F
- c) G
- d) F
- e) can not be determined

Q13: Which of the following does not belong to the group?

- a) C

- b) D
- c) B
- d) G
- e) A

Q14: how many persons are older than B?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q15: Which of the following statements is false?

- a) A was born in 1972.
- b) F drives Buggati
- c) F was born in 1975.
- d) C is youngest.
- e) None of these

SOLUTION (1-5):

1. The one who was born in 1968 works in Hcl.
2. Rohan is 44 years old now and works in Wipro.
3. The one working in Hcl is 18 years younger than the one working in TCS. (so, person working in TCS must be born in 1950).
4. The one working in Accenture is 56 years old now (must be born in 1962).

Year	Age	Person	Company
1950	68		TCS
1962	56		Accenture
1968	50		Hcl
1974	44	Rohan	Wipro
1981	37		
1993	25		
2000	18		
2007	11		

5. Ruhanika is 12 years older than Rohan.

(so, Ruhanika must be born in 1962.)

6. Raheja is 19 years younger than Raheja.

Year	Age	Person	Company
1950	68		TCS
1962	56	Ruhanika	Accenture
1968	50		Hcl
1974	44	Rohan	Wipro
1981	37	Raheja	
1993	25		
2000	18		
2007	11		

7. Rajat is 14 years older than Roshan.

(only possibility is Rajat must be born in 1993 and Roshan in 2007.)

8. Ram is 7 years younger than Roshan.

(so, Ram must be born in 2000.)

Year	Age	Person	Company
1950	68		TCS
1962	56	Ruhanika	Accenture
1968	50		Hcl
1974	44	Rohan	Wipro
1981	37	Raheja	
1993	25	Rajat	
2000	18	Ram	
2007	11	Roshan	

9. Roshan works in Sasken.

10. Ram works in TCIL.

11. Romit is older than Ritvik.

Year	Age	Person	Company
1950	68	Romit	TCS
1962	56	Ruhanika	Accenture
1968	50	Ritvik	Hcl

1974	44	Rohan	Wipro
1981	37	Raheja	
1993	25	Rajat	
2000	18	Ram	TCIL
2007	11	Roshan	Sasken

After filling the remaining data we get,

Year	Age	Person	Company
1950	68	Romit	TCS
1962	56	Ruhanika	Accenture
1968	50	Ritvik	Hcl
1974	44	Rohan	Wipro
1981	37	Raheja	Samsung/Adobe
1993	25	Rajat	Samsung/Adobe
2000	18	Ram	TCIL
2007	11	Roshan	Sasken

- 1) Option b) is the correct answer as Ram was born in year 2000.
- 2) Option c) is the correct answer as Rajat is 25 years old at present.
- 3) Option b) is the correct answer.
- 4) Option d) is the correct answer.
- 5) Option e) is the correct answer as either Raheja or Rajat works in Adobe.

SOLUTION (6-10):

i) Lets first calculate the ages of different persons.

(For example: 2018 – 1950 = 68)

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	
1960	58	
1965	53	
1970	48	
1975	43	
1980	38	

ii) Age of B is a prime number.

(so, we get 2 possible cases here).

Case 1:

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	
1960	58	
1965	53	B
1970	48	
1975	43	
1980	38	

Case 2:

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	
1960	58	
1965	53	
1970	48	
1975	43	B
1980	38	

iii) Difference between ages of B and C is 10 years.

iv) E is born after C but before B.

(so, we can conclude than B is born after C).

Case 1:

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	C
1960	58	

1965	53	B
1970	48	
1975	43	
1980	38	

Case 2:

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	
1960	58	
1965	53	C
1970	48	
1975	43	B
1980	38	

v) A is born after A but age of A is not a multiple of 19.

(so, we get 2 possibilities for case 1 here and case 2 gets eliminated).

Case 1(a):

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	C
1960	58	
1965	53	B
1970	48	A
1975	43	
1980	38	

Case 1(b):

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	C

1960	58	
1965	53	B
1970	48	
1975	43	A
1980	38	

vi) Equal number of persons are born between A and D as in A and G.

Case 1(a):

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	C
1960	58	D/G
1965	53	B
1970	48	A
1975	43	
1980	38	D/G

Case 1(b):

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	
1955	63	C
1960	58	
1965	53	B
1970	48	D/G
1975	43	A
1980	38	D/G

vii) E is younger than C but older than B.

(so, case 1(a) gets eliminated here as it does not satisfy the condition).

Case 1(b):

<u>Year</u>	<u>Age</u>	<u>Person</u>
-------------	------------	---------------

1950	68	
1955	63	C
1960	58	E
1965	53	B
1970	48	D/G
1975	43	A
1980	38	D/G

After filling the remaining data, we get:

<u>Year</u>	<u>Age</u>	<u>Person</u>
1950	68	F
1955	63	C
1960	58	E
1965	53	B
1970	48	D/G
1975	43	A
1980	38	D/G

6) Option d) is the correct answer as F is the oldest.

7) Option a) is the correct answer as A was born in 1975.

8) Option e) is the correct answer as B was born in odd numbered year while others (given in the options) are born in even numbered year.

9) Option e) is the correct answer as none of the given statements are true.

10) Option e) is the correct answer as D can be either 40 years or 50 years old.

SOLUTION (11-15):

i) Lets first calculate the age of these persons w.r.t. year 2017.

(For Example: $2017 - 1948 = 69$)

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
-------------	------------	---------------	------------

1948	69		
1951	66		
1963	54		
1972	45		
1975	42		
1992	25		
2002	15		

ii) Person who has Buggati was born in an odd year and his age is multiple of 14.

(only possibility is he is born in the year 1975).

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69		
1951	66		
1963	54		
1972	45		
1975	42		Buggati
1992	25		
2002	15		

iii) A was born in even year and his age is multiple of 5 and likes creta.

iv) A is not the youngest.

(so, we get 2 possible cases here).

Case 1:

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69		
1951	66		
1963	54		
1972	45	A	Creta
1975	42		Buggati
1992	25		
2002	15		

Case 2:

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69		
1951	66		
1963	54		
1972	45		
1975	42		Buggati
1992	25	A	Creta
2002	15		

v) Age of F is twice the difference of ages of A and G.

(now, we have to check possible age of G, so that twice the difference of both A and G can be the age of F).

So, considering case 1:

Age of A is 45.

If we take age of G as 66, so difference between ages of A and G will be 21 and its twice will be 42, which is age of F.

But, Case 2 does not satisfy the given condition, so it gets eliminated here.

Case 1:

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69		
1951	66	G	
1963	54		
1972	45	A	Creta
1975	42	F	Buggati
1992	25		
2002	15		

vi) The person who likes Honda city born after G and before the person who born in 1972.

(so, one born in 1963 has Honda city).

vii) Age of E is difference between ages of B and C.

viii) E is not the youngest and C is not the oldest.

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69	B	
1951	66	G	
1963	54	E	Honda city
1972	45	A	Creta
1975	42	F	Buggati
1992	25		
2002	15	C	

ix) Oldest person likes Audi. And The youngest person likes Swift.

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69	B	Audi
1951	66	G	
1963	54	E	Honda city
1972	45	A	Creta
1975	42	F	Buggati
1992	25		
2002	15	C	Swift

x) G does not like BMW.

<u>Year</u>	<u>Age</u>	<u>Person</u>	<u>Car</u>
1948	69	B	Audi
1951	66	G	
1963	54	E	Honda city
1972	45	A	Creta
1975	42	F	Buggati
1992	25		BMW
2002	15	C	Swift

After filling the remaining data, we get:

<u><i>Year</i></u>	<u><i>Age</i></u>	<u><i>Person</i></u>	<u><i>Car</i></u>
1948	69	B	Audi
1951	66	G	Duster
1963	54	E	Honda city
1972	45	A	Creta
1975	42	F	Buggati
1992	25	D	BMW
2002	15	C	Swift

11) Option c) is the correct answer as D has BMW.

12) Option a) is the correct answer as E is 54 years old.

13) Option d) is the correct answer as G was born in odd numbered year rest others (given in the options) are born in even numbered year.

14) Option a) is the correct answer as no one is older than B.

15) Option e) is the correct answer as all the given statements are true.

7. DIRECTION AND DISTANCE BASED PUZZLES

DIRECTIONS(1-5): Study the following information carefully and answer the given questions:

5 horses P, Q, R, S and T are standing in a straight line but not necessarily in same order. The distance between horses is a successive multiple of 3.

Distance between horses P and Q is a multiple of 11. Horse P is immediate left of Q. Distance between Q and R is 75m and only 1 horse is between them. Distance between horse S and T is a multiple of both 9 and 11 and horse S is to the left of T.

Man gets down from horse S and moves for 10m in north, takes a right turn moves for another 50m and stops there at point A.

Another man gets down from horse T and moves 10m south, takes a right turn and moves for 49m and stops at point B.

Q1: What is the distance between point A and B?

- a) 5m
- b) 20m
- c) 15m
- d) 10m
- e) can not be determined

Q2: What is the direction of point B with respect to point P?

- a) North
- b) South
- c) west

d) South west

e) South east

Q3: How many horses are there between S and T?

a) none

b) 1

c) 2

d) 3

e) can not be determined

Q4: Which of the following statement is true?

a) Q is to the immediate right of T.

b) A is to the north west of B.

c) R is 33m away from S.

d) Only 1 horse is between P and S

e) None of these

Q5: What is the distance between horse P and T?

a) 54

b) 57

c) 63

d) 66

e) 69

DIRECTIONS (6-10): Study the following information carefully and answer the given questions:

6 cars A, B, C, D, E and F are parked in a straight line. Distance between each car is a successive multiple of 6.

Car C is parked to the right of A. Distance between cars F and C is 30m. Distance between A and B is multiple of both 5 and 6. Distance between cars A and C is multiple of 9. Distance between cars A and E is 36m. Car D is parked to the immediate left of A. No car is parked to the right of C. No car is parked between F and C.

Car B moves 5m in south direction, takes a right turn moves for another 10m and stops at point S.

Car C moves for 5m in north and takes a left turn and moves for 54m and takes a right turn and moves for 5m more and stops at point J.

Q6: What is the difference between car A and point J?

- a) 5m
- b) 10m
- c) 15m
- d) 20m
- e) can not be determined

Q7: In which direction is point S with respect to car E?

- a) South
- b) North
- c) West

d) North west

e) South west

Q8: How many cars are parked between Car B and car E?

a) None

b) 1

c) 2

d) 3

e) 4

Q9: What is the distance between car A and C?

a) exactly 36

b) less than 30

c) exactly 45

d) more than 45

e) can not be determined

Q10: Which of the following does not belong to the group?

a) A

b) B

c) C

d) D

e) F

Directions (11-15): Study the following information carefully and answer the given questions-

Six horses A, B, C, D, E & F are made to stand in a row facing north & distance between 2 adjacent horses increases from left to right, in consecutive integral multiples of 4. Distance between C & D is 60 m and only 2 horses stands between them. F sits immediate left of C. A sits somewhere to the right of F and distance between them is in multiple of six. Distance between C and B is 44 m. Horse A starts moving towards east, after moving 12 m, it turns to its right and walked 20m. Again it turns right and moves 60 m. From there after turning to its left and walking for a distance of 5 m, it comes to halt at a point M. Horse F, moves in north direction for a distance of 20 m and then turn to its left and moves 26 m. After taking one more turn to its left it stops at a point N after walking 5 m. Horse D, walks south and travel 10 m before turning to its left. After 24 m it takes right turn and walks 15 m and reaches point Q.

Q11: What is the distance between point Q and M?

- a) 36m
- b) 30m
- c) 44m
- d) 40m
- e) None of these

Q12: Point N is in which direction with respect to point Q?

- a) North
- b) South
- c) South east

- d) North east
- e) North west

Q13: What is the difference between horse A and C?

- a) 32m
- b) 28m
- c) 60m
- d) 84m
- e) 104m

Q14: How many horses are there between A and C?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q15: Which of the following statement(s) is/are true?

- a) The distance between C and M is 25m.
- b) D is immediate left of B.
- c) A is at one of the extreme ends.
- d) Distance between E and F is more than 50m.
- e) All are true.

SOLUTION (1-5):

i) Distance between Q and R is 75m and only 1 horse is between them.

therefore, $X + (X + 3) = 75$

$$2X = 75 - 3 = 72$$

$$X = 36\text{m}$$

ii) Horse P is immediate left of Q. Distance between horses P and Q is a multiple of 11.

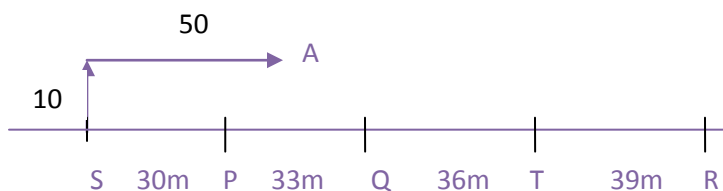


iii) Distance between horse S and T is a multiple of both 9 and 11 and horse S is to the left of T.

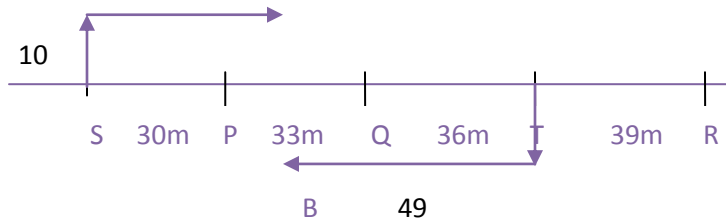
(only possibility is S is to the immediate left of P).



iv) Man gets down from horse S and moves for 10m in north, takes a right turn moves for another 50m and stops there at point A.



v) Another man gets down from horse T and moves 10m south, takes a right turn and moves for 49m and stops at point B.



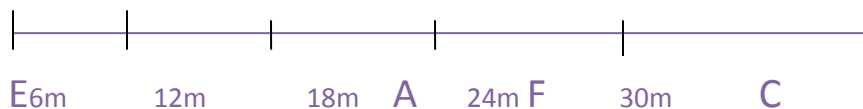
- 1) Option b) is the correct answer as distance between A and B is 20m.
- 2) Option e) is the correct answer as point B is to the south east of P.
- 3) Option c) is the correct answer as there are 2 horses between S and T.
- 4) Option e) is the correct answer as none of the given statements is true.
- 5) Option e) is the correct answer as distance between P and T is 69m.

SOLUTION (6-10):

- i) No car is parked to the right of C.
- ii) Distance between cars F and C is 30m.



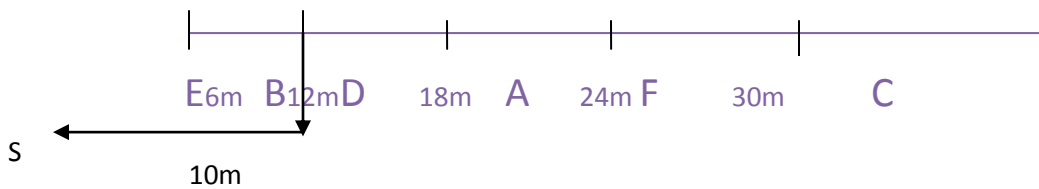
- iii) Distance between cars A and E is 36m.
- iv) Distance between cars A and C is multiple of 9.
(only possibility is A is to the immediate left of F).



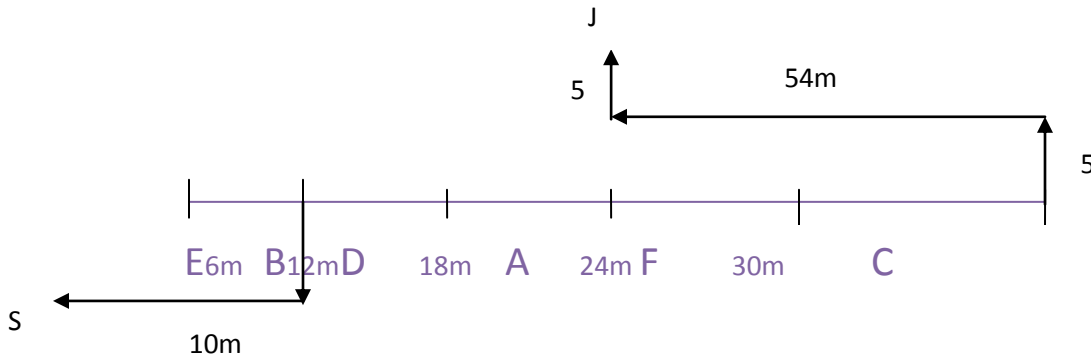
- v) Car D is parked to the immediate left of A.



vi) Car B moves 5m in south direction, takes a right turn moves for another 10m and stops at point S.



vii) Car C moves for 5m in north and takes a left turn and moves for 54m and takes a right turn and moves for 5m more and stops at point J.



6) Option b) is the correct answer as distance between A and J is 10m.

7) Option e) is the correct answer as point S is to the southwest of car E.

8) Option a) is the correct answer as no car is parked between B and E.

9) Option d) is the correct answer as distance between A and C is 54m.

10) Option c) is the correct answer as car C is parked at an end while others (given in the options) are parked in mid.

SOLUTION (11-15):

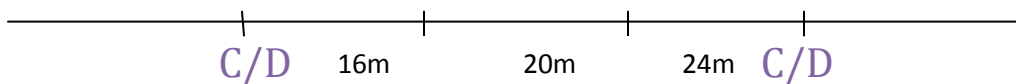
i) Distance between C and D is 60m and only 2 horses stand between them. And it is also given that distance between 2 horses is consecutive integral multiple of 4.

So, this distance can be calculated as :

$$X + (X + 4) + (X + 8) = 60$$

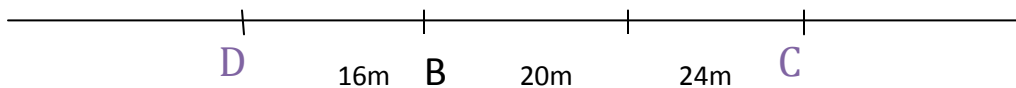
$$3X = 60 - 12$$

Therefore, $X = 16$

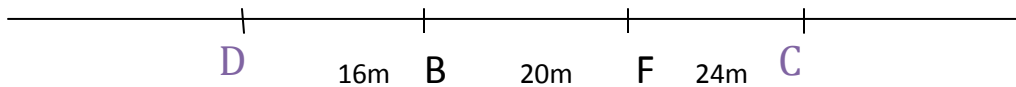


ii) Distance between C and B is 44m.

(only possibility is C is somewhere to the right of B).



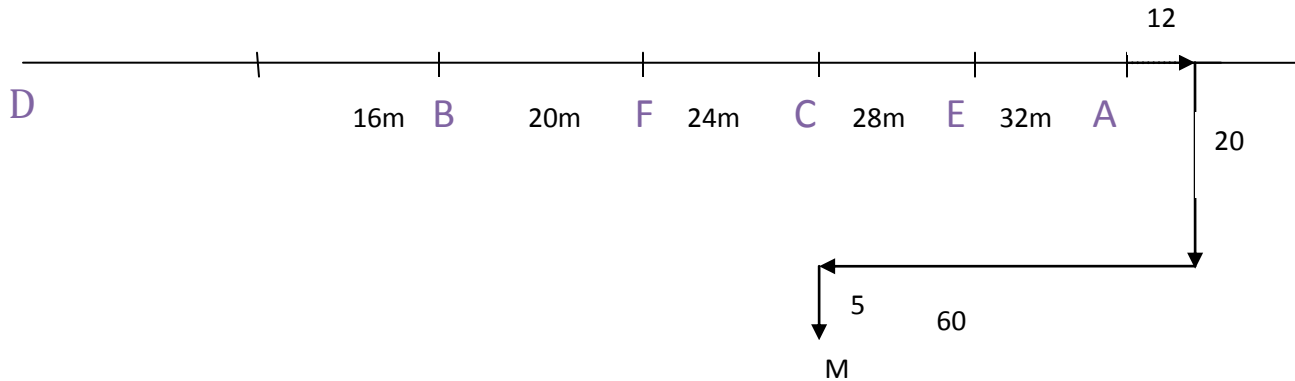
iii) F sits to the immediate left of C.



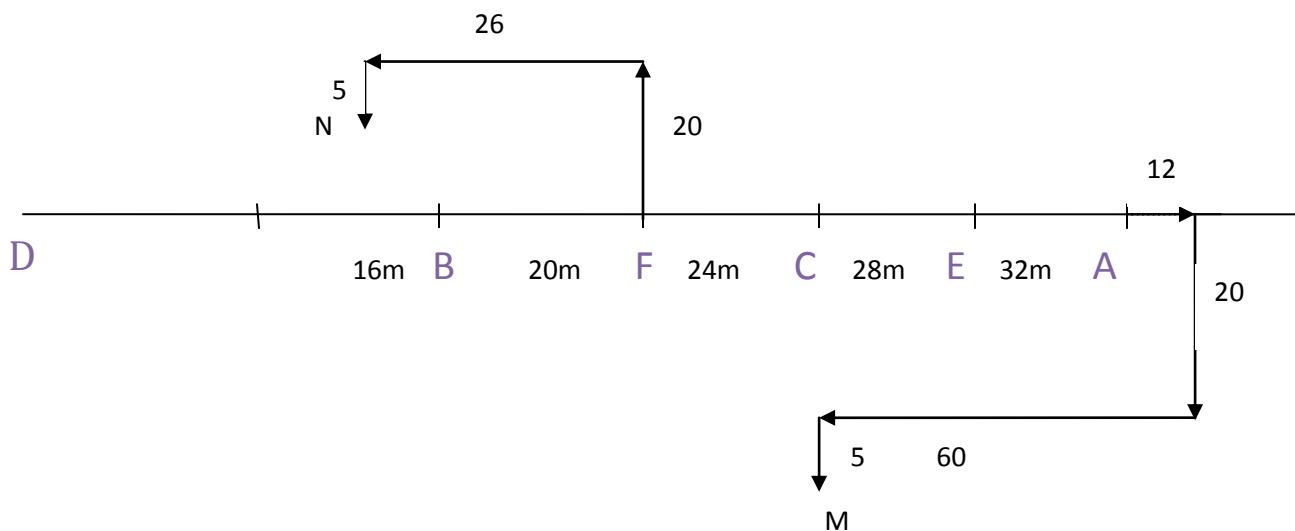
iv) A sits somewhere to the right of F and distance between them is in multiple of six (only possibility is A sits third to the right of F so that difference between them is 84m, which is multiple of six).



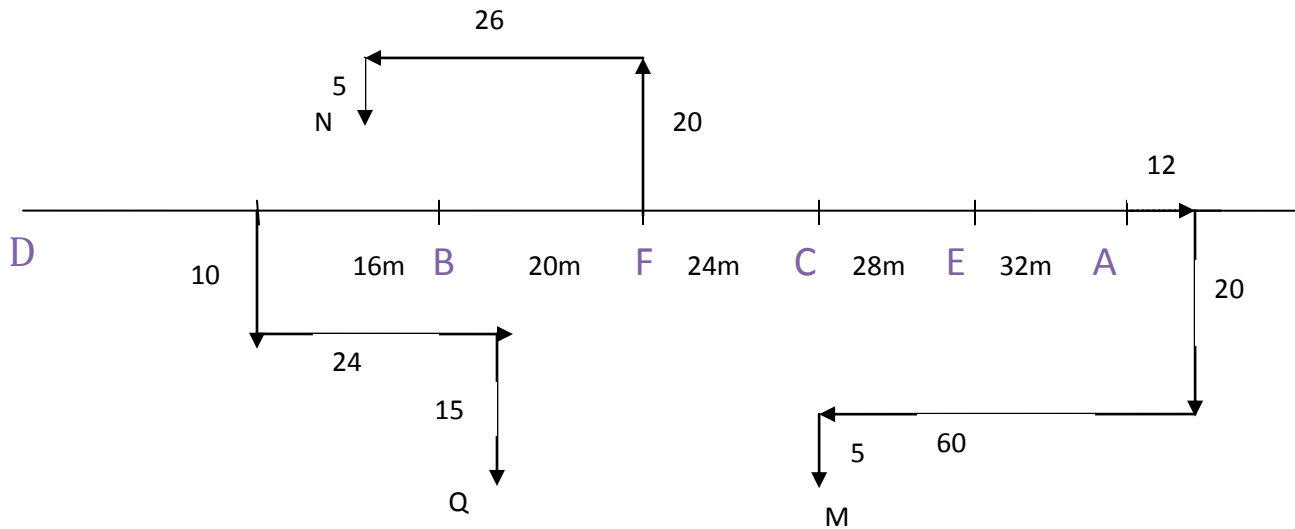
v) Horse A starts moving towards east, after moving 12 m, it turns to its right and walked 20m. Again it turns right and moves 60 m. From there after turning to its left and walking for a distance of 5 m, it comes to halt at a point M.



vi) Horse F, moves in north direction for a distance of 20 m and then turn to its left and moves 26 m. After taking one more turn to its left it stops at a point N after walking 5 m.



vii) Horse D, walks south and travel 10 m before turning to its left. After 24 m it takes right turn and walks 15 m and reaches point Q.



11) Option a) is the correct answer as distance between Q and M is 36m.

12) Option e) is the correct answer as Point N is North west with respect to Point Q.

13) Option c) is the correct answer as difference between A and C is 60m.

14) Option b) is the correct answer as there is 1 horse between A and C.

15) Option e) is the correct answer as all the given statements are true.

8. BLOOD RELATIONS BASED PUZZLES

Directions (1-5): Study the following information carefully and answer the given questions-

A, B, C, D, E and F are travelling in a train. There are two Engineers, Two Technicians, One Singer and One Writer in the group. A is married to an Engineer. F is not a writer. The Writer is married to B, who is of the same profession as that of F. D and E are both of same profession. A, C, B, D are two married couples and nobody in the group has same profession. F is the brother of C. The Singer A is married to D.

1. Which of the following is a pair of Technician?

- a) C, D
- b) D, F
- c) A, E
- d) B, F
- e) None of these

2. Which of the following is a pair of Engineers?

- a) A, B
- b) C, E
- c) D, E
- d) D, F
- e) None of these.

3. How is C related to F?

- a) Brother
- b) Sister
- c) Uncle
- d) CND
- e) None of these

4. Which of the following pairs is a couple?

- a) A, B
- b) B, C
- c) B, D
- d) A, E
- e) None of these

5. Which of the following is a pair of Husband?

- a) A, B
- b) A, C
- c) B, D
- d) CND
- e) None of these

Directions (6-10): Study the following information and answer the questions given below:

M, N, P, Q, E, F, G, H, K and J are family members. There are three generation in the family. Each member likes a different Games viz. cricket, Hockey, Polo, Rugby, Football, Kabaddi, Table tennis, Badminton, Shooting and swimming, but not necessarily in the same order. There are five females in the family. N does not like Rugby. F is not the father of M. E does not like Table Tennis. K is the father-in-law of F and likes Football. G, who likes Kabaddi, is son-in law of N. The mother of P likes Hockey. Q, who likes Cricket, is the unmarried sister of E. P is sister-in-law of F, but she does not likes Football, Swimming or Hockey. In the family each female member, except N and H, has two sisters and one unmarried brother. N has no sister-in-law. M does not like Hockey. The grandson of J does not like Badminton. No male member likes table tennis, Swimming or Hockey. E is brother –in- law of G. the father of N is husband of H and he does not like Shooting. The grandparents do not like any game except Polo and Shooting. P is a married sister of M.

Q6. Who among the following likes Table tennis?

- a) N
- b) P

- c) F
- d) E
- e) None of these

Q7.F likes which of the following Game?

- a) Swimming
- b) Polo
- c) Badminton
- d) Rugby
- e) None of these

Q8.How many granddaughters does H have?

- a) Two
- b) Four
- c) One
- d) Three
- e) None of these

Q9.How is M related to H?

- a) Granddaughter
- b) Daughter
- c) Son
- d) Daughter-in-law
- e) None of these

Q10.Who among the following is father of E?

- a) H
- b) N
- c) K
- d) F
- e) None of these

Directions (11-15): Study the following information carefully and answer the given questions-

P, Q, R, S, T, V and W are seven members of a family. Each one of them has a different profession- doctor, teacher, lawyer, engineer, architect, chartered accountant and banker and their incomes are different. There are two married couples in the group.

R is the doctor and he earns more than the engineer and the lawyer. T is married to the chartered accountant and she earns the least. No lady is lawyer. T is not an engineer. Q, the teacher, earns less than P, the banker. W is married to Q and he earns more than S and P. V is not the lawyer. The chartered accountant earns less than the lawyer but more than the banker. S is a female. Engineer earns more than architect.

11. Who earns the maximum in the family?

- a) V
- b) W
- c) R
- d) S
- e) None of these

12. Which of the following is a pair of married couple?

- a) RT
- b) VT
- c) QT
- d) Data inadequate
- e) None of these

13. What is P's position from the top when they are arranged in descending order of their incomes?

- a) Second
- b) Fourth
- c) Third
- d) Data inadequate

e) None of these

14. What is the profession of V?

- a) Engineer
- b) Chartered accountant
- c) Engineer or Chartered accountant
- d) Data inadequate
- e) None of these

15. How many male members are there in the family?

- a) Two
- b) Three
- c) Four
- d) Five
- e) can not be determined

SOLUTION(1-5):

- i) Singer A is married to D.
- ii) A is married to an Engineer.

A(+/-) \longleftrightarrow D(+/-)
Singer Engineer

- iii) D and E are of same profession.
(E must be an engineer).

- iii) The writer is married to B who is of same profession as that of F.
- iv) A,C,B,D are two married couples and nobody in the group has same profession. (D and A already form a couple, so B and C forms another couple, and only possibility is B is a technician).

B(+/-) \longleftrightarrow C(+/-)
Technician Writer

v) F must be a technician.

vi) F is brother of C.

F(+) ————— C(+/-) ↔ B(+/-)
Technician Writer Technician

<u>Person</u>	<u>Profession</u>
A(+/-)	Singer
B(+/-)	Technician
C(+/-)	Writer
D(+/-)	Engineer
E(+/-)	Engineer
F(+)	technician

1) Option d) is the correct answer as both B and F are technicians.

2) Option c) is the correct answer as both D and E are Engineers.

3) Option d) is the correct answer as C can be either sister or brother of F.

4) Option b) is the correct answer as B and C is a couple.

5) Option d) is the correct answer as genders of A, B, C and D can not be determined.

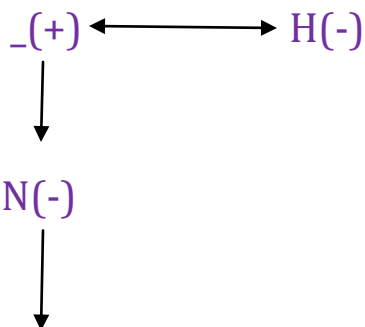
SOLUTION(6-10):

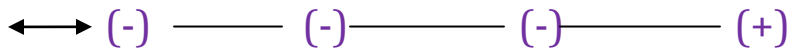
i)G, who likes Kabaddi, is son-in law of N.

ii) the father of N is husband of H.

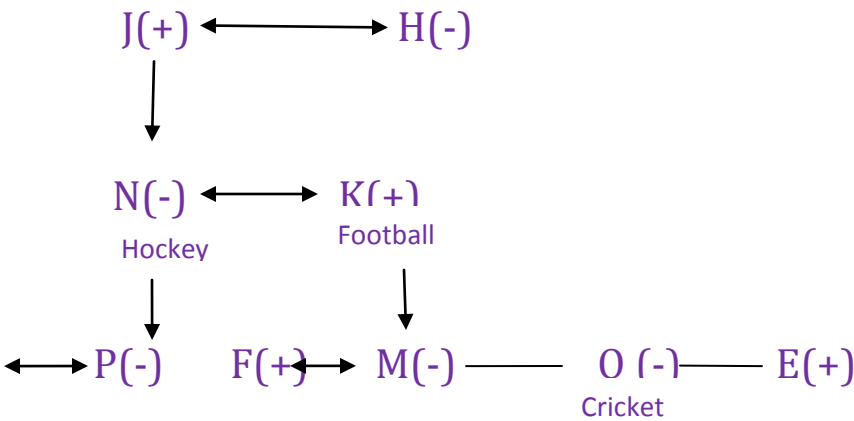
iii) All the female member except N and H has two sisters and one unmarried brother.

(so, we can conclude that both N and H are females).

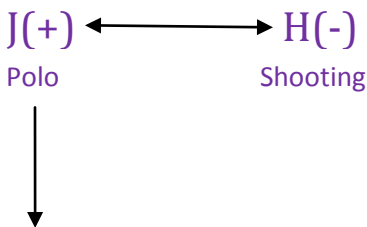


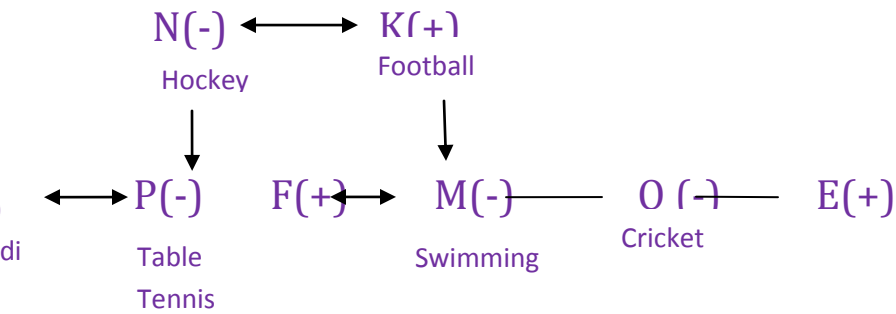


- iv) E is brother-in-law of G.
- v) The grandson of J does not like Badminton. (so, J must be grandfather of G as family has only 3 generations).
- vi) P is a married sister of M.
- vii) Also, P is sister-in-law of F
- viii) P's mother likes Hockey.
- ix) K is the father-in-law of F and likes Football.
- x) Q, who likes Cricket, is the unmarried sister of E.



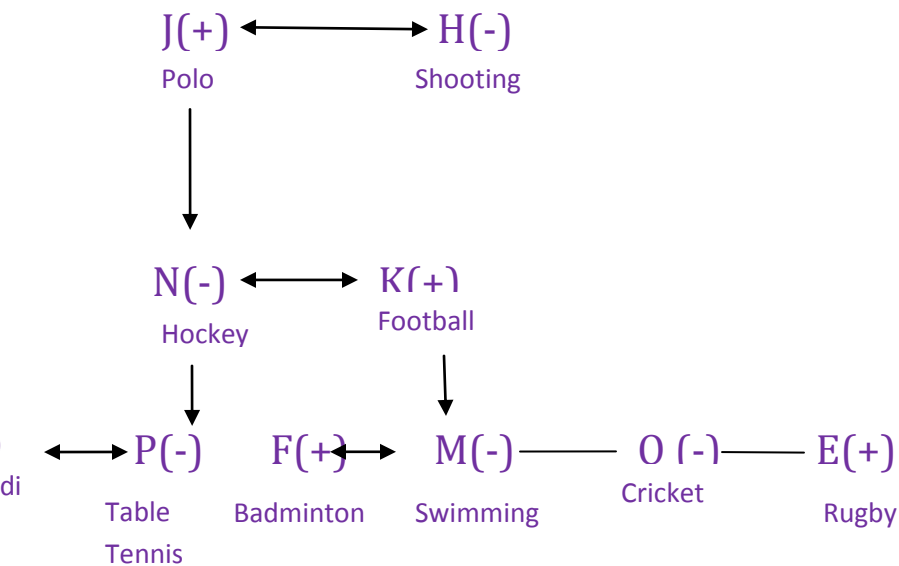
- xi) The father of N does not like Shooting. The grandparents do not like any game except Polo and Shooting. (so, J likes Polo and H likes Shooting).
- xii) It is also given that no male likes Table tennis and swimming. And P does not like Swimming. (so, P must like Table tennis and M must like swimming).





xiii) E does not like Badminton.

(so, F must like Badminton).



6) Option b) is the correct answer as P likes Table Tennis.

7) Option c) is the correct answer as F likes Badminton.

8) Option d) is the correct answer as H has 3 granddaughters.

9) Option a) the correct answer as M is grand daughter to H.

10) Option c) is the correct answer as K is father of E.

SOLUTION (11-15):

i) R, the doctor earns more than Lawyer.

ii) CA earns more than P, Banker but less than Lawyer.

iii) Q, teacher earns less than P, Banker.

Therefore,

$R(\text{Doctor}) > \text{Lawyer} > \text{CA} > P(\text{Banker}) > Q(\text{Teacher})$

iv) T earns the least and she is not an engineer.

v) Engineer earns more than Architect.

(so, it is concluded that T is an Architect as she earns least).

Therefore,

$R(\text{Doctor}) > \text{Lawyer} > \text{CA} > P(\text{Banker}) > Q(\text{Teacher}) > \text{Engineer} > T(\text{Architect})$

vi) T is married to CA and she is a female.

T, Architect (-) \longleftrightarrow CA (+)

vii) W is married to Q and he earns more than S and P. And it is given that only male is a lawyer.

(so, only possibility is W is a lawyer).

W(+) \longleftrightarrow Q(-)

Therefore,

$R(\text{Doctor}) > W(\text{Lawyer}) > \text{CA} > P(\text{Banker}) > Q(\text{Teacher}) > \text{Engineer} > T(\text{Architect})$

viii) Person who is a CA is a male and it is given that S is a female.

Therefore,

$R(\text{Doctor}) > W(\text{Lawyer}) > V(\text{CA}) > P(\text{Banker}) > Q(\text{Teacher}) > S(\text{Engineer}) > T(\text{Architect})$

<u>Person</u>	<u>Profession</u>
P	Banker
Q ⁻	Teacher
R ⁺	Doctor
S ⁻	Engineer
T ⁻	Architect
V ⁺	Chartered Accountant
W ⁺	Lawyer

11) Option c) is the correct answer as R earns maximum in the family.

12) Option b) is the correct answer as VT is a married couple.

13) Option b) is the correct answer as P is at fourth place when arranged in descending order according to their salaries.

14) Option b) is the correct answer as V is Chartered accountant.

15) Option e) is the correct answer as there can be either 3 or 4 male members in the family as P's gender is not known.

9. ORDER COMPARISON BASED PUZZLES

Directions (1-5): Study the following information carefully and answer the given questions-

Seven persons – M, N, O, P, W, X and Y – are seated in ascending order of their salaries. N earns more than P and X. N earns more than M but he does not earn the highest. O earns more than P. The person who earns the second highest receives a salary of Rs. 30,000 while the third lowest earner receives Rs. 24,000. W earns less than P but more than X. Y earns Rs. 16,000. X is not the lowest earner. M earns more than P.

Q1: What may be the possible salary of X?

- a) Rs 32000
- b) Rs 28000
- c) Rs 25000
- d) Rs 20000
- e) Rs 15000

Q2: Who earns highest?

- a) N
- b) M
- c) O
- d) P
- e) can not be determined

Q3: How many persons earn more than P?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q4: Who gets the second lowest salary?

- a) P
- b) W
- c) X
- d) Y
- e) can not be determined

Q5: Which of the following statement(s) is definitely true?

- a) N earns less than 30,000
- b) W earns Rs 30,000
- c) X earns more than P
- d) O earns more than 30,000
- e) None of these

Directions (6-10): Study the following information carefully and answer the given questions-

Seven persons – P, Q, R, S, T, F and G have come to a party in different colored cars – Red, black, white, green, grey, yellow and Blue but not necessarily in the

same order. They hold different positions – AM (Assistant Manager), MG (Manager), DGM (Deputy General Manager), GM (General Manager), CGM (Chief General Manager), ED (Executive Director) and CEO (Chief Executive Officer).

The positions given are in increasing order of seniority. AM is the least junior and the CEO is the most senior.

- P is senior to only three persons. Person who came in red car is senior to GM. R is junior to the one who came in white car and senior to DGM. DGM did not come in yellow car. The person who came in white car is not the most senior.
- Q is junior to P but not the least junior and has come in yellow car. F is senior to one came in yellow car and junior to one came in red car. T is junior to GM.
- The one who came in green car is junior to G and senior to DGM who came in blue car.
- F did not come in white car. S came in black car.

Q6: Who has grey colored car?

- a) R
- b) S
- c) T
- d) F
- e) can not be determined

Q7: How many people are senior to S?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q8: Which of the following is CGM?

- a) G
- b) One who has red car.
- c) S
- d) One who has yellow car.
- e) None of the above

Q9: Who among the following is junior?

- a) G
- b) P
- c) S
- d) T
- e) F

Q10: Which of the following statement(s) is/are true?

- a) T has white car.
- b) T is senior to F.
- c) Q is DGM.
- d) Only 2 persons are junior to Q.
- e) None of these

Directions (11-15): Study the following information carefully and answer the given questions-

There are seven friends i.e. J, K, L, M, N, O and P, each having different salaries. They all belong to different cities i.e. Agra, Bangalore, Chandigarh, Delhi, Etawah, Firozpur, and Gandhinagar (but not necessarily in same order) also

they like different colours i.e. Red, Green, Blue, Violet, Pink, white, and Black (but not necessarily in same order).

K likes green colour. P is from Gandhinagar but K is not from Agra. M's salary is more than only 2 people and he is from Delhi. The one who belongs to Bangalore, earn more than N but less than O. The one who likes the red colour earn more money than the person who is from Delhi. N is from Etawah and likes Violet colour. O belongs neither from Agra nor from Firozpur, but likes the white colour. The one who likes the pink colour earns the highest salary. The one who likes the violet colour is not the lowest earner among them. The one who likes green colour does not belongs to Bangalore. L earns less money than N. L earns less than the person who likes the blue colour. The one who belongs to Firozpur earns more than the one who belong to Chandigarh.

Q11. Who among the following is from Delhi?

- (a) The one who gets lowest salary
- (b) M
- (c) The one who likes pink
- (d) K
- (e) None of these

Q12. Who among the following like violet colour?

- (a) L
- (b) M
- (c) N
- (d) O
- (e) None of these

Q13. Who among the following gets highest salary?

- (a) O
- (b) P
- (c) J
- (d) N
- (e) None of these

Q14. M likes which of the following colour?

- (a) Red
- (b) Black

- (c) Blue
- (d) Pink
- (e) None of these

Q15. Who among the following belongs to Firozpur?

- (a) O
- (b) K
- (c) J
- (d) N
- (e) None of these

SOLUTION (1-5):

- i) N earns more than M but N does not earn the highest. ($N > M$)
- ii) M earns more than P. ($M > P$)
- iii) W earns more than X but less than P. ($P > W > X$)
- iv) X does not earn the least.

Therefore,

$$_ > N > M > P > W > X > _$$

v) Y earns Rs. 16000 and person who earns second highest receives a salary of Rs 30000. (so, Y must be the least earner).

vi) Person who earns third lowest has salary equal to Rs 24000.

Therefore,

$$O > N > M > P > W > X > Y$$

\downarrow
30000

\downarrow
24000

\downarrow
16000

1) Option d) is the correct answer as possible salary of X may be Rs 20,000.

- 2) Option c) is the correct answer as O earns the highest.
- 3) Option d) is the correct answer as 3 persons earn more than P.
- 4) Option c) is the correct answer as X gets the second lowest salary.
- 5) Option d) is the correct answer.

SOLUTION (6-10):

- i) P is senior to only 3 persons.
- ii) Designations are given in increasing order of seniority.

Therefore,

__ > __ > __ > P > __ > __ > __

CEO ED CGM GM DGM MG AM

- iii) DGM comes in blue car.
- iv) Q comes in yellow car but he is not junior most.
- v) Q is junior to P. (only possibility is Q is a MG).

Therefore,

__ > __ > __ > P > __ > Q > __

CEO ED CGM GM DGM MG AM
 Blue Yellow

- vi) Person who has White car is senior to R and R is senior to DGM.
- vii) Person who is senior most does not travel in white car.

Therefore,

__ > __ > R > P > __ > Q > __

CEO ED CGM GM DGM MG AM
 White Blue Yellow

- viii) Person who has Red car is senior to F who is senior to Q.
- ix) GM is senior to T.

x) S has black car.

Therefore,

$S > _ > R > P > F > Q > T$

CEO	ED	CGM	GM	DGM	MG	AM
Black	White			Blue	Yellow	

xi) G is senior to Person who travels in green car and person who has green car is senior to DGM.

xii) Person who travels in Red is senior to F.

Therefore,

$S > G > R > P > F > Q > T$

CEO	ED	CGM	GM	DGM	MG	AM
Black	White	Red	Green	Blue	Yellow	

After filling the remaining data, we get:

$S > G > R > P > F > Q > T$

CEO	ED	CGM	GM	DGM	MG	AM
Black	White	Red	Green	Blue	Yellow	Grey

6) Option c) is the correct answer as T has grey colored car.

7) Option a) is the correct answer as S is senior most.

8) Option b) is the correct answer as one who has red car is CGM.

9) Option d) is the correct answer as T is junior among all.

10) Option e) is the correct answer as none of the given options is true.

SOLUTION (11-15):

i) Only 2 persons earn less than M and he is from Delhi.

ii) Person who earns highest likes Pink color.

Therefore,

$_ > _ > _ > _ > M > _ > _$

Pink

Delhi

iv) O likes White and earns more than person from Bangalore, who earns more than N.

v) N likes violet and is from Etawah.

vi) Person who likes violet does not earn least.

So, we get following possible cases:

Case 1:

_____	>	O	>	_____	>	N	>	M	>	_____	>	_____
Pink		White		Bangalore		Violet Etawah				Delhi		

Case 2:

_____	>	_____	>	O	>	_____	>	M	>	N	>	_____
Pink				White		Bangalore		Delhi		Violet Etawah		

; to Bangalore.

viii) L earns less than N.

Case 1:

_____	>	O	>	_____	>	N	>	M	>	K/ L	>	K/L
Pink		White		Bangalore		Violet Etawah				Delhi		

Case 2:

_____	>	K	>	O	>	_____	>	M	>	N	>	L
Pink		Green		White		Bangalore		Delhi		Violet Etawah		

ix) P belongs to Gandhinagar.

(so, only possibility is person who likes Pink belongs to Gandhinagar).

Case 1:

P	>	O	>	_____	>	N	>	M	>	K/ L	>	K/L
Pink Gandhinagar		White		Bangalore		Violet Etawah		Delhi				

Case 2:

P > K > O > ____ > M > N > L
Pink Green White Bangalore Delhi Violet
Gandhinagar Etawah

x) Person who likes Red earns more than M.

(so, only possibility is person who belongs to Bangalore earns more than M).

Case 1:

P > O > J > N > M > K/L > K/L
Pink White Red Violet Delhi
Gandhinagar Bangalore Etawah

Case 2:

P > K > O > I____ > M > N > L
Pink Green White Red Delhi Violet
Gandhinagar Bangalore Etawah

xi) One who likes blue earns more than L.

(only possibility is M likes blue).

Case 1:

P > O > J > N > M > K/L > K/L
Pink White Red Violet Blue
Gandhinagar Bangalore Etawah Delhi

Case 2:

P > K > O > I____ > M > N > L
Pink Green White Red Blue Violet
Gandhinagar Bangalore Delhi Etawah

xii) One who belongs to Firozpur earns more than one who belongs to Chandigarh.

xiii) O belongs to neither Agra nor Firozpur.

(so, case 1 gets eliminated here).

Case 2:

P	>	K	>	O	>	I____	>	M	>	N	>	L
Pink		Green		White		Red		Blue		Violet		
Gandhinagar		Firozpur		Chandi garh		Bangalore		Delhi		Etawah		

After filling the remaining data, we get:

P	>	K	>	O	>	I____	>	M	>	N	>	L
Pink		Green		White		Red		Blue		Violet		Black
Gandhinagar		Firozpur		Chandi garh		Bangalore		Delhi		Etawah		Agra

11) Option b) is the correct answer as M is from Delhi.

12) Option c) is the correct answer as N likes violet color.

13) Option b) is the correct answer as P gets highest salary.

14) Option c) is the correct answer as M likes Blue color.

15) Option b) is the correct answer as K belongs to Firozpur.

10. MIXED AND OTHERS

Directions (1-5): Study the following information carefully and answer the given questions-

Seven persons – Q, B, W, D, E, F and G live on seven different floors (numbered 1 to 7) of a building but not necessarily in same order. Each one of them like different colors, namely Red, Blue, Green, Black, Yellow, Orange and White (but not necessarily in same order). All of them decided to visit a particular place with their family on seven different days of a week starting from Monday to Sunday.

Q lives on an odd numbered floor but not on floor numbered 3. The one who likes yellow color lives on floor immediately above Q. Only two persons live between the one who likes yellow color and D. The one who likes green color lives immediately above W. The one who likes Yellow visited the place on one of the days before Thursday. The one who likes blue color lives on an odd numbered floors on one of the floors above D. B lives on one of the floors above E. Only three persons live between W and the one who likes blue color. The person who visited the place on Friday likes red Color. The one who likes red color lives on floor immediately above the one who likes white color. G lives on an odd numbered floor. E does not like green color. D visited the place on Sunday. Only one person lives between the floors of B and E. Neither of Q or W likes black color. The one who visited the place on Wednesday visited the place immediately after the one who likes blue color. The one who likes green color visited the place immediately before the one who lives on floor no 3. Two persons live between the floor no 4 and the person who visited the place on Wednesday. The one who visited the place on Wednesday is not W.

Q1: How many people visit the place between W and B?

- a) None
- b) 1
- c) 2
- d) 3

e) More than 3

Q2: Who visits the place on Thursday?

a) G

b) Q

c) D

d) W

e) can not be determined

Q3: How many floors are there between Q and one who likes Red?

a) None

b) 1

c) 2

d) 3

e) More than 3

Q4: Which of the following does not belong to the group?

a) G

b) One who likes Blue

c) One who likes Red

d) D

e) One who likes Orange

Q5: Who lives immediately above the one who likes orange colour ?

- a) W
- b) F
- c) D
- d) E
- e) G

DIRECTIONS (6-10) : Study the following information carefully and answer the given questions:

9 students of a class – Ena, Gazal, Jones, Nick, Rajat, Rohan, Sam, Sonu and Sudhir appeared for 10th board examination. They got different marks in Mathematics(out of 100) and different percentage in total. They got different position based on their marks in totality.

- A) The student who got 1st and the last position (i.e. 9th) got 98% and 38% respectively.
- B) Rohan got 79% marks in total but 56 in Mathematics.
- C) Jones got a position higher in comparison to Rohan.
- D) Ena got 62% marks in total, more than that of Sudhir, who got 78 marks in Mathematics.
- E) Sudhir got a higher position than Sam but lower than Jones by scoring 51% marks.
- F) Sonu got 41% marks but his marks in Mathematics is same as Ena's percentage in total.
- G) Difference between marks in Mathematics of Sudhir and Gazal is 29.
- H) Sam got a position higher than Sonu.
- I) Nick got third position in the class scoring 83% marks.
- J) Jones got 95% marks in total but scored 66 marks in Mathematics.
- K) Rajat got a position higher to that of Nick and Ena.
- L) The topper got 86 marks in Mathematics.

- M) Gazal got a position lower to that of Sonu and Sam.
- N) The person who got 3rd position in the class got 100 % marks in Mathematics.
- O) Difference between Sam's and Rohan's marks in Mathematics is 4.
- P) Ena scored only 35 marks in Mathematics.
- Q) One of the student got 46% marks.

Q6: Who among the Following got 46% marks?

- a) Gazal
- b) Rajat
- c) Sam
- d) Sonu
- e) None of the above

Q7: How many students have got more than 80 marks in Mathematics?

- a) None
- b) 1
- c) 2
- d) 3
- e) More than 3

Q8: How many marks Sam obtained in Mathematics?

- a) 50
- b) 52
- c) 62
- d) 60
- e) Can not be determined

Q9: How many students got a position higher than the student who got 56 marks in Mathematics?

- a) None
- b) 1
- c) 2
- d) 3
- e) None of the above

Q10: Which of the following statement(s) is/are true?

- a) Sam got 8th position.
- b) Student who got 79% marks in total has obtained 66 marks in Mathematics.
- c) Gazal got a position higher than one who scored 62 marks in Mathematics.
- d) Only 1 student got less than 40% marks.
- e) None of the above

SOLUTION (1-5):

- i) Q lives on odd numbered floor but not on floor numbered 3.
- ii) One who likes yellow lives immediately above Q.

so, we get 2 possible cases here.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7			
6			
5			
4			
3			
2		Yellow	
1	Q		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7			
6		Yellow	
5	Q		
4			
3			
2			
1			

iii) There are 2 floors between yellow and D.

iv) Person who likes Blue lives on an odd numbered floor above D and there are 3 floors between W and one who likes Blue.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7		Blue	
6			
5	D		
4			
3	W		
2		Yellow	
1	Q		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7			
6		Yellow	
5	Q	Blue	
4			
3	D		
2			
1	W		

v) G lives on an odd floor.

vi) Person who likes green lives immediately above W.

vii) B lives above E and there is one floor between B and E.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Blue	
6			

5	D		
4	B	Green	
3	W		
2	E	Yellow	
1	Q		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G		
6	B	Yellow	
5	Q	Blue	
4	E		
3	D		
2		Green	
1	W		

viii) D visits the place on Sunday.

ix) The one who visited the place on Wednesday visited the place immediately after the one who likes blue color. (i.e. one who likes blue visits on Tuesday).

x) One who likes Red lives immediately above the one who likes white. And he visits on Friday.

Case 1:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Blue	Tuesday
6		Red	Friday
5	D	White	Sunday
4	B	Green	
3	W		
2	E	Yellow	
1	Q		

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G		
6	B	Yellow	
5	Q	Blue	Tuesday
4	E	Red	Friday
3	D	White	Sunday
2		Green	
1	W		

xi) Neither Q nor W likes Black.

(so, case 1 gets eliminated here as it does not satisfy the condition).

Case 2:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Black	
6	B	Yellow	
5	Q	Blue	Tuesday
4	E	Red	Friday
3	D	White	Sunday
2		Green	
1	W		

xii) The one who likes green color visited the place immediately before the one who lives on floor no 3. (i.e one who likes green visits on Saturday).

xiii) Only 2 persons live between person who lives on floor numbered 4 and who visits on Wednesday. And W does not visit on Wednesday.

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Black	Wednesday
6	B	Yellow	
5	Q	Blue	Tuesday
4	E	Red	Friday

3	D	White	Sunday
2		Green	Saturday
1	W		

xiv) One who likes yellow visits before Thursday (Only possibility is he visits on Monday).

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Black	Wednesday
6	B	Yellow	Monday
5	Q	Blue	Tuesday
4	E	Red	Friday
3	D	White	Sunday
2		Green	Saturday
1	W		

After filling the remaining data, we get:

<u>Floor</u>	<u>Person</u>	<u>Colour</u>	<u>Day</u>
7	G	Black	Wednesday
6	B	Yellow	Monday
5	Q	Blue	Tuesday
4	E	Red	Friday
3	D	White	Sunday
2	F	Green	Saturday
1	W	Orange	Thursday

1) Option c) is the correct answer as 2 persons visits between B and W.

2) Option d) is the correct answer as W visits on Thursday.

3) Option a) is the correct answer as there is no floor between Q and one who likes red colour.

4) Option c) is the correct answer as one who likes red colour lives on an even numbered floor while others (given in the options) lives on odd numbered floors.

5) Option b) is the correct answer as F lives immediately above the one who likes Orange colour.

SOLUTION (6-10):

1. The student who got 1st and the last position (i.e. 9th) got 98% and 38% respectively.
2. Nick got 3rd position in the class by scoring 83% marks in total and 100% in Mathematics.
3. Jones got 95% marks and scored 66 marks in Mathematics.
(so, Jones must have obtained 2nd position as his percentage is between 1st and 3rd rank holders).
4. The topper got 86 marks in Mathematics.

Position	Person	Percentage	Marks
1		98	86
2	Jones	95	66
3	Nick	83	100
4			
5			
6			
7			
8			
9		38	

5. Rajat got a position higher than Nick.
(so, Rajat must have obtained 1st position).

6. Ena got a position higher than Sudhir.

Ena>Sudhir

7. Sam got a rank higher than Sonu and Gazal got a rank below than both Sam and Sonu.

Sam >Sonu>Gazal

8. Rohan got 79 % , which is higher than 62% (that Ena obtained).

(so, we can conclude that Rohan got a rank higher than Ena).

9. Also, Sudhir got a rank higher than Sam.

Therefore, it can be concluded :

Rohan>Ena>Sudhir> Sam>Sonu>Gazal

Position	Person	Percentage	Marks
1	Rajat	98	86
2	Jones	95	66
3	Nick	83	100
4	Rohan		
5	Ena		
6	Sudhir		
7	Sam		
8	Sonu		
9	Gazal	38	

10. Rohan got 79% marks in total and 56 marks in Mathematics.

11. Ena got 62% marks in total.

12. Sudhir got 78 marks in Mathematics.

13. The difference between marks obtained by Sudhir and Gazal in Mathematics is 29 (so, Gazal must have obtained either 107 (78+29) marks or 49 marks. But Maths exam is of 100 marks only. Therefore, Gazal has obtained 49 marks in Mathematics).

Position	Person	Percentage	Marks
1	Rajat	98	86
2	Jones	95	66
3	Nick	83	100
4	Rohan	79	56
5	Ena	62	
6	Sudhir		78
7	Sam		
8	Sonu		
9	Gazal	38	49

14. Sonu has obtained 41% marks.

15. Sonu marks in Mathematics is equal to Ena's Percentage in total.
(so, Sonu must have obtained 62 marks in Mathematics).

16. Ena got 35 marks in Mathematics.

Position	Person	Percentage	Marks
1	Rajat	98	86
2	Jones	95	66
3	Nick	83	100
4	Rohan	79	56
5	Ena	62	35
6	Sudhir		78
7	Sam		
8	Sonu	41	62
9	Gazal	38	49

17. Difference between marks in Mathematics obtained by Sam and Rohan is only 4 marks.(so, Sam must have obtained either 60 (56+4) marks or 52 (56-4) marks).

18. Sudhir obtained 51% marks.

Position	Person	Percentage	Marks
1	Rajat	98	86
2	Jones	95	66
3	Nick	83	100
4	Rohan	79	56
5	Ena	62	35
6	Sudhir	51	78
7	Sam		60/52
8	Sonu	41	62
9	Gazal	38	49

19. One of the student got 46% marks.
(so, only possibility is Sam got 46% marks).

Position	Person	Percentage	Marks
1	Rajat	98	86
2	Jones	95	66
3	Nick	83	100
4	Rohan	79	56
5	Ena	62	35
6	Sudhir	51	78
7	Sam	46	60/52
8	Sonu	41	62
9	Gazal	38	49

6) Option c) is the correct answer as Sam got 46% marks.

7) Option c) is the correct answer as only 2 students got more than 80 marks in Mathematics.

8) Option e) is the correct answer as Sam got either 60 or 52 marks in Mathematics.

9) Option d) is the correct answer as 3 students got a position higher than the students who got 56 marks in Mathematics.

10) Option d) is the correct answer.