△ RACE

Section-wise Grand Test – Reasoning Ability – SWGTR-180106
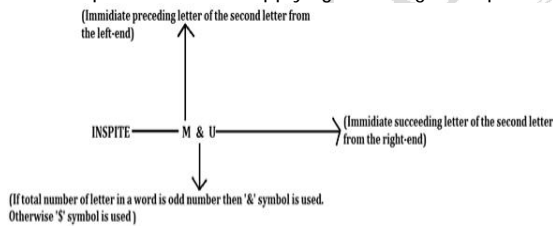## HINTS & SOLUTIONS

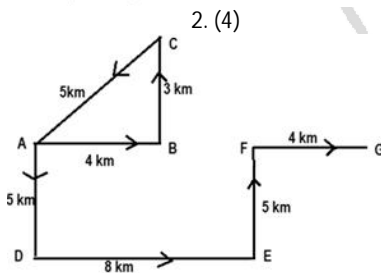### ANSWER KEY

1. (2)	11. (4)	21. (4)	31. (5)	41. (2)
2. (4)	12. (2)	22. (5)	32. (1)	42. (5)
3. (1)	13. (1)	23. (2)	33. (1)	43. (3)
4. (4)	14. (4)	24. (5)	34. (2)	44. (2)
5. (5)	15. (3)	25. (2)	35. (3)	45. (1)
6. (2)	16. (4)	26. (3)	36. (3)	46. (5)
7. (4)	17. (2)	27. (4)	37. (3)	47. (5)
8. (1)	18. (2)	28. (1)	38. (4)	48. (5)
9. (2)	19. (4)	29. (2)	39. (1)	49. (5)
10. (5)	20. (1)	30. (2)	40. (1)	50. (1)

HINTS & SOLUTIONS

1-2. These are the latest pattern of coding-decoding questions. In these questions we are applying following concept:-

1. (2)   2. (4)

3-4.

3. (1)   4. (4)
5. (5)

6-10. From the given conditions, the person who goes for a vacation in Goa lives on the floor numbered 7. The person who goes for a vacation in Bangkok lives on the topmost floor. The person who lives on the lowermost floor celebrates his birthday on one of the months after June and he goes for a vacation in Germany. The person who goes for a vacation in Japan lives immediately above the 4th floor.

Floor	Person	Places	Month
8		Bangkok	
7		Goa	
6			
5		Japan	
4			
3			
2			
1		Germany	

Now from the other conditions, F, who goes for a vacation in China, celebrates his birthday on the month before June. The person who lives on the 5th floor celebrates his birthday on one of the months after April; hence the person who lives on the 5th floor does not celebrate his birthday on February and April. The person who celebrates his birthday in February lives on one of the floors above the 4th floor. The persons who live on odd numbered floors celebrate their birthday in the months which has less than 31 days: hence the person, who celebrates their birthday on February, April, June and September, lives on odd numbered floor. Hence the person, who celebrates their birthday on February, lives on 7th floor.

D lives on an even numbered floor. Only three people live between D and E. Only one person lives between E and G. G lives on one of the floors below E. Only two persons live between G and F. H lives on a floor that is immediately below F. Only two persons live between E and B.

From these conditions D lives on 4th floor and E lives on 8th floor. A does not live on the lowermost floor. From that condition we deduce the following-

Floor	Person	Places	Month
8	E	Bangkok	
7	A	Goa	February
6	G		
5	B	Japan	
4	D		
3	F		
2	H		
1	C	Germany	

Now, H goes for a vacation in Paris. The person who celebrates his birthday on July goes for a vacation in Paris. G goes for a vacation in Malaysia and celebrates his birthday in the month after October; G celebrates his birthday on December. F, who goes for a vacation in China, celebrates his birthday on the month before June: Hence he celebrates his birthday on April. The person who lives on the lowermost floor celebrates his birthday on one of the months after June and he goes for a vacation in Germany; hence the person who lives on the lowermost floor does not celebrate his birthday on June.

So the person who lives on the lowermost floor celebrates his birthday on September. And the rest person, who lives on odd number floor, celebrates his birthday on June.

The person who goes for a vacation in San jones celebrates his birthday in the month after July; hence this person celebrates his birthday on August. And the rest person E celebrates his birthday on October. The Final arrangement are-

Floor	Person	Places	Month
8	E	Bangkok	October
7	A	Goa	February
6	G	Malaysia	December
5	B	Japan	June
4	D	San jones	August
3	F	China	April
2	H	Paris	July
1	C	Germany	September

6. (2)   7. (4)
8. (1)   9. (2)   10. (5)

11-15. From the given conditions, C makes 11 papers and works with only I, who found 28 errors in QC. The person, whose salary is 24k makes 16 papers and works with G and B in the Math department. C found 46 errors in QC. B's salary is 28K and he is not the person, who select for the QC. A makes 10 papers and found just double errors in QC of the number of papers, which he makes. H's salary is 1k more than the J's salary. Hence J's salary is 24K and H's salary is 25K. F's salary is 30K more than the H's salary. Hence F's salary is 55K. By using those conditions we conclude the following.

Department	Employees	Salary	No. of Papers	Error in QC	Change in Salary
	A		10	20	-
Math	B	28K			23K
	C		11	46	-
	D				
	E				
	F	55K			
Math	G				
	H	25K			20K
	I			28	-
Math	J	24K	16	-	-

Now from the rest conditions, neither B nor G makes 15 papers. The person, who found 14 errors in QC, works with the person, who makes 15 papers but both do not work in Reasoning and English department. Hence those persons are work in Computer department because in Math department already three person are working. Number of Persons in the Reasoning department is equal to the number of the persons in the Math department. Hence three- three persons are in Math and Reasoning department and two- two persons are in English and Computer department. Now we have four digits of errors in QC i.e. 20, 46, 28 and 14 and we know that the total no. of errors in QC is 158. Hence the fifth digit of error in QC is 50. F found the least number of errors in QC. Hence F found 14 errors in QC. C works with only I, hence C and I work in English department. H does not work in Computer department. Hence H works in Reasoning department. C's salary is 38K more than the person, who makes 16paper. Hence C's salary is 62K.

Department	Employees	Salary	No. of Papers	Error in QC	Change in Salary
	A		10	20	-
Math	B	28K			23K
English	C	62K	11	46	-
	D				
	E				-
Computer	F	55K		14	-
Math	G				
Reasoning	H	25K			20K
English	I			28	-
Math	J	24K	16	-	-

Now, the person, who makes 14 papers found most number of errors in QC, hence he found 50 errors in QC. The person, who makes 2 papers work in English department but his salary, is not 62K. Hence I make 2 papers. The persons, whose salary is 18k and 62K, work in English department and they are not the person, whose salary changed. A's salary is higher than other persons who works in the same department with A. And A works in Reasoning department also H, who works in Reasoning department have 25K salary that means A's salary must be more than 25K salary. So only one salary is left for A i.e 35K. The person, whose salary is 46K, makes 15 papers. Rest salaries are 22K, 15K, 46K and it is clear in the puzzle that the persons, whose salaries are 35K and 15K, both works in Reasoning department. And the one, whose salary is 46K works in Computer department, So G's salary

is 22K. The person, whose salary is 22k, makes 5 papers. Hence E makes 14 papers and found 50 errors in QC. D's salary is 46K and makes 15 papers. B makes 1 paper more than F. H does not make 4 papers. No any person makes the same number of papers. No person makes more than 16 papers, so there are only one combination left for B and F i.e. B makes 9 papers and F makes 8 papers. And rest H makes 12 papers.

The Final arrangement are-

Department	Employees	Salary	No. of Papers	Error in QC	Change in Salary
Reasoning	A	35K	10	20	-
Math	B	28K	9	-	23K
English	C	62K	11	46	-
Computer	D	46K	15	-	41K
Reasoning	E	15K	14	50	-
Computer	F	55K	8	14	-
Math	G	22K	5	-	-
Reasoning	H	25K	12	-	20K
English	I	18K	2	28	-
Math	J	24K	16	-	-

11. (4)

12. (2)

13. (1)

14. (4)

15. (3)

16. (4) For I- This statement cannot be reason of Sinha's statement because emphasizing government's efforts over past three years to provide the benefits of growth percolate to the poor by Arun Jitely cannot be lead to his contradiction with Yashwant Sinha.

For II- This statement can be reason of Sinha's statement because Jaitely refferd Sinha as a job applicant over his criticism of the government's handling of the economy which is also mentioned in the given statement that Sinha hits back at Jaitely by saying that He wouldn't be there if I had been a job applicant'.

For III- This statement cannot be reason of Sinha's statement because this is a general statement of Mr. Jaitely over his approach of handling the problems.

17. (2) In the above question we have to find the possible outcome of the given statement. For I-This is not the repercussion but just an instruction to be followed to clean the Ganga in a limited time period.

For II-This can be the repercussion of the given statement as it is given in the statement that minister Satyapal Singh asked the officials of NMCG to make optimal use of latest geo-spatial technologies to rejuvenate the river which lead to achieve the objective of monitoring of pollution in Ganga and also helps to achieve GIS mapping of the entire Ganga river basin.

For III-This cannot be the repercussion as it is an course of action which must be taken to ensure the cleanliness of Ganga.

18. (2) Only II and III are not in line of the above passage. As, there is nothing mentioned about intervention of UN and there is nowhere discussed in the passage about trade from J&K.

19. (4) Only II and III are inferred from the above passage as politicians and delegation of civil society have attempted to bring peace in the area. And most of the schools have set on fire by the unknown groups of terrorists.

20. (1) Shoot at sight is a harsh course of action. And statement II is immediate course of action. And imposing presidential rule is not a proper solution.

21. (4)

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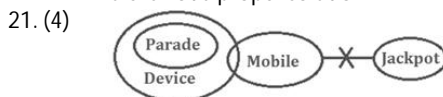
22. (5)
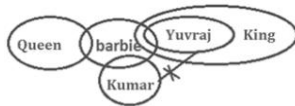
23. (2) In the above question we have to find which statement concluded from the given statement.
For I-This cannot be deduced from the given statement as it is nowhere mentioned in the given statement.
For II- This cannot be deduced from the given statement as it cannot be determine from the given statement about banks potential to turn into digital space and about the percentage of customers who have a reliable online banking experience.
For III-This can be deduced from the given statement as it is clearly mentioned in the given statement that 90% Indian customers still prefer branch over online banking which implies that digital banking is still not widely accepted by group of people.
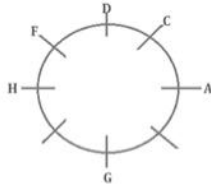
24. (5)
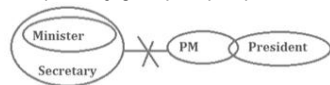
25. (2)
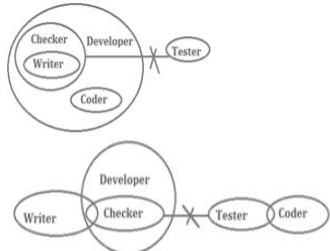
26-30. From the given conditions, we try to start circular seating arrangement-
(i) D#G≠C$A   (ii) F@A©H

Also we know that At most three and at least two person lives in each kind of flat. The person, who sits immediate right of F, lives in 3BHK. Hence H lives in 3BHK flat. C does not live in 1BHK flat.

Flat	Persons
1BHK	C(×)
2BHK	
3BHK	H

The person, who sits immediate left of the person, who sits opposite to B, lives with A, Hence if B sits immediate right of H, then the person who is immediate left of the person, who sits opposite to B, is A and A lives with A that is not possible. So B does not sit immediate right of H. Then E sits immediate right of H and B sits opposite to F. B lives with only one person, who sits opposite to him. So there are two cases for B's flat-

Case-1

Flat	Persons
1BHK	B, F
2BHK	
3BHK	H
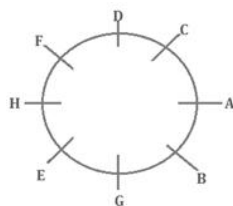
Case-2

Flat	Persons
1BHK	C(×)
2BHK	B, F
3BHK	H

H does not live with A. The person, who sits immediate left of the person, who sits opposite to B, lives with A. G lives with that person, who fulfill given condition i.e. G#D, Hence G lives with D, but G does not live in 2BHK flat. So case-1 is eliminated and case-2 is continued. The final arrangement are-

Case-2

Flat	Persons
1BHK	D, A, G
2BHK	B, F
3BHK	H, C, E

26. (3)   **27. (4)**
28. (1)   **29. (2)**   **30. (2)**
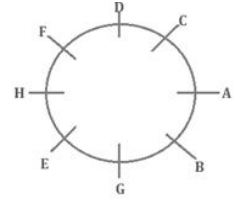
31-35. From the given conditions, no box is placed above Pink box and is of neither Silk nor Munch. The box of dairy milk has its side equal to the width of the corresponding shelf minus 1 and has equal number of boxes above and below it which means box of Dairy milk will be at 4th shelf. There are only two boxes between the box of orange color and box of Perk which is placed at even numbered shelf but below 5th shelf i.e. Box of Perk at 2nd shelf and Orange box at 5th shelf. Box of Bournville and Dairymilk are not of Blue colour and Pink colour. The box of Bournville is placed immediately above the box of Kitkat which means box of Bournville will be at 6th shelf and box of Kitkat at 5th shelf.

Shelves	Boxes	Area of the box	Colour	Width of the Shelf
7	Silk(×) Munch(×)		Pink	
6	Bournville			
5	Kitkat		Orange	
4	Dairy milk	(width-1)²		
3				
2	Perk			
1				

Now, the remaining chocolate i.e. 5-Star box will be at top shelf. Green box is placed at the bottom and does not contain Silk i.e. it will contain munch and Silk box will be at 3rd shelf. The shelf which contain green box has highest width which is 35. The sides of the boxes of silk is 12 and munch is 5, so there areas will be 144 and 25 respectively. The area of the box of Kitkat is equal to the addition of the areas of the box of Silk and the one which is placed on the bottom shelf hence its area will be 169. The box which has its area equal to the square of seven is placed immediately below Black box so Box of Silk will be of Black color and area of box of Perk will be 49.

Shelves	Boxes	Area of the box	Colour	Width of the Shelf
7	5-Star		Pink	21
6	Bournville			
5	Kitkat	169	Orange	5
4	Dairy milk	(width-1)²		
3	Silk	144	Black	
2	Perk	49		
1	Munch	25	Green	35

The width of Pink box is multiple of seven and width of White box is a perfect square so the widths will be 21 and 9 respectively. The ratio of the widths of Pink and White box is equal to the ratio of the widths of Green and Black box. By applying the given condition we get, $\dfrac{21}{9} = \dfrac{5}{\text{Black box}}$

So the width of Black box will be 15. The width of the box of Kitkat is least i.e. 5. The area of the box placed immediately below the top shelf is equal to the square of the width (which is a prime number) of its corresponding

shelf. No two boxes have equal areas. Box of Bournville and Dairy milk are not of Blue color and Pink colour. The width of Blue box is less than the width of the Box of Black box. From the above condition we get that the width of Blue box will be 11 and contain Perk. Hence width of the box of Bournville will be 17.White box contains Dairy milk.

Shelves	Boxes	Area of the box	Colour	Width of the Shelf
7	5-Star		Pink	21
6	Bournville	289		17
5	Kitkat	169	Orange	5
4	Dairy milk	(width-1)^2	White	9
3	Silk	144	Black	15
2	Perk	49	Blue	11
1	Munch	25	Green	35

Now, the area of the box of 5-star is equal to the square of the width of the box of white color. And area of the box of Dairy milk will be 64. So, final solution is-

| Shelves	Boxes	Area of the box	Color	Width of the shelf
7	5-star	81	Pink	21
6	Bournville	289	Purple	17
5	Kitkat	169	Orange	5
4	Dairy milk	64	White	9
3	Silk	144	Black	15
2	Perk	49	Blue	11
1	Munch	25	Green	35

31. (5) 32. (1)
33. (1) 34. (2) 35. (3)

36-40. First we have to make the blood relation tree by using the following conditions. A is the son of C. H is the son-in-law of B. G works on Excel and is the maternal grandmother of E. D is the sister-in-law of the one who is married to C. B has only one daughter and is married to the one who works on Excel. C is the maternal uncle of E. A has only one cousin sister and works on Visio. There are only three married couple in the family.
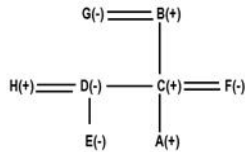

Now, from the remaining conditions arrange the persons. H sits at an extreme end of the row. Both the persons sitting at the corner faces south direction. A is an immediate neighbour of H. A is the son of C and sits third to the left of B who sits third to the right of the one who works on Power-point. A has only one cousin sister and works on Visio. So there will be two possible cases:
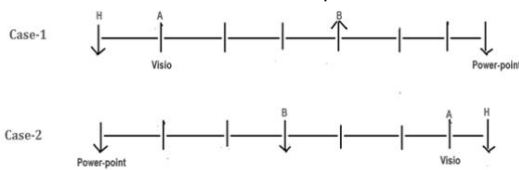
C sits second to the left of G who is an immediate neighbour of her husband. The one, who works on On-note, sits third to the right of the grandson of B. The son of B works on Project and is facing same direction as that of B. G works on Excel. The one, who works on Word, sits third to the left of the one who works on Excel. Mother and aunt of E are immediate neighbours.
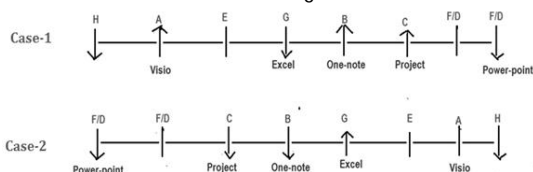

The daughter-in-law of G does not work on Power-point. The one who works on Publisher sits second to the left of the one who works on Access. Four of them are facing north and four of them are facing south direction. The mother of C is not facing north direction and is facing same direction as that of E. From this Case-2 will be eliminated. Now from Case-1 the final solution will be-
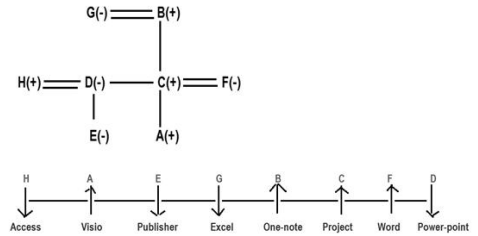

36. (3) 37. (3)
38. (4) 39. (1) 40. (1)
41-45.

Words	Code
Neeraj	zi
Aniket	la
Saurabh	pa
Prashant	ta
Gopal	sa
Swati	ga
Meena	na/hi
Guneet	na/hi
Priyanka	mi/jo
Vidushi	mi/jo

41. (2) 42. (5)
43. (3) 44. (2) 45. (1)
46-47.
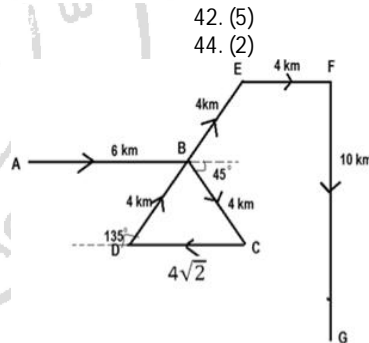
46. (5) From the figure it is clear that angle B is 90°. So by using Pythagoras's theorem-

Shortest distance between point E and C=$\sqrt{4^2 + 4^2}$
$$=4\sqrt{2} \text{ km}$$

47. (5) Longest route, travelled by Ram, from point B to point G
= 4+4√2+4+4+4+10 = 31.656 km = 31 Km

48. (5) By using both statement together-
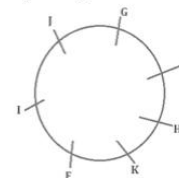
49. (5) By using both statement together-

50. (1) Using only first statement, we can say that Q is the tallest.