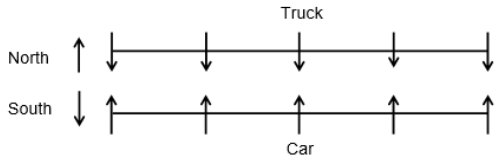
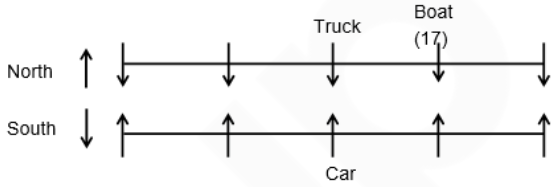
Solutions

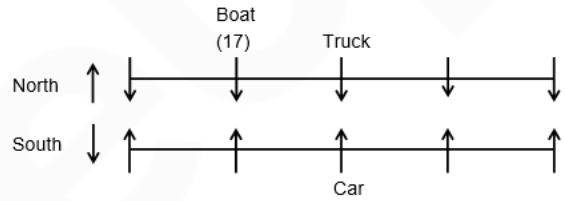
1. Ans. C.
Scheduled time for train to leave = "#&" = 9:30
Train late by 3 hrs.
Train leaves from the station = 9 hours 30 minutes + 3 hours = 12:30 = "@&"
2. Ans. B.
Bus to arrive at Delhi = "#$" = 9:25
Bus to arrive Delhi at least 30 minutes before scheduled time = 9:25 – 25 minutes = 9:00
Bus to depart from Ambala = 8:60 – 2 hours 40 minutes = 6:20 = "&%"
3. Ans. D.
Scheduled time of train = "$% = 5:20
To reach station 10 minutes earlier = 5:20 – 10 minutes = 5:10
Man take 25 minutes to reach station = 5:10 – 25 minutes = 4:45 = "%#"
4. Ans. C.
Depart time of train = "$&" = 5:30
It usually completes its journey in = 6 hours
On Friday = 15 × 5 = 75 minutes
Train is late by = 6 hours 75 minutes = 7 hours 15 minutes
Train reach Delhi = 5 hours 30 minutes + 7 hours 15 minutes = 12 hours 45 minutes = 12:45 = "@#"
5. Ans. E.
Scheduled time of the ceremony = "$$" = 5:25
Delay by 1 hour 20 minutes
Ceremony will start on = 5 hour 25 minutes + 1 hour 20 minutes = 6 hour 45 minutes = "&#"
6. Ans. C.
Vehicles - Cycle, Scooter, Car, Auto, Train, Boat, Truck, Helicopter, Motorcycle and Aeroplane
Speed – 9, 17, 30, 35, 45, 55, 70, 224, 367 and 575
1. The car is sitting third to the extreme end. Truck faces car.



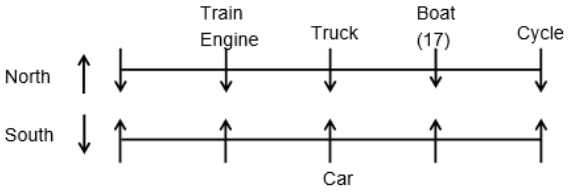
2. The vehicle car is facing immediate neighbour of boat whose speed is 17km/hr.
Case 1:



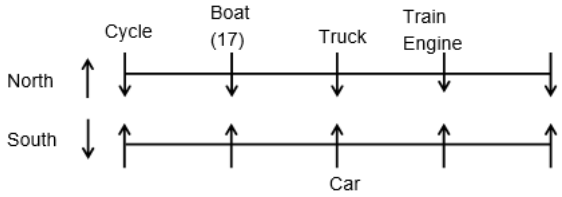
Case 2:



3. Only one vehicle comes in between Train Engine and Boat neither of them has speed of 55 or 35 km/hr. Cycle and boat are immediate neighbours of each other.
Case 1:

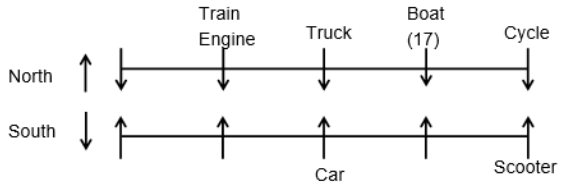


Case 2:

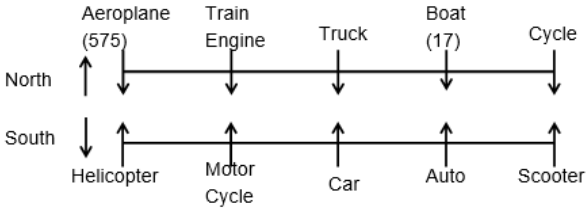


4. The one who faces Train Engine sits third to the right of scooter and both have a speed of multiple of 5.

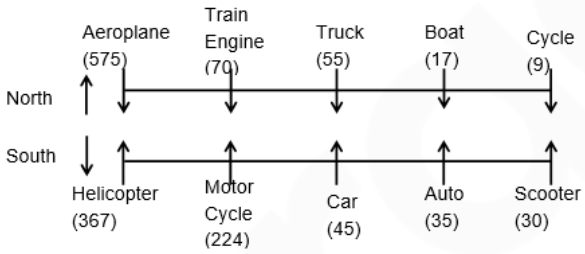
This is not possible in case 2. So, case 1 is correct.



5. Motorcycle and Helicopter are immediate neighbours of each other and one of them has even number speed and the other has odd number of speed. Aeroplane is sitting at the extreme end and has the highest speed.



6. The one who has speed of 35 and 45 km/hr are immediate neighbours of each other. Motorcycle has more speed than Train Engine. Truck has speed more than 50 km/hr. All the vehicles are placed from east to west in the increasing order of their speeds.



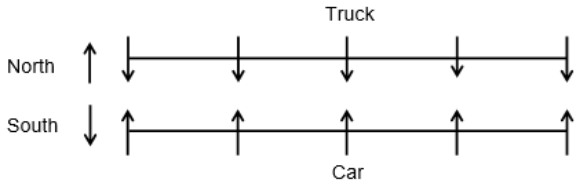
Hence, difference between speed of motorcycle and truck is 169km/hr.

7. Ans. D.

Vehicles - Cycle, Scooter, Car, Auto, Train, Boat, Truck, Helicopter, Motorcycle and Aeroplane

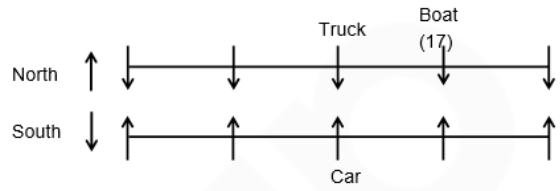
Speed – 9, 17, 30, 35, 45, 55, 70, 224, 367 and 575

1. The car is sitting third to the extreme end. Truck faces car.

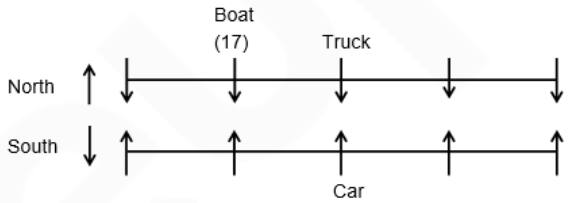


2. The vehicle car is facing immediate neighbour of boat whose speed is 17km/hr.

Case 1:

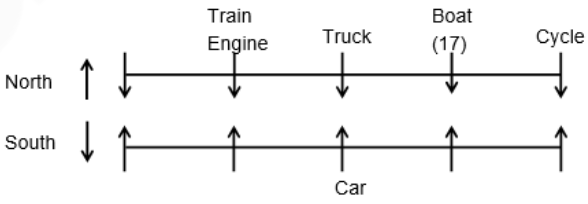


Case 2:

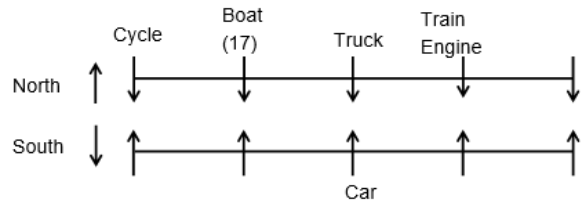


3. Only one vehicle comes in between Train Engine and Boat neither of them has speed of 55 or 35 km/hr. Cycle and boat are immediate neighbours of each other.

Case 1:

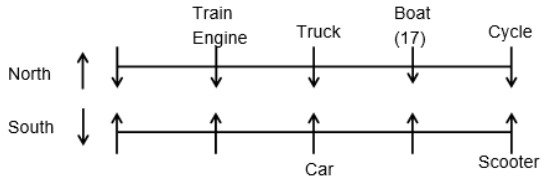


Case 2:

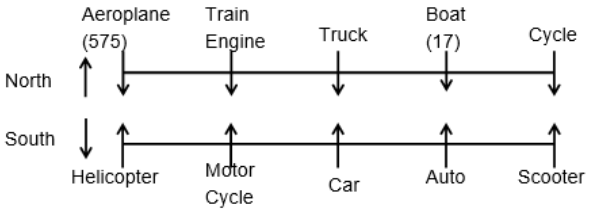


4. The one who faces Train Engine sits third to the right of scooter and both have a speed of multiple of 5.

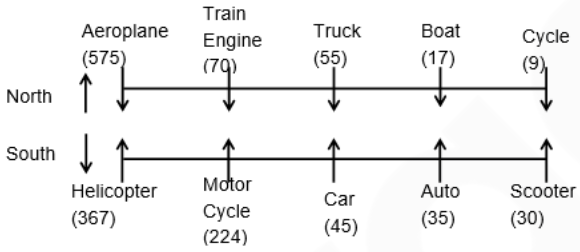
This is not possible in case 2. So, case 1 is correct.



5. Motorcycle and Helicopter are immediate neighbours of each other and one of them has even number speed and the other has odd number of speed. Aeroplane is sitting at the extreme end and has the highest speed.



6. The one who has speed of 35 and 45 km/hr are immediate neighbours of each other. Motorcycle has more speed than Train Engine. Truck has speed more than 50 km/hr. All the vehicles are placed from east to west in the increasing order of their speeds.



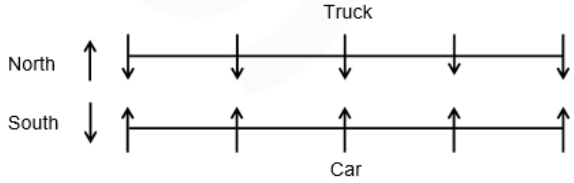
Hence, except auto all other vehicles are placed at extreme end.

8. Ans. B.

Vehicles - Cycle, Scooter, Car, Auto, Train, Boat, Truck, Helicopter, Motorcycle and Aeroplane

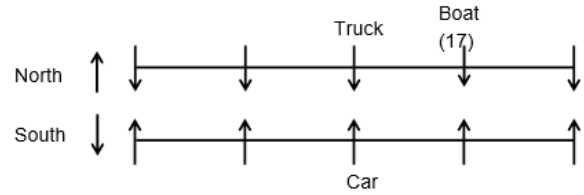
Speed – 9, 17, 30, 35, 45, 55, 70, 224, 367 and 575

1. The car is sitting third to the extreme end. Truck faces car.

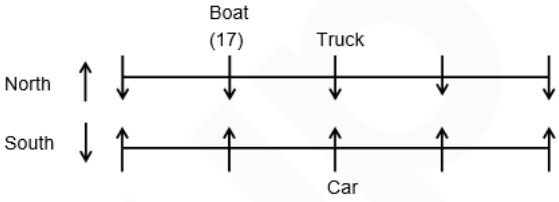


2. The vehicle car is facing immediate neighbour of boat whose speed is 17km/hr.

Case 1:

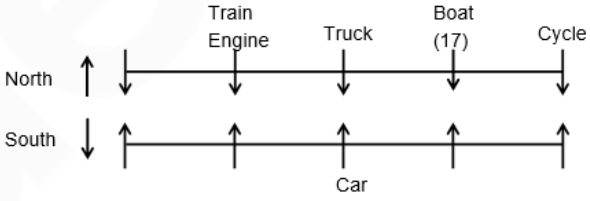


Case 2:

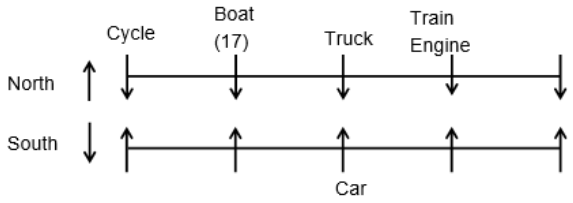


3. Only one vehicle comes in between Train Engine and Boat neither of them has speed of 55 or 35 km/hr. Cycle and boat are immediate neighbours of each other.

Case 1:

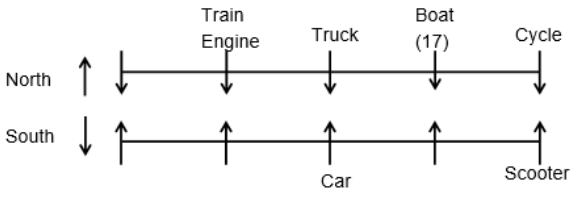


Case 2:

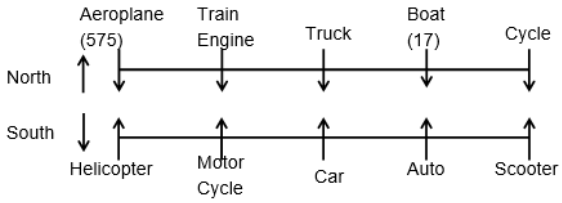


4. The one who faces Train Engine sits third to the right of scooter and both have a speed of multiple of 5.

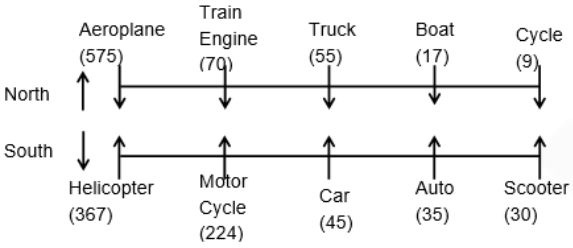
This is not possible in case 2. So, case 1 is correct.



5. Motorcycle and Helicopter are immediate neighbours of each other and one of them has even number speed and the other has odd number of speed. Aeroplane is sitting at the extreme end and has the highest speed.



6. The one who has speed of 35 and 45 km/hr are immediate neighbours of each other. Motorcycle has more speed than Train Engine. Truck has speed more than 50 km/hr. All the vehicles are placed from east to west in the increasing order of their speeds.



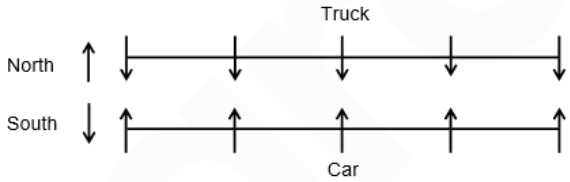
Hence, speed of auto is 35km/hr.

9. Ans. E.

Vehicles - Cycle, Scooter, Car, Auto, Train, Boat, Truck, Helicopter, Motorcycle and Aeroplane

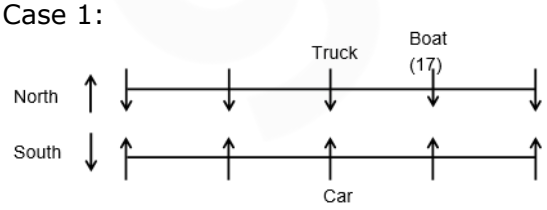
Speed – 9, 17, 30, 35, 45, 55, 70, 224, 367 and 575

1. The car is sitting third to the extreme end. Truck faces car.

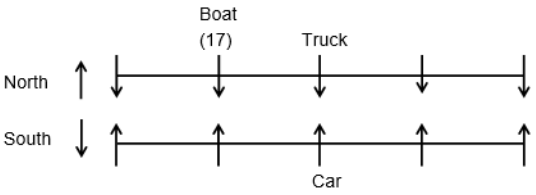


2. The vehicle car is facing immediate neighbour of boat whose speed is 17km/hr.

Case 1:

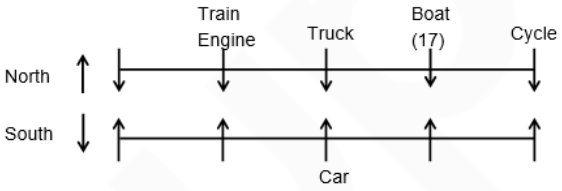


Case 2:

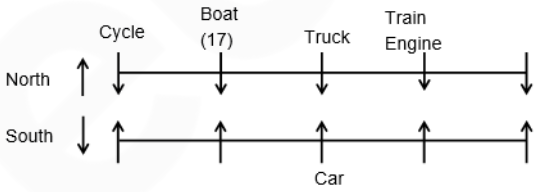


3. Only one vehicle comes in between Train Engine and Boat neither of them has speed of 55 or 35 km/hr. Cycle and boat are immediate neighbours of each other.

Case 1:

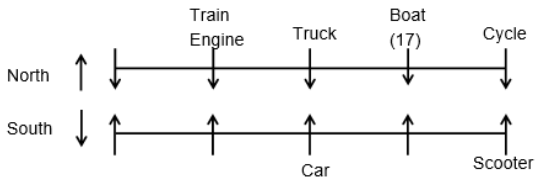


Case 2:

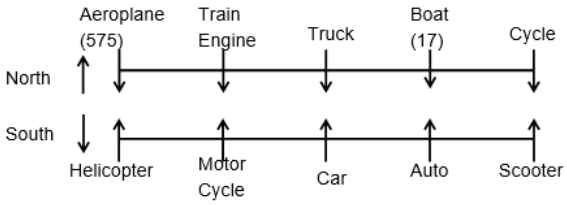


4. The one who faces Train Engine sits third to the right of scooter and both have a speed of multiple of 5.

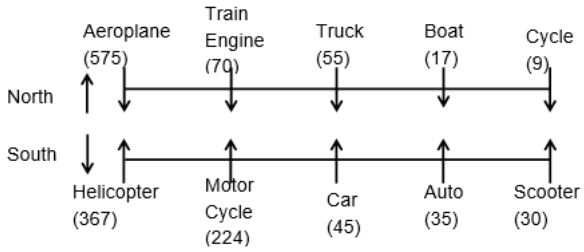
This is not possible in case 2. So, case 1 is correct.



5. Motorcycle and Helicopter are immediate neighbours of each other and one of them has even number speed and the other has odd number of speed. Aeroplane is sitting at the extreme end and has the highest speed.



6. The one who has speed of 35 and 45 km/hr are immediate neighbours of each other. Motorcycle has more speed than Train Engine. Truck has speed more than 50 km/hr. All the vehicles are placed from east to west in the increasing order of their speeds.



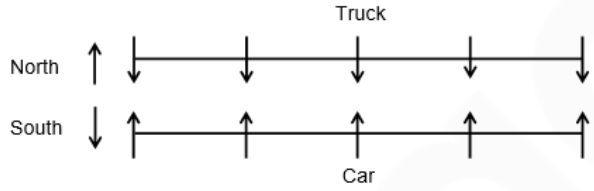
Hence, truck is placed at the immediate left of boat.

10. Ans. B.

Vehicles - Cycle, Scooter, Car, Auto, Train, Boat, Truck, Helicopter, Motorcycle and Aeroplane

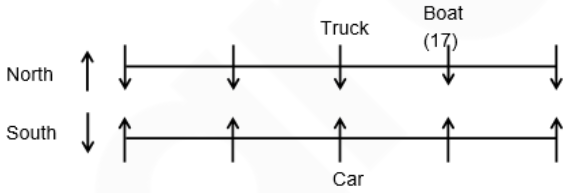
Speed – 9, 17, 30, 35, 45, 55, 70, 224, 367 and 575

1. The car is sitting third to the extreme end. Truck faces car.

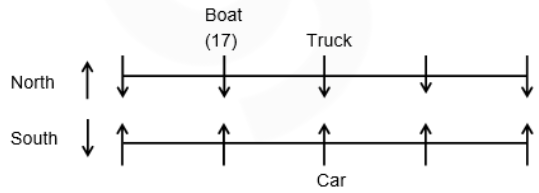


2. The vehicle car is facing immediate neighbour of boat whose speed is 17km/hr.

Case 1:

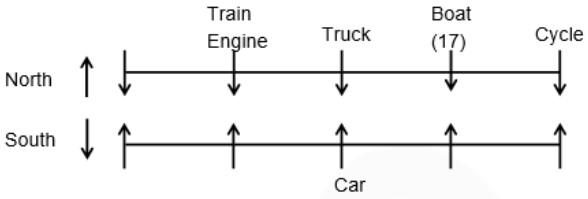


Case 2:

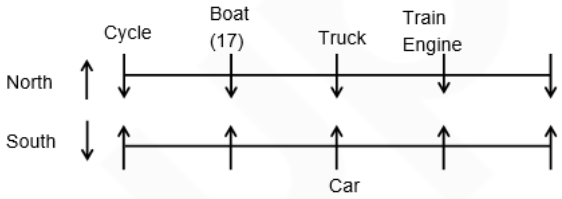


3. Only one vehicle comes in between Train Engine and Boat neither of them has speed of 55 or 35 km/hr. Cycle and boat are immediate neighbours of each other.

Case 1:

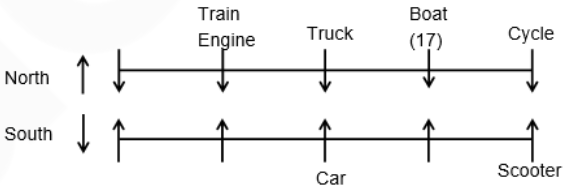


Case 2:

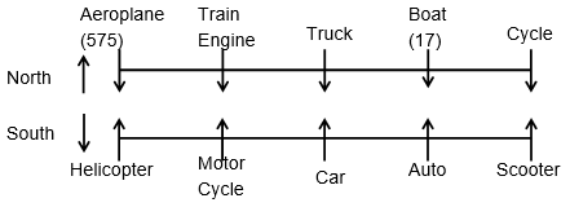


4. The one who faces Train Engine sits third to the right of scooter and both have a speed of multiple of 5.

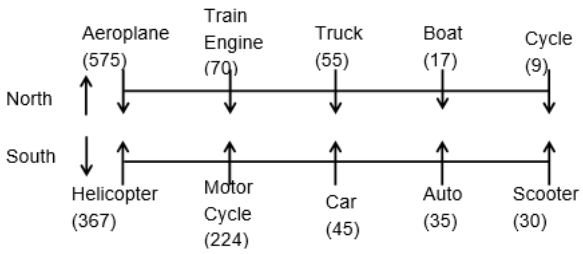
This is not possible in case 2. So, case 1 is correct.



5. Motorcycle and Helicopter are immediate neighbours of each other and one of them has even number speed and the other has odd number of speed. Aeroplane is sitting at the extreme end and has the highest speed.



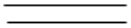
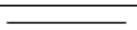
6. The one who has speed of 35 and 45 km/hr are immediate neighbours of each other. Motorcycle has more speed than Train Engine. Truck has speed more than 50 km/hr. All the vehicles are placed from east to west in the increasing order of their speeds.



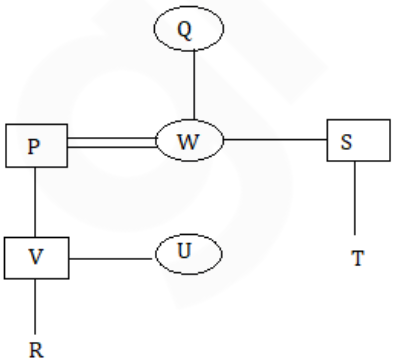
Hence, the sum of speeds of car and cycle is 54km/hr

11. Ans. D.

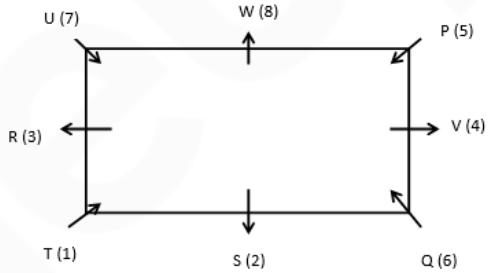
From the given information,

Symbol in Diagram	Meaning
	Female
	Male
	Married Couple
	Siblings
	Difference of a generation

1. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. V is father of R and is not an immediate neighbour of T. P is married to W.



2. S's daughter lucky number is 1. Only one person is sitting between P and U. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. T sits on the immediate right of the person whose lucky number is 2. No female is an immediate neighbour of Q, who sits at the corner of the table. S's daughter sits second to the right of U and on the immediate left of that person whose lucky number is 3. Q sits second to the left of W's husband whose lucky number is neither 4 nor 7. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. Only one person sits between W and V. V sits second to the right of the person whose lucky number is 8. V is father of R and is not an immediate neighbour of T.



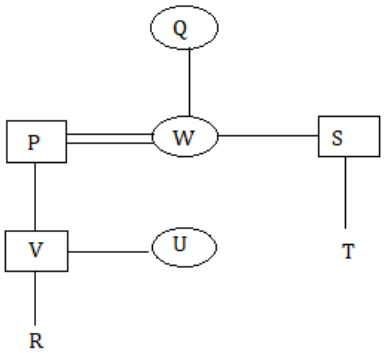
Hence, Q is U's grandmother.

12. Ans. A.

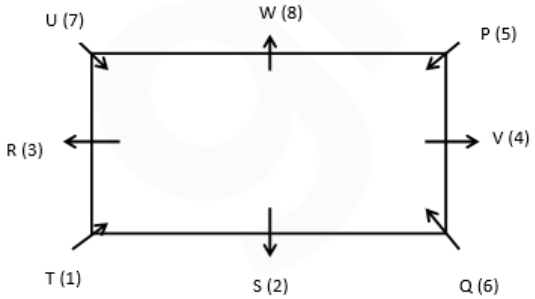
From the given information,

Symbol in Diagram	Meaning
	Female
	Male
	Married Couple
	Siblings
	Difference of a generation

1. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. V is father of R and is not an immediate neighbour of T. P is married to W.

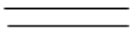


2. S's daughter lucky number is 1. Only one person is sitting between P and U. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. T sits on the immediate right of the person whose lucky number is 2. No female is an immediate neighbour of Q, who sits at the corner of the table. S's daughter sits second to the right of U and on the immediate left of that person whose lucky number is 3. Q sits second to the left of W's husband whose lucky number is neither 4 nor 7. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. Only one person sits between W and V. V sits second to the right of the person whose lucky number is 8. V is father of R and is not an immediate neighbour of T.

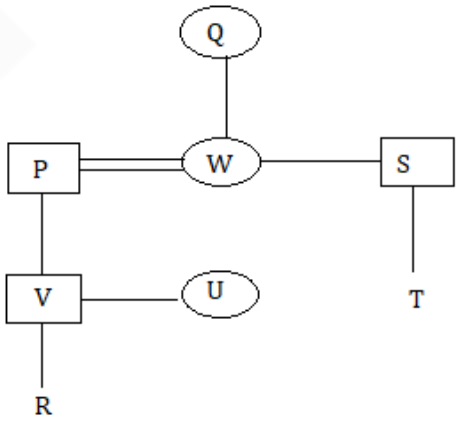


Hence, U sits second to the right of P.

13. Ans. E.
From the given information,

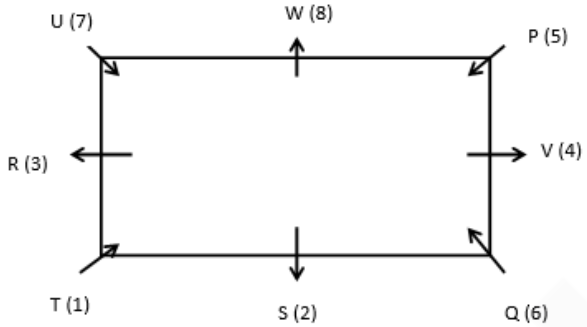
Symbol in Diagram	Meaning
	Female
	Male
	Married Couple
	Siblings
	Difference of a generation

1. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. V is father of R and is not an immediate neighbour of T. P is married to W.



2. S's daughter lucky number is 1. Only one person is sitting between P and U. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. T sits on the immediate right of the person whose lucky number is 2. No female is an immediate neighbour of Q, who sits at the

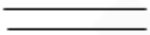
corner of the table. S's daughter sits second to the right of U and on the immediate left of that person whose lucky number is 3. Q sits second to the left of W's husband whose lucky number is neither 4 nor 7. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. Only one person sits between W and V. V sits second to the right of the person whose lucky number is 8. V is father of R and is not an immediate neighbour of T.



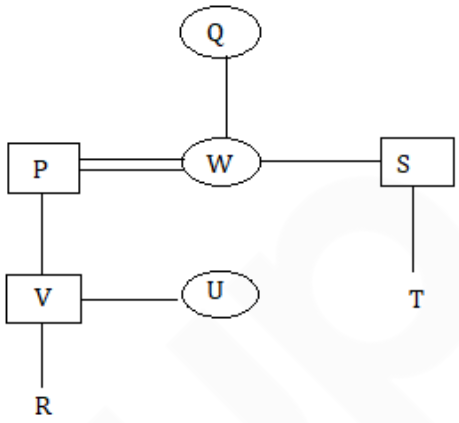
Hence, W's lucky number is 8.

14. Ans. D.

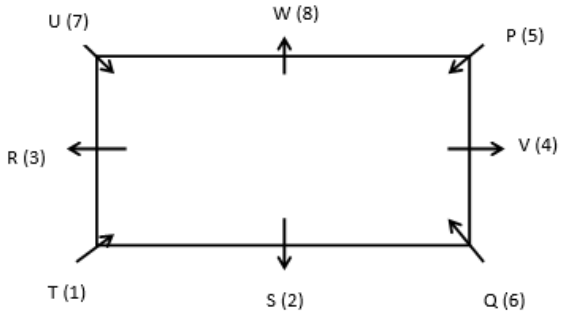
From the given information,

Symbol in Diagram	Meaning
	Female
	Male
	Married Couple
	Siblings
	Difference of a generation

1. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. V is father of R and is not an immediate neighbour of T. P is married to W.



2. S's daughter lucky number is 1. Only one person is sitting between P and U. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. T sits on the immediate right of the person whose lucky number is 2. No female is an immediate neighbour of Q, who sits at the corner of the table. S's daughter sits second to the right of U and on the immediate left of that person whose lucky number is 3. Q sits second to the left of W's husband whose lucky number is neither 4 nor 7. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. Only one person sits between W and V. V sits second to the right of the person whose lucky number is 8. V is father of R and is not an immediate neighbour of T.

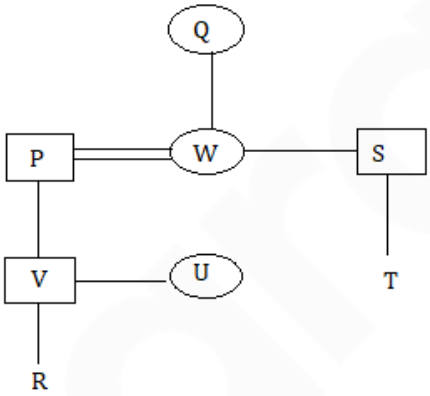


Hence, except P all are facing away from the centre.

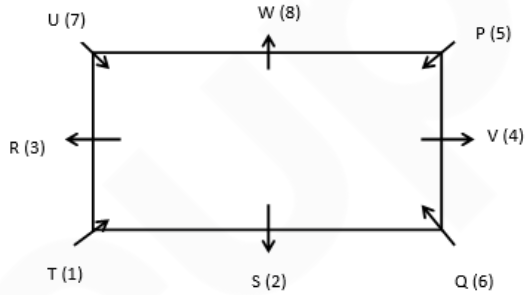
15. Ans. E.
From the given information,

Symbol in Diagram	Meaning
	Female
	Male
	Married Couple
	Siblings
	Difference of a generation

1. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. V is father of R and is not an immediate neighbour of T. P is married to W.



2. S's daughter lucky number is 1. Only one person is sitting between P and U. W's brother S, sits on the immediate left of his mother whose lucky number is 6. P is the father of V and only one person sits between W's mother and T. T sits on the immediate right of the person whose lucky number is 2. No female is an immediate neighbour of Q, who sits at the corner of the table. S's daughter sits second to the right of U and on the immediate left of that person whose lucky number is 3. Q sits second to the left of W's husband whose lucky number is neither 4 nor 7. U, who is sister of V, her lucky number is 7 and is not an immediate neighbour of W's husband. Only one person sits between W and V. V sits second to the right of the person whose lucky number is 8. V is father of R and is not an immediate neighbour of T.

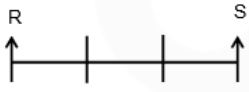


Hence, P and T are sitting opposite to each other.

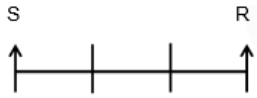
16. Ans. B.
First row – 9 216 6
According to step 4: "9 216" = 216 – 9 = 207
According to step 1: "207 × 6" = 1242
1242 is the resultant of first row.
Second row – 1242 5 11
According to step 3: "1242 5" = 1242 + 5 = 1247
According to step 5: "1247 11" = 1247 + 11 = 1258
1258 is the resultant of second row.
Difference between the resultant of two rows = 1258 – 1242 = 16

17. Ans. C.
First row – 15 8 15
According to step 1: "15 8" = 15 × 8 = 120
According to step 2: "120 15" = 120 – 15 = 105
105 is the resultant of first row.
Second row – 35 45 13
According to step 5: "35 45" = 35 + 45 = 80
According to step 3: "80 13" = 80 + 13 = 93
93 is the resultant of second row.
Addition of resultant of two rows = 105 + 93 = 198

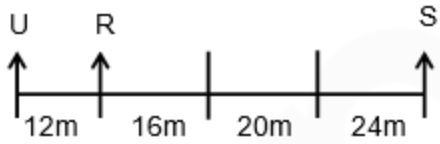
18. Ans. B.
First row – 8 11 8
According to step 3: "8 11" = 11 + 8 = 19
According to step 4: "19 8" = 19 – 8 = 11
11 is the resultant of first row.
Second row – 26 21 7
According to step 2: "26 21" = 26 – 21 = 5
According to step 5: "5 7" = 5 + 7 = 12
12 is the resultant of second row.
Difference of resultant of two rows=12–11=1
19. Ans. A.
Second row - 45 33 3
According to step 5: "45 33" = 45 + 33 = 78
According to step 3: "78 3" = 78 + 3 = 81
81 is the resultant of second row.
First row – 81 6 15
According to step 1: "81 6" = 81 × 6 = 486
According to step 2: "486 15" = 486 – 15 = 471
471 is the resultant of first row.
Multiplication of resultant of two rows = 471 × 81 = 38151
20. Ans. B.
First row – 3 27 15
According to step 4: "3 27" = 27 – 3 = 24
According to step 2: "24 15" = 24 – 15 = 9
9 is the resultant of first row.
Sum of resultant of two rows = 30
9 + Resultant of second row = 30
Resultant of second row = 30 – 9 = 21
Second row – 7 3 X
According to step 5: "7 3" = 7 + 3 = 10
10 + X = 21
X = 21 – 10 = 11
Hence, value of X is 11.
21. Ans. D.
Horses - P, Q, R, S, T and U
1. Distance between R and S is 60m and only two horses stand between them.
Case 1:



Case 2:

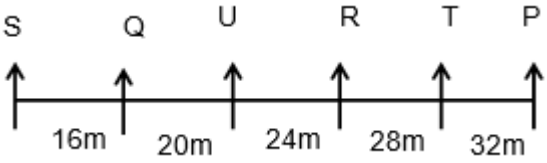


Let distance between two horses be 4x. All the distances are consecutive integral multiple of 4.
4x + 4x + 4 + 4x + 8 = 60 12x + 12 = 60
12x = 60 – 12
12x = 48 x = 4
Hence, distances are 16, 20, 24.
2. U sits immediate left of R.
Case 1:

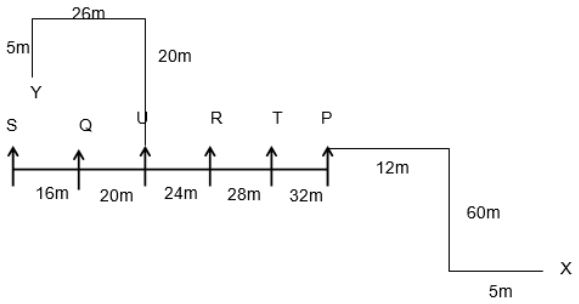


Case 2:
3. P sits somewhere to the right of U and distance between them is in multiple of six. Distance between R and Q is 44m.
Case 1:
Distance between P and U must be multiple of 6. There is only one possibility as 12 + 16 + 20 = 48 which is multiple of 6.

Distance between R and Q is 44m which is not possible in this case.
Case 2:
Distance between P and U must be multiple of 6. There is only one possibility as 24 + 28 + 32 = 84 which is multiple of 6. Distance between R and Q is 44m.



4. Horse P starts moving towards east, after moving 12m, it turns to its right and moves 60m. From there after turning to its left and walking for a distance of 5m, it comes to halt at a point X.
Horse U moves in north direction for a distance of 20m and then turn to its left and moves 26m. After taking one more turn to its left it stops at a point Y after walking 5m.



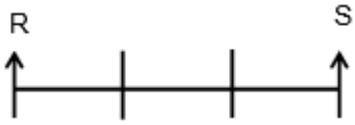
Hence, distance between horses S and R is 60m.

22. Ans. D.

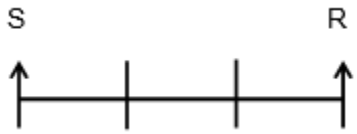
Horses - P, Q, R, S, T and U

1. Distance between R and S is 60m and only two horses stand between them.

Case 1:



Case 2:



Let distance between two horses be 4x. All the distances are consecutive integral multiple of 4.

4x + 4x + 4 + 4x + 8 = 60

12x + 12 = 60

12x = 60 – 12

12x = 48

x = 4

Hence, distances are 16, 20, 24.

2. U sits immediate left of R.

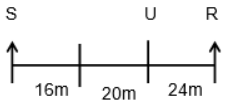
Case 1:

Case 2:

3. P sits somewhere to the right of U and distance between them is in multiple of six. Distance between R and Q is 44m.

Case 1:

Distance between P and U must be multiple of 6. There is only one possibility as 12 + 16 + 20 = 48 which is multiple of 6.



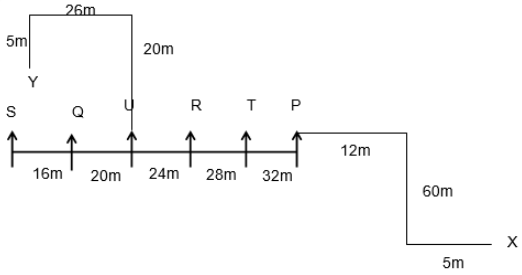
Distance between R and Q is 44m which is not possible in this case.

Case 2:

Distance between P and U must be multiple of 6. There is only one possibility as 24 + 28 + 32 = 84 which is multiple of 6. Distance between R and Q is 44m.

4. Horse P starts moving towards east, after moving 12m, it turns to its right and moves 60m. From there after turning to its left and walking for a distance of 5m, it comes to halt at a point X.

Horse U moves in north direction for a distance of 20m and then turn to its left and moves 26m. After taking one more turn to its left it stops at a point Y after walking 5m.



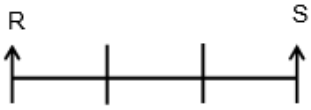
Hence, horse P is now facing east direction.

23. Ans. C.

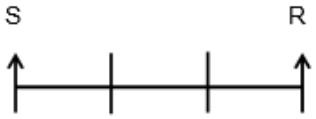
Horses - P, Q, R, S, T and U

1. Distance between R and S is 60m and only two horses stand between them.

Case 1:

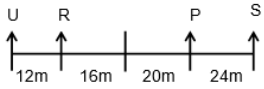


Case 2:

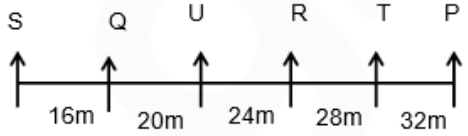


Let distance between two horses be 4x. All the distances are consecutive integral multiple of 4.
4x + 4x + 4 + 4x + 8 = 60
12x + 12 = 60
12x = 60 – 12
12x = 48
x = 4
Hence, distances are 16, 20, 24.
2. U sits immediate left of R.
Case 1:

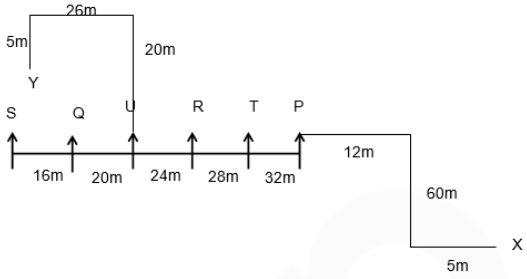
Case 2:
3. P sits somewhere to the right of U and distance between them is in multiple of six. Distance between R and Q is 44m.
Case 1:
Distance between P and U must be multiple of 6. There is only one possibility as 12 + 16 + 20 = 48 which is multiple of 6.



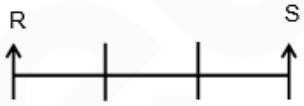
Distance between R and Q is 44m which is not possible in this case.
Case 2:
Distance between P and U must be multiple of 6. There is only one possibility as 24 + 28 + 32 = 84 which is multiple of 6. Distance between R and Q is 44m.



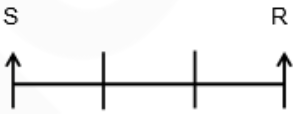
4. Horse P starts moving towards east, after moving 12m, it turns to its right and moves 60m. From there after turning to its left and walking for a distance of 5m, it comes to halt at a point X.
Horse U moves in north direction for a distance of 20m and then turn to its left and moves 26m. After taking one more turn to its left it stops at a point Y after walking 5m.



Hence, horse U is on the immediate right of Q.
24. Ans. E.
Horses - P, Q, R, S, T and U
1. Distance between R and S is 60m and only two horses stand between them.
Case 1:



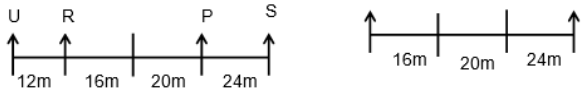
Case 2:

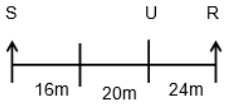


Let distance between two horses be 4x. All the distances are consecutive integral multiple of 4.
4x + 4x + 4 + 4x + 8 = 60
12x + 12 = 60
12x = 60 – 12
12x = 48
x = 4
Hence, distances are 16, 20, 24.
2. U sits immediate left of R.
Case 1:

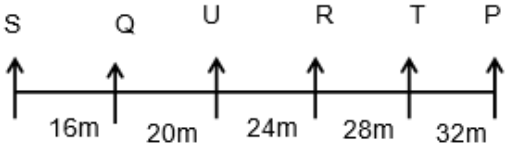
Case 2:
3. P sits somewhere to the right of U and distance between them is in multiple of six. Distance between R and Q is 44m.

Case 1:
Distance between P and U must be multiple of 6. There is only one possibility as 12 + 16 + 20 = 48 which is multiple of 6.

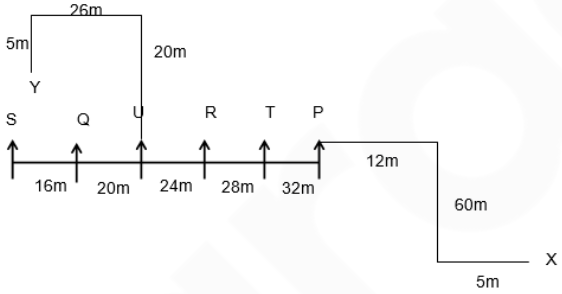




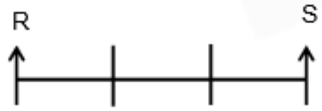
Distance between R and Q is 44m which is not possible in this case.
Case 2:
Distance between P and U must be multiple of 6. There is only one possibility as 24 + 28 + 32 = 84 which is multiple of 6. Distance between R and Q is 44m.



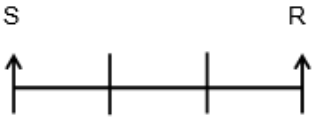
4. Horse P starts moving towards east, after moving 12m, it turns to its right and moves 60m. From there after turning to its left and walking for a distance of 5m, it comes to halt at a point X.
Horse U moves in north direction for a distance of 20m and then turn to its left and moves 26m. After taking one more turn to its left it stops at a point Y after walking 5m.



Hence, there are four horses between S and P.
25. Ans. C.
Horses - P, Q, R, S, T and U
1. Distance between R and S is 60m and only two horses stand between them.
Case 1:

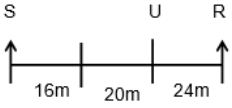


Case 2:

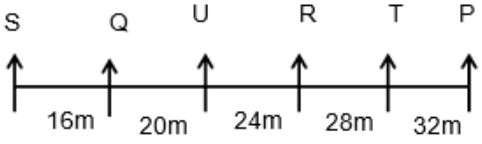


Let distance between two horses be 4x. All the distances are consecutive integral multiple of 4.
4x + 4x + 4 + 4x + 8 = 60
12x + 12 = 60
12x = 60 – 12
12x = 48
x = 4
Hence, distances are 16, 20, 24.
2. U sits immediate left of R.
Case 1:

Case 2:
3. P sits somewhere to the right of U and distance between them is in multiple of six. Distance between R and Q is 44m.
Case 1:
Distance between P and U must be multiple of 6. There is only one possibility as 12 + 16 + 20 = 48 which is multiple of 6.

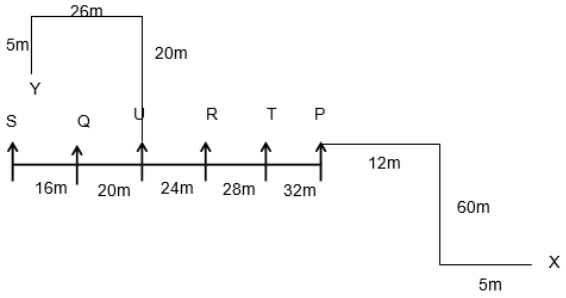


Distance between R and Q is 44m which is not possible in this case.
Case 2:
Distance between P and U must be multiple of 6. There is only one possibility as 24 + 28 + 32 = 84 which is multiple of 6. Distance between R and Q is 44m.



4. Horse P starts moving towards east, after moving 12m, it turns to its right and moves 60m. From there after turning to its left and walking for a distance of 5m, it comes to halt at a point X.

Horse U moves in north direction for a distance of 20m and then turn to its left and moves 26m. After taking one more turn to its left it stops at a point Y after walking 5m.



Hence, point Y is in north-west direction with respect to point X.

26. Ans. C.

Persons - P, Q, R, S, T, U, V and W

Fruits – Apple, Mango, Banana, Papaya, Orange, Cherry, strawberry and Guava

1. There are only three floors gap between U and the one who likes Banana. U lives one of the floors below to the one who likes Banana. There are only three floors between U and S. S does not like Banana.

Case 1:

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.		
6.	U	
5.		
4.		
3.		
2.	S	
1.		

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.		
7.		
6.		
5.	U	
4.		
3.		
2.		
1.	S	

2. There are three floors between P and Q. The person who likes mango lives below to both P and Q. The one who likes Apple lives immediately between P and W. W likes mango.

Case 1:

Floor	Person	Game
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.		
3.	P	
2.	S	Apple
1.	W	Mango

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.	Q	
7.		
6.		
5.	U	
4.	P	
3.		Apple
2.	W	Mango
1.	S	

3. There are two floors between W and R. This is not possible in case 2. So, case 1 is correct.

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

4. V lives immediately below the one who likes Cherry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

5. The number of person lives between U and the one who likes Banana is same as the number of floors between U and the person who likes Orange.
Hence, R likes Orange.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	Orange
3.	P	
2.	S	Apple
1.	W	Mango

6. The one who likes Guava lives below the one who likes Papaya but does not lives below the one who likes Strawberry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	Papaya
6.	U	Cherry
5.	V	Guava
4.	R	Orange
3.	P	Strawberry
2.	S	Apple
1.	W	Mango

Hence, Q likes Papaya.

27. Ans. B.
Persons - P, Q, R, S, T, U, V and W
Fruits – Apple, Mango, Banana, Papaya, Orange, Cherry, strawberry and Guava
1. There are only three floors gap between U and the one who likes Banana. U lives one of the floors below to the one who likes Banana. There are only three floors between U and S. S does not like Banana.
Case 1:

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.		
6.	U	
5.		
4.		
3.		
2.	S	
1.		

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.		
7.		
6.		
5.	U	
4.		
3.		
2.		
1.	S	

2. There are three floors between P and Q. The person who likes mango lives below to both P and Q. The one who likes Apple lives immediately between P and W. W likes mango.
Case 1:

Floor	Person	Game
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.		
3.	P	
2.	S	Apple
1.	W	Mango

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.	Q	
7.		
6.		
5.	U	
4.	P	
3.		Apple
2.	W	Mango
1.	S	

3. There are two floors between W and R. This is not possible in case 2. So, case 1 is correct.

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

4. V lives immediately below the one who likes Cherry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

5. The number of person lives between U and the one who likes Banana is same as the number of floors between U and the person who likes Orange.
Hence, R likes Orange.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	Orange
3.	P	
2.	S	Apple
1.	W	Mango

6. The one who likes Guava lives below the one who likes Papaya but does not lives below the one who likes Strawberry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	Papaya
6.	U	Cherry
5.	V	Guava
4.	R	Orange
3.	P	Strawberry
2.	S	Apple
1.	W	Mango

Hence, the T lives immediately above the vacant floor.

28. Ans. D.
Persons - P, Q, R, S, T, U, V and W
Fruits – Apple, Mango, Banana, Papaya, Orange, Cherry, strawberry and Guava
1. There are only three floors gap between U and the one who likes Banana. U lives one of the floors below to the one who likes Banana. There are only three floors between U and S. S does not like Banana.
Case 1:

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.		
6.	U	
5.		
4.		
3.		
2.	S	
1.		

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.		
7.		
6.		
5.	U	
4.		
3.		
2.		
1.	S	

2. There are three floors between P and Q. The person who likes mango lives below to both P and Q. The one who likes Apple lives immediately between P and W. W likes mango.

Case 1:

Floor	Person	Game
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.		
3.	P	
2.	S	Apple
1.	W	Mango

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.	Q	
7.		
6.		
5.	U	
4.	P	
3.		Apple
2.	W	Mango
1.	S	

3. There are two floors between W and R. This is not possible in case 2. So, case 1 is correct.

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

4. V lives immediately below the one who likes Cherry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

5. The number of person lives between U and the one who likes Banana is same as the number of floors between U and the person who likes Orange.

Hence, R likes Orange.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	Orange
3.	P	
2.	S	Apple
1.	W	Mango

6. The one who likes Guava lives below the one who likes Papaya but does not lives below the one who likes Strawberry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	Papaya
6.	U	Cherry
5.	V	Guava
4.	R	Orange
3.	P	Strawberry
2.	S	Apple
1.	W	Mango

Hence, 9 is a vacant floor.

29. Ans. A.

Persons - P, Q, R, S, T, U, V and W

Fruits – Apple, Mango, Banana, Papaya, Orange, Cherry, strawberry and Guava

1. There are only three floors gap between U and the one who likes Banana. U lives one of the floors below to the one who likes Banana. There are only three floors between U and S. S does not like Banana.

Case 1:

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.		
6.	U	
5.		
4.		
3.		
2.	S	
1.		

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.		
7.		
6.		
5.	U	
4.		
3.		
2.		
1.	S	

2. There are three floors between P and Q. The person who likes mango lives below to both P and Q. The one who likes Apple lives immediately between P and W. W likes mango.

Case 1:

Floor	Person	Game
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.		
3.	P	
2.	S	Apple
1.	W	Mango

Case 2:

Floor	Person	Fruit
10.		
9.		Banana
8.	Q	
7.		
6.		
5.	U	
4.	P	
3.		Apple
2.	W	Mango
1.	S	

3. There are two floors between W and R. This is not possible in case 2. So, case 1 is correct.

Floor	Person	Fruit
10.		Banana
9.		
8.		
7.	Q	
6.	U	
5.		
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

4. V lives immediately below the one who likes Cherry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	
3.	P	
2.	S	Apple
1.	W	Mango

5. The number of person lives between U and the one who likes Banana is same as the number of floors between U and the person who likes Orange.
Hence, R likes Orange.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	
6.	U	Cherry
5.	V	
4.	R	Orange
3.	P	
2.	S	Apple
1.	W	Mango

6. The one who likes Guava lives below the one who likes Papaya but does not lives below the one who likes Strawberry.

Floor	Person	Fruit
10.	T	Banana
9.	Vacant Floor	
8.	Vacant Floor	
7.	Q	Papaya
6.	U	Cherry
5.	V	Guava
4.	R	Orange
3.	P	Strawberry
2.	S	Apple
1.	W	Mango

Hence, two persons lives between T and the one who likes Guava.

30. Ans. C.
(i) The statement can be concluded from the given statement because it describes that Republic day 2018 will witness so many leaders for the first time which is also mentioned in the given statement that for the first time India will invite heads of ten ASEAN nations for Republic day 2018 celebrations.
(ii) This statement cannot be concluded from the given statement as it is not mentioned in the given statements.
(iii) This also cannot be concluded as no information is given about India and Asian's economic partnership.

31. Ans. B.
The given argument states that obesity should be categorized as a serious disease as it is known to decrease life expectancy and to harm the normal functioning of the body just like any other life-threatening disease. Option B undermines the argument by pointing out that obesity is mostly a lifestyle problem and not a disease. Compared to 40 years ago, people today spend more time commuting, sitting in front of a computer, watching television, playing video games, and generally exercising less, and end up burning fewer calories. Hence, option B is the correct answer.

32. Ans. B.
1. C likes grey colour and was born in the same month as E. Only B and H were born in March. The one who likes Pink colour was born in the month which has 30 days only. B is a scientist and the one who likes pink colour works is a doctor. D likes Orange colour and was born in the same month as F. H is a fashion designer. F does not like Black colour and the one who likes orange colour is an engineer.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
D		Orange	Engineer

2. The one who is a teacher was born on one of the months which have more than 30 days and the one who is an engineer was born on one of the months which have more than 30 days. The one who is a scientist was born on one of the months which have more than 30 days and the one who is a professor was born on one of the months which has less than 31 days. The one who is a IPS was born on one of the months which have less than 31 days and the one who is a IAS was born on one of the months which has more than 30 days.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
	June (30)		Professor
	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

3. C likes grey colour and was born in the same month as E. F was not born in the same month as E. D likes Orange colour and was born in the same month as F. C was not born in December. C is neither Fashion designer nor IPS. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

4. The one who likes Black and the one who likes Blue were born in the same month. The one who likes Black was not born in the same month as H. F does not like Black colour and the one who likes orange colour is an engineer. The one who likes red colour was born in the same month as A. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)	White	Scientist
H	March (31)	Green	Fashion Designer
A	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)	Red	IPS
D	December (31)	Orange	Engineer
F	December (31)	Blue	Teacher
G	December (31)	Black	IAS

Hence, G is an IAS.

33. Ans. C.

1. C likes grey colour and was born in the same month as E. Only B and H were born in March. The one who likes Pink colour was born in the month which has 30 days only. B is a scientist and the one who likes pink colour works is a doctor. D likes Orange colour and was born in the same month as F. H is a fashion designer. F does not like Black colour and the one who likes orange colour is an engineer.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
D		Orange	Engineer

2. The one who is a teacher was born on one of the months which have more than 30 days and the one who is an engineer was born on one of the months which have more than 30 days. The one who is a scientist was born on one of the months which have more than 30 days and the one who is a professor was born on one of the months which has less than 31 days. The one who is a IPS was born on one of the months which have less than 31 days and the one who is a IAS was born on one of the months which has more than 30 days.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
	June (30)		Professor
	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

3. C likes grey colour and was born in the same month as E. F was not born in the same month as E. D likes Orange colour and was born in the same month as F. C was not born in December. C is neither Fashion designer nor IPS. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

4. The one who likes Black and the one who likes Blue were born in the same month. The one who likes Black was not born in the same month as H. F does not like Black colour and the one who likes orange colour is an engineer. The one who likes red colour was born in the same month as A. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)	White	Scientist
H	March (31)	Green	Fashion Designer
A	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)	Red	IPS
D	December (31)	Orange	Engineer
F	December (31)	Blue	Teacher
G	December (31)	Black	IAS

Hence, D likes orange colour.

34. Ans. E.

1. C likes grey colour and was born in the same month as E. Only B and H were born in March. The one who likes Pink colour was born in the month which has 30 days only. B is a scientist and the one who likes pink colour works is a doctor. D likes Orange colour and was born in the same month as F. H is a fashion designer. F does not like Black colour and the one who likes orange colour is an engineer.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
D		Orange	Engineer

2. The one who is a teacher was born on one of the months which have more than 30 days and the one who is an engineer was born on one of the months which have more than 30 days. The one who is a scientist was born on one of the months which have more than 30 days and the one who is a professor was born on one of the months which has less than 31 days. The one who is a IPS was born on one of the months which have less than 31 days and the one who is a IAS was born on one of the months which has more than 30 days.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
	June (30)		Professor
	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

3. C likes grey colour and was born in the same month as E. F was not born in the same month as E. D likes Orange colour and was born in the same month as F. C was not born in December. C is neither Fashion designer nor IPS. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

4. The one who likes Black and the one who likes Blue were born in the same month. The one who likes Black was not born in the same month as H. F does not like Black colour and the one who likes orange colour is an engineer. The one who likes red colour was born in the same month as A. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)	White	Scientist
H	March (31)	Green	Fashion Designer
A	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)	Red	IPS
D	December (31)	Orange	Engineer
F	December (31)	Blue	Teacher
G	December (31)	Black	IAS

Hence, D,F and G was born in December.

35. Ans. E.

1. C likes grey colour and was born in the same month as E. Only B and H were born in March. The one who likes Pink colour was born in the month which has 30 days only. B is a scientist and the one who likes pink colour works is a doctor. D likes Orange colour and was born in the same month as F. H is a fashion designer. F does not like Black colour and the one who likes orange colour is an engineer.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
D		Orange	Engineer

2. The one who is a teacher was born on one of the months which have more than 30 days and the one who is an engineer was born on one of the months which have more than 30 days. The one who is a scientist was born on one of the months which have more than 30 days and the one who is a professor was born on one of the months which has less than 31 days. The one who is a IPS was born on one of the months which have less than 31 days and the one who is a IAS was born on one of the months which has more than 30 days.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
	June (30)		Professor
	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

3. C likes grey colour and was born in the same month as E. F was not born in the same month as E. D likes Orange colour and was born in the same month as F. C was not born in December. C is neither Fashion designer nor IPS. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

4. The one who likes Black and the one who likes Blue were born in the same month. The one who likes Black was not born in the same month as H. F does not like Black colour and the one who likes orange colour is an engineer. The one who likes red colour was born in the same month as A. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)	White	Scientist
H	March (31)	Green	Fashion Designer
A	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)	Red	IPS
D	December (31)	Orange	Engineer
F	December (31)	Blue	Teacher
G	December (31)	Black	IAS

Hence, except one who is an engineer all other are born in June.

36. Ans. B.

1. C likes grey colour and was born in the same month as E. Only B and H were born in March. The one who likes Pink colour was born in the month which has 30 days only. B is a scientist and the one who likes pink colour works is a doctor. D likes Orange colour and was born in the same month as F. H is a fashion designer. F does not like Black colour and the one who likes orange colour is an engineer.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
D		Orange	Engineer

2. The one who is a teacher was born on one of the months which have more than 30 days and the one who is an engineer was born on one of the months which have more than 30 days. The one who is a scientist was born on one of the months which have more than 30 days and the one who is a professor was born on one of the months which has less than 31 days. The one who is a IPS was born on one of the months which have less than 31 days and the one who is a IAS was born on one of the months which has more than 30 days.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
	June (30)		Professor
	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

3. C likes grey colour and was born in the same month as E. F was not born in the same month as E. D likes Orange colour and was born in the same month as F. C was not born in December. C is neither Fashion designer nor IPS. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)		Scientist
H	March (31)		Fashion Designer
	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)		IPS
D	December (31)	Orange	Engineer
	December (31)		Teacher
	December (31)		IAS

4. The one who likes Black and the one who likes Blue were born in the same month. The one who likes Black was not born in the same month as H. F does not like Black colour and the one who likes orange colour is an engineer. The one who likes red colour was born in the same month as A. B does not like green colour and E does not like pink.

Person	Month	Colour	Profession
B	March (31)	White	Scientist
H	March (31)	Green	Fashion Designer
A	June (30)	Pink	Doctor
C	June (30)	Grey	Professor
E	June (30)	Red	IPS
D	December (31)	Orange	Engineer
F	December (31)	Blue	Teacher
G	December (31)	Black	IAS

Hence, C likes grey colour.

37. Ans. E.
None of the courses of action follow. Banning the sale of knives just because one particular knife-wielding assailant went on a rampage makes no sense. Similarly, taking into police custody all those who are seen carrying knives is not something practical. Knives can be used for so many other purposes not involving the killing/harming of people. Finally, it is not a realistic expectation that posting policemen in all major tourist spots would reduce or altogether stop instances of such occurrences. Therefore, option E is the correct answer.
38. Ans. C.
Only III can be inferred. We can only deduce from the given statement that Putin and America have not been on good terms because President Trump was accused of treason simply because he embraced his Russian counterpart. We cannot draw any general conclusions about the relationship between both the countries. Also, we cannot infer anything about the prior presidents of America from what is given. Therefore, option C is the correct answer.
39. Ans. C.
Subjects - Mathematics, Hindi, English, Science, Accounts and Economics
1. Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.
Time slot of English is 1 hour less than the time slot of Science.
Hence, time slot of English class is 2 hours.
Number of classes took place between Economics and Accounts is same as the number of classes between English and Economics. English class took place between Mathematics and Accounts but it did not takes place immediately after or before Accounts.
Only one class took place between Mathematics and Science.

Subject	Time
Science	
Hindi	
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	
Accounts	

2. Accounts classes starts from 5:30 pm.
Hence, time slot of Economics class is 3 hours.
Total slot time of Hindi and Economics class is 4.5 hours.
Time slot of Hindi class is = 4.5 – 3 = 1.5 hours
Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm

Total time for the whole day = 14 hours
3 hours + 1.5 hours + 1.5 hours + 2 hours + 3 hours + Time slot of Accounts = 14 hours
11 hours + Time slot of Accounts = 14 hours
Time slot of Accounts = 14 – 11 = 3 hours

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm – 8:30 pm

Hence, total time slot of Accounts class is 3 hours.
40. Ans. B.
Subjects - Mathematics, Hindi, English, Science, Accounts and Economics
1. Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.
Time slot of English is 1 hour less than the time slot of Science.
Hence, time slot of English class is 2 hours.
Number of classes took place between Economics and Accounts is same as the number of classes between English and Economics. English class took place between

Mathematics and Accounts but it did not takes place immediately after or before Accounts. Only one class took place between Mathematics and Science.

Subject	Time
Science	
Hindi	
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	
Accounts	

2. Accounts classes starts from 5:30 pm.
Hence, time slot of Economics class is 3 hours.
Total slot time of Hindi and Economics class is 4.5 hours.
Time slot of Hindi class is = 4.5 – 3 = 1.5 hours
Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm

Total time for the whole day = 14 hours
3 hours + 1.5 hours + 1.5 hours + 2 hours + 3 hours + Time slot of Accounts = 14 hours
11 hours + Time slot of Accounts = 14 hours
Time slot of Accounts = 14 – 11 = 3 hours

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm – 8:30 pm

Hence, Economics class is held after English class.

41. Ans. E.
Subjects - Mathematics, Hindi, English, Science, Accounts and Economics
1. Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.
Time slot of English is 1 hour less than the time slot of Science.
Hence, time slot of English class is 2 hours.
Number of classes took place between Economics and Accounts is same as the number of classes between English and Economics. English class took place between Mathematics and Accounts but it did not takes place immediately after or before Accounts. Only one class took place between Mathematics and Science.

Subject	Time
Science	
Hindi	
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	
Accounts	

2. Accounts classes starts from 5:30 pm.
Hence, time slot of Economics class is 3 hours.
Total slot time of Hindi and Economics class is 4.5 hours.
Time slot of Hindi class is = 4.5 – 3 = 1.5 hours
Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm

Total time for the whole day = 14 hours
3 hours + 1.5 hours + 1.5 hours + 2 hours + 3 hours + Time slot of Accounts = 14 hours
11 hours + Time slot of Accounts = 14 hours

Time slot of Accounts = 14 – 11 = 3 hours

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm – 8:30 pm

Hence, five classes took place between Science and Accounts.

42. Ans. C.

Subjects - Mathematics, Hindi, English, Science, Accounts and Economics

1. Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.

Hence, time slot of Science class is 3 hours.

Time slot of English is 1 hour less than the time slot of Science.

Hence, time slot of English class is 2 hours.

Number of classes took place between Economics and Accounts is same as the number of classes between English and Economics. English class took place between Mathematics and Accounts but it did not takes place immediately after or before Accounts. Only one class took place between Mathematics and Science.

Subject	Time
Science	
Hindi	
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	
Accounts	

2. Accounts classes starts from 5:30 pm.

Hence, time slot of Economics class is 3 hours.

Total slot time of Hindi and Economics class is 4.5 hours.

Time slot of Hindi class is = 4.5 – 3 = 1.5 hours

Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.

Hence, time slot of Science class is 3 hours.

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm

Total time for the whole day = 14 hours

3 hours + 1.5 hours + 1.5 hours + 2 hours + 3 hours + Time slot of Accounts = 14 hours

11 hours + Time slot of Accounts = 14 hours

Time slot of Accounts = 14 – 11 = 3 hours

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm – 8:30 pm

Hence, Hindi class starts at 9:30 am – 11:00 am.

43. Ans. D.

Subjects - Mathematics, Hindi, English, Science, Accounts and Economics

1. Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.

Hence, time slot of Science class is 3 hours.

Time slot of English is 1 hour less than the time slot of Science.

Hence, time slot of English class is 2 hours.

Number of classes took place between Economics and Accounts is same as the number of classes between English and Economics. English class took place between Mathematics and Accounts but it did not takes place immediately after or before Accounts. Only one class took place between Mathematics and Science.

Subject	Time
Science	
Hindi	
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	
Accounts	

2. Accounts classes starts from 5:30 pm. Hence, time slot of Economics class is 3 hours.
Total slot time of Hindi and Economics class is 4.5 hours.
Time slot of Hindi class is = 4.5 – 3 = 1.5 hours
Mathematics class takes place from 11am to 12:30 pm. Time slot of Science is twice the time slot of mathematics.
Hence, time slot of Science class is 3 hours.

Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm

Total time for the whole day = 14 hours
3 hours + 1.5 hours + 1.5 hours + 2 hours + 3 hours + Time slot of Accounts = 14 hours
11 hours + Time slot of Accounts = 14 hours
Time slot of Accounts = 14 – 11 = 3 hours

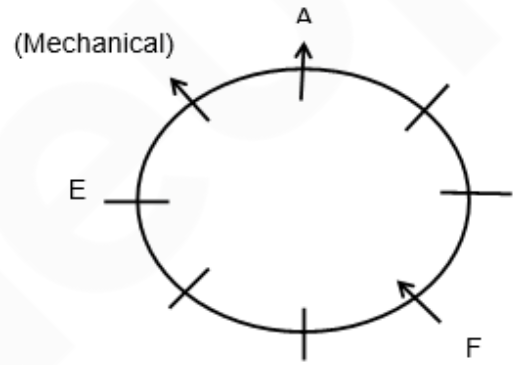
Subject	Time
Science	6:30 am – 9:30 am
Hindi	9:30 am – 11 am
Mathematics	11am – 12:30 pm
English	12:30pm – 2:30 pm
Economics	2:30 pm – 5:30 pm
Accounts	5:30pm – 8:30 pm

Hence, total time slot of English and Hindi class is 3.5 hours.

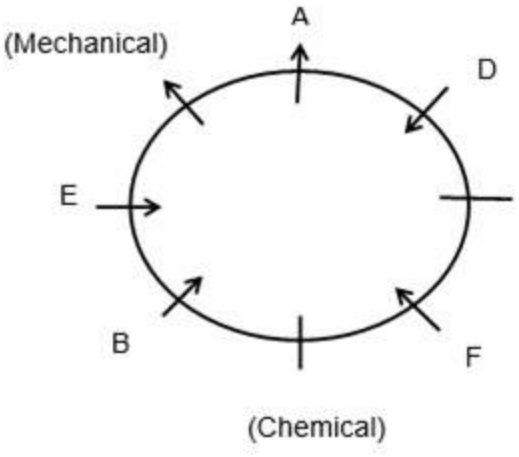
44. Ans. A.
Argument I is strong as it gives a proper reason as to why women should be included in combat arms – because they have already worked in this area in Iraq and other places and so it makes sense to include them officially. Argument II is weak because it talks about a general scenario in comparing an average female with an average male. However, what if a woman with exceptional athletic ability and toughness can meet and even exceed the standards currently set for male troops, on what basis should she be denied entry into combat arms? Therefore, option A is the correct answer.

45. Ans. C.
Pakistan is losing its reputation and other countries are planning to take strict action against Pakistan for supporting terrorism as an instrument of state policy. Hence, option C is the correct option.

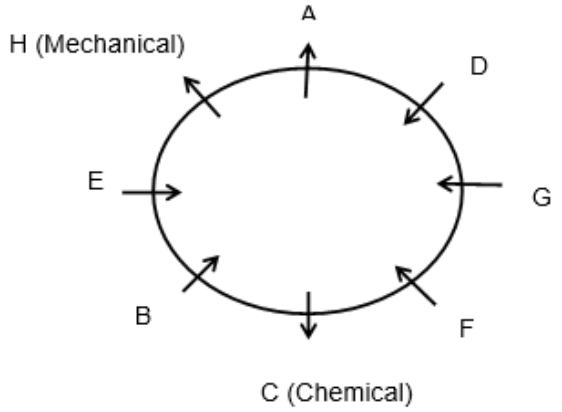
46. Ans. E.
Persons: A, B, C, D, E, F, G and H
Branches: Civil, Mechanical, Chemical, Electrical, Optical, Power, Computer and Geological.
1) Immediate left of A likes Mechanical, who faces opposite the centre. E sits second to the left of A. F and E are facing the same side and only two persons are sitting between them. F does not sit immediately next to A. A and C are facing outward direction but not as F.



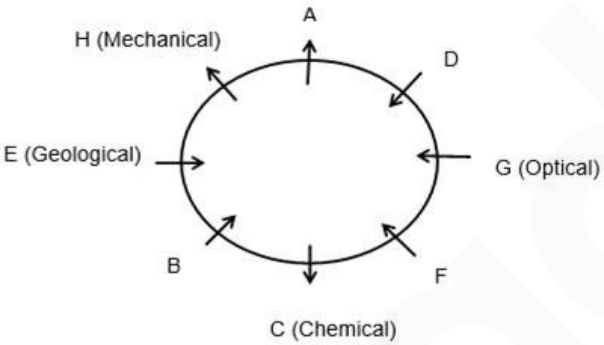
2) D sits diagonally opposite to B who sits to the immediate right of E and both E and B are facing same direction. The one who likes Chemical sits between F and B. D is facing same direction as F.
Hence, E, D and F face the centre.



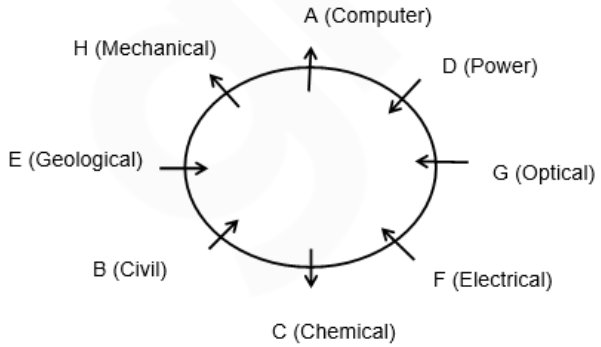
3) Only two persons sit between G and H. C sits second to the left of G. A and C are facing outward direction but not as F.
Hence, G faces the centre.



4) The one who likes Geological sits second to the right of the one who likes Chemical. The one who likes Optical faces the one who likes Geological.

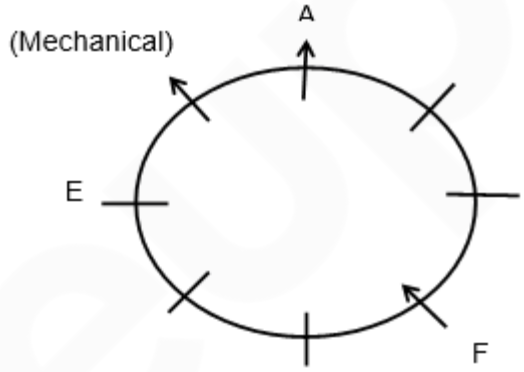


5) The one who likes Power sits immediately next to the one who likes Computer but not faces the one who likes Chemical. The one who likes Civil does not sit immediately next to F.

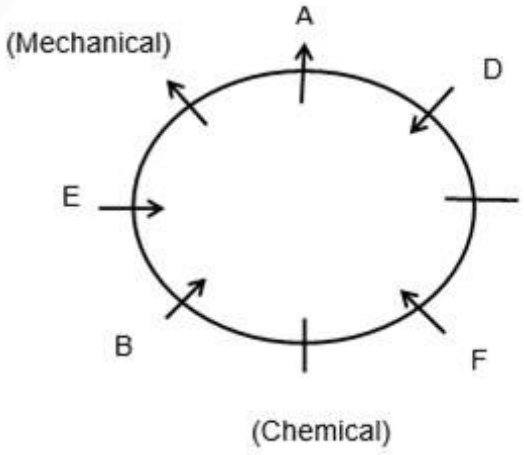


Hence, F likes Electrical.

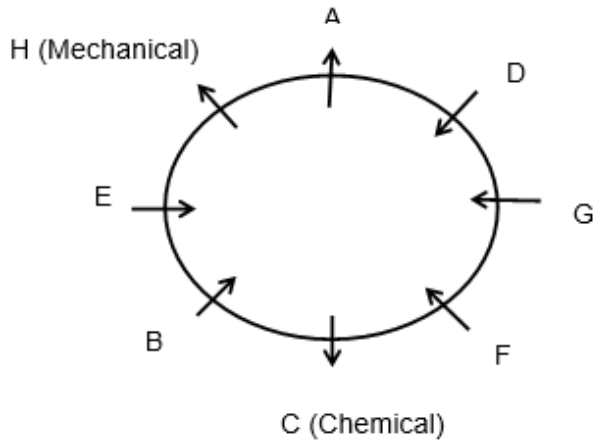
47. Ans. B.
Persons: A, B, C, D, E, F, G and H
Branches: Civil, Mechanical, Chemical, Electrical, Optical, Power, Computer and Geological.
1) Immediate left of A likes Mechanical, who faces opposite the centre. E sits second to the left of A. F and E are facing the same side and only two persons are sitting between them. F does not sit immediately next to A. A and C are facing outward direction but not as F.



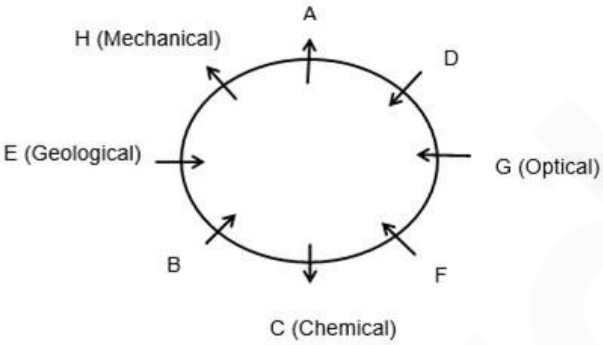
2) D sits diagonally opposite to B who sits to the immediate right of E and both of them are facing each other. The one who likes Chemical sits between F and B.
Hence, E, D and F face the centre.



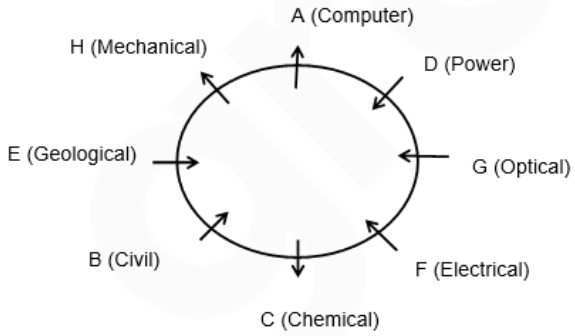
3) Only two persons sit between G and H. C sits second to the left of G. A and C are facing outward direction but not as F.
Hence, G faces the centre.



4) The one who likes Geological sits second to the right of the one who likes Chemical. The one who likes Optical faces the one who likes Geological.



5) The one who likes Power sits immediately next to the one who likes Computer but not faces the one who likes Chemical. The one who likes Civil does not sit immediately next to F



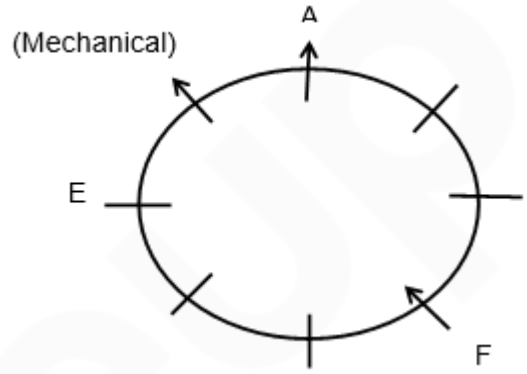
Hence, D sits between A and G.

48. Ans. B.

Persons: A, B, C, D, E, F, G and H

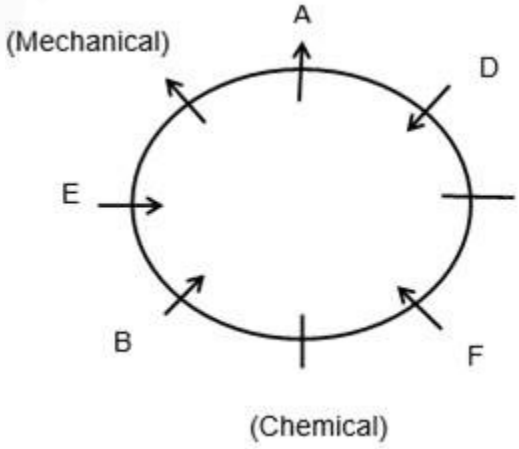
Branches: Civil, Mechanical, Chemical, Electrical, Optical, Power, Computer and Geological.

1) Immediate left of A likes Mechanical, who faces opposite the centre. E sits second to the left of A. F and E are facing the same side and only two persons are sitting between them. F does not sit immediately next to A. A and C are facing outward direction but not as F.



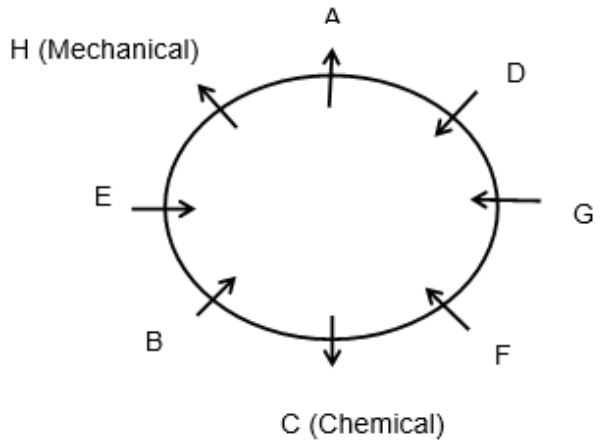
2) D sits diagonally opposite to B who sits to the immediate right of E and both of them are facing each other. The one who likes Chemical sits between F and B.

Hence, E, D and F face the centre.

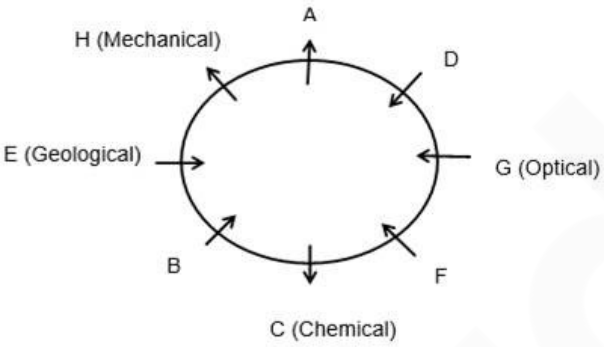


3) Only two persons sit between G and H. C sits second to the left of G. A and C are facing outward direction but not as F.

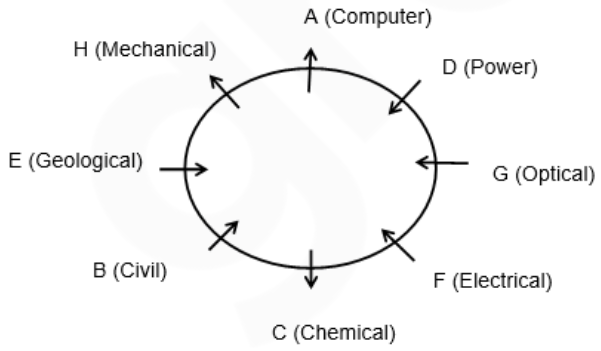
Hence, G faces the centre.



4) The one who likes Geological sits second to the right of the one who likes Chemical. The one who likes Optical faces the one who likes Geological.

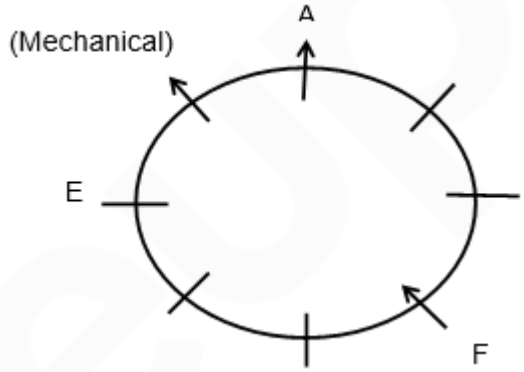


5) The one who likes Power sits immediately next to the one who likes Computer but not faces the one who likes Chemical. The one who likes Civil does not sit immediately next to F.

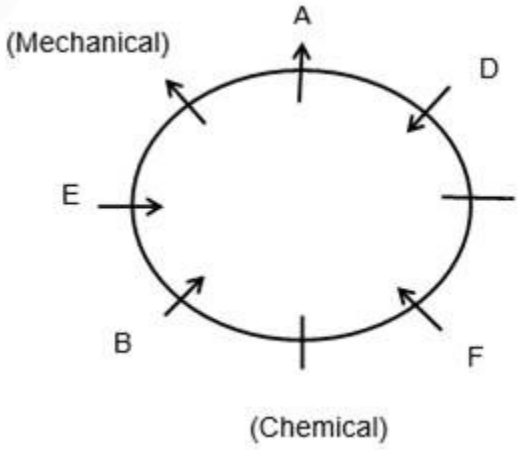


Hence, G and C do not face the same direction.

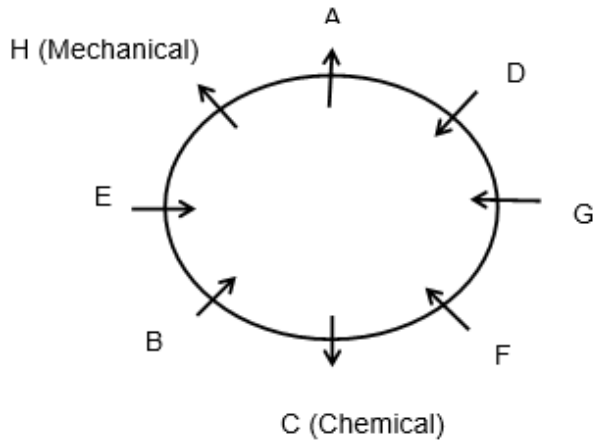
49. Ans. C.
Persons: A, B, C, D, E, F, G and H
Branches: Civil, Mechanical, Chemical, Electrical, Optical, Power, Computer and Geological.
1) Immediate left of A likes Mechanical, who faces opposite the centre. E sits second to the left of A. F and E are facing the same side and only two persons are sitting between them. F does not sit immediately next to A. A and C are facing outward direction but not as F.



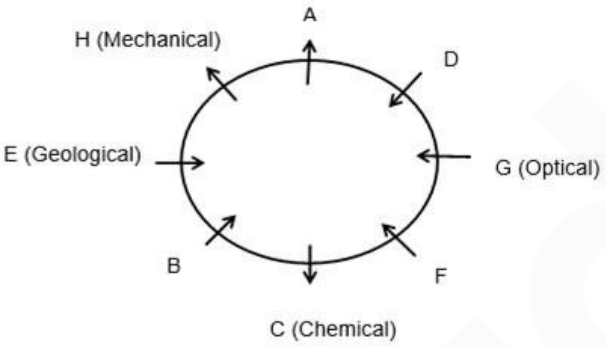
2) D sits diagonally opposite to B who sits to the immediate right of E and both of them are facing each other. The one who likes Chemical sits between F and B.
Hence, E, D and F face the centre.



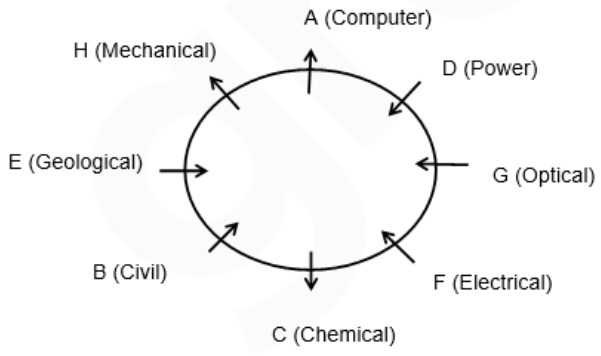
3) Only two persons sit between G and H. C sits second to the left of G. A and C are facing outward direction but not as F.
Hence, G faces the centre.



4) The one who likes Geological sits second to the right of the one who likes Chemical. The one who likes Optical faces the one who likes Geological.



5) The one who likes Power sits immediately next to the one who likes Computer but not faces the one who likes Chemical. The one who likes Civil does not sit immediately next to F.



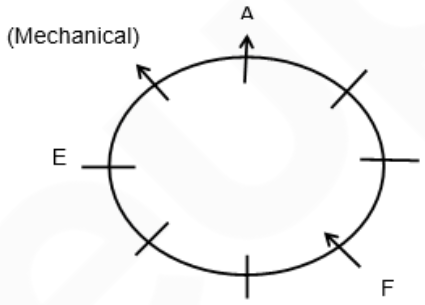
Hence, E faces the one who sits second to the left of C.

50. Ans. D.

Persons: A, B, C, D, E, F, G and H

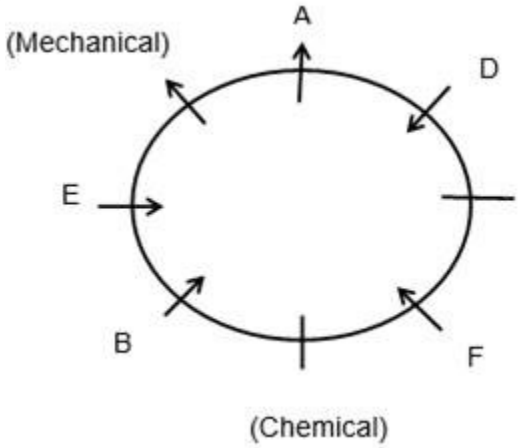
Branches: Civil, Mechanical, Chemical, Electrical, Optical, Power, Computer and Geological.

1) Immediate left of A likes Mechanical, who faces opposite the centre. E sits second to the left of A. F and E are facing the same side and only two persons are sitting between them. F does not sit immediately next to A. A and C are facing outward direction but not as F.



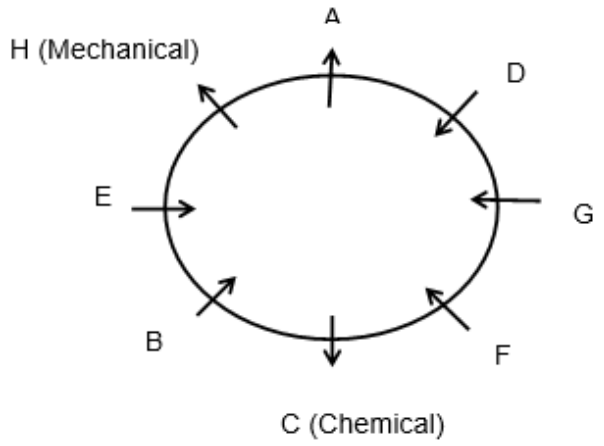
2) D sits diagonally opposite to B who sits to the immediate right of E and both of them are facing each other. The one who likes Chemical sits between F and B.

Hence, E, D and F face the centre.

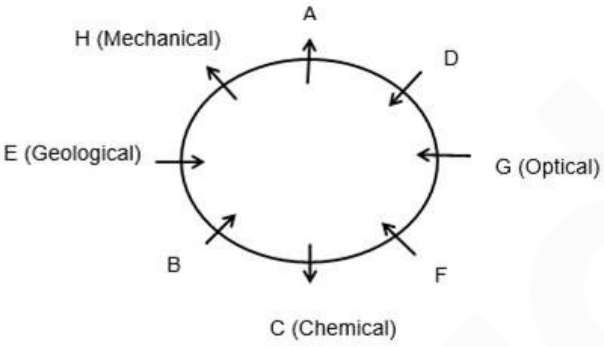


3) Only two persons sit between G and H. C sits second to the left of G. A and C are facing outward direction but not as F.

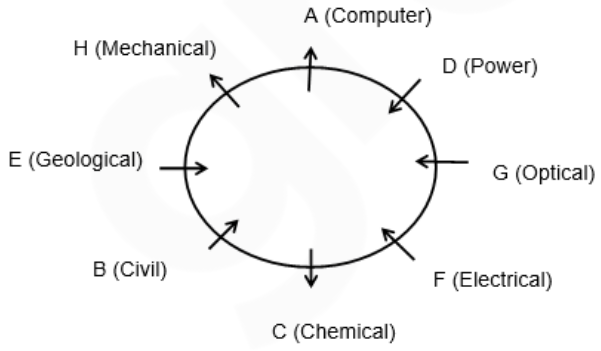
Hence, G faces the centre.



4) The one who likes Geological sits second to the right of the one who likes Chemical. The one who likes Optical faces the one who likes Geological.



5) The one who likes Power sits immediately next to the one who likes Computer but not faces the one who likes Chemical. The one who likes Civil does not sit immediately next to F.



Hence, C faces away from the centre while rest faces the centre.

51. Ans. D.
When a person sits on a scale, it is his *weight* against which the gold bars are measured. Also, we measure something *with* a scale, not *against* it.
'Occasion' is a particular event or the time at which it takes place. 'Date' is the number of a day along with the month of the year specified by a number. Since no number is present, 'occasion' is correct. Wherein and whereby have the same meaning in the sentence and since none of the options mention the combination, it can be ignored. 'Equity' is the quality of being fair and impartial, which will not suit the sentence. Hence, the correct answer is D.
52. Ans. C.
'Debate' results in only one of the parties involved in the argument to win. But, when employees and employers discuss the terms of working, the end results must satisfy both and not just one of them. This is called 'negotiation', not a debate. Also, employees are the same as that of workers. So, no change is required here. A committee is formed by '*representatives*' from various factions. 'Capital' doesn't require representation.
53. Ans. A.
Scepticism refers to doubt. The incident that is discussed in the sentence shows love and the positive side of a human being. Thus 'humanity' is the appropriate word. Hence (1) should be replaced by (5). When a person is charged with a crime, a formal allegation (a statement not yet proven) of an offence is made. But the sentence says he was going to jail, which means the allegations have been proved to be true. He has already been *sentenced.* Thus, (4) must be replaced by (8).
Vandalised and destroyed are synonyms. Also, if the Masjid forgot about the boys, they wouldn't have bothered to pay his fine. So, no changes in these two options. Hence, the correct answer is A.

54. Ans. E.
All the words in the sentence are correct and require no changes. Hence, the correct answer is option E.
55. Ans. B.
Abilities belong to humans, not of institutions. The number of beds in a hospital are fixed. They cannot be increased beyond a certain limit. So, if the number of beds is less, the number of patients often *exceed* the number of beds. *Insipid* and *tasteless* are synonymous, so no change there. Both *medication* and *medicine* have bills, so, changing hem wouldn't make a difference. Hence, the correct answer is B.
56. Ans. D.
To infer means to deduce or conclude something from evidence and reasoning rather than from explicit statements.
Option I: It can be inferred from the following lines, 'In this context, an article titled Lessons on Food and Hunger in 2013… found out that natural and intimate narratives of food and hunger, reflecting the lives of a majority of children, are generally absent from the discourse of education. What can be found, instead, are clinical and insensitive descriptions of what constitutes a healthy diet, often illustrated with visuals of food far beyond the reach of most children.'
Option II: It can't be inferred from the passage.
Option III: It can be inferred from the following lines, 'It is suggested that hunger can only be dealt with by, "carrying out policies of income redistribution,…..In most developing countries one of the biggest issues, with respect to public provisioning towards social protection, to address hunger and food insecurity is organically connected with that of adequate "fiscal" or "expenditure" space.'
Therefore, option E is the apt answer.
57. Ans. B.
An assumption is something supposed or taken for granted. An inference is a piece of information which can be logically deduced from the given statement.
Option I: There is no such mention that 'poor have been increasingly forced to spend more.' Thereby, this statement is incorrect.
Option II: Again, there is no such mention of 'increases in household incomes.' Thereby, this statement is incorrect.
Option III: The statement can be inferred from the paragraph. Increased dependence on private entities for essential services like education and transportation on the demand side, and a retreat of government provisioning of education, health, nutrition and transportation on the supply side, could interact to effect a squeeze on the food budget.
Option IV: The statement is an assumption. The passage says that "shrinking social expenditure by the government" makes "poor dependent on private entities for essential services" as a result "the portion of income that can be spent on food" shrinks. This means that private entities are expensive, thereby absorbing a larger portion of income and a small portion of income is left to spend on food.
Therefore, option B is the apt answer.
58. Ans. E.
To infer means to deduce or conclude something from evidence and reasoning rather than from explicit statements.
Option I: It is stated in the last paragraph.
Option II: It can be inferred from the following lines, 'Researchers explain that India's rank fell from 2016 because, from 2015, the conception of malnutrition was reformulated. New parameters were introduced to expand what is understood as hunger to include stunting and wasting in children,…….. The inclusion of stunting ensures consideration of rigid cultural factors, while that of wasting represents aspects of diet quality as well. Also, stunting is an indicator of long-term growth failure, and therefore, must be accounted for in any analysis of potential threat a given level of child malnutrition poses for a country.'
Option III: The passage states, 'It is suggested that hunger can only be dealt with by, "carrying out policies of income

redistribution, which respond to objectives of social justice rather than economic efficiency as perceived by neo-liberalism."..' This statement does not say that the neo-liberals prefer to brush off the issue of "chronic" hunger. Thereby, this option is incorrect.
Option IV: This statement can be inferred from the first and the last paragraph.
Therefore, option E is the apt answer.

59. Ans. C.
To understand the last line of the first paragraph, it is important to understand the following lines first, 'Instead, it is kept under the larger purview of economic development which expects that wealth will percolate to solve the problem of hunger. This formulation makes a number of incorrect assumptions about the relationship between hunger and other social structures. It is, at best, an indirect method that does nothing to immediately address the alarming issue of hunger that India is facing at present.'
The author says that the issue of hunger is always kept under the idea that with economic development, i.e. with more wealth or money flowing in the country, the problem of hunger will be solved. Fast and good economic growth/development will eliminate hunger.
The author says that this relationship between hunger and economic development is an indirect method for solving the issue of hunger. This method is good for the long run, but it does nothing to immediately address the problem. This is best described in option C.
Therefore, option C is the apt answer.

60. Ans. A.
The National Food Security Act, 2013 (also Right to Food Act) is an Act of the Parliament of India, which aims to provide subsidized food grains to approximately two-thirds of India's 1.2 billion people. The highlighted statement states that during the Food Security Bill debate in Parliament, the concept of hunger and malnutrition must have presented in a way that would allow one to see how the government presents access to food as a right. The law failed to present that the right to food is one of the most basic human rights, closely linked to the right to life. So, option A comes out as most logical. The other options either do not speak of this point or give extraneous information, which cannot be deciphered from the highlighted part.
Therefore, option A is the apt answer.

61. Ans. D.
Disdainful refers to a piece of writing that shows contempt or lack of respect.
Evocative refers to a piece of writing that brings strong images, memories, or feelings to mind.
Partisan refers to a piece of writing that prejudice in favour of a particular cause.
Pragmatic refers to a piece of writing that deals with things sensibly and realistically in a way that is based on practical rather than theoretical considerations.
Peremptory refers to a piece of writing that insists on immediate attention or obedience, especially in a brusquely imperious way.
Among all the options, 'pragmatic' can be used as the tone of the passage. The passage is about the social issue of hunger. The author is trying to rethink our understanding of hunger and how we address it. He deals the issue with sensibility and reality.
Therefore, option D is the apt answer.

62. Ans. E.
Percolate is a verb which means to spread gradually through an area or a group of people. It also refers to a liquid or gas that filter gradually through a porous surface or substance. We prepare coffee in a percolator.
Permeate means to spread throughout something. Hence, all three options are synonymous to 'percolate.'
Therefore, option E is the apt answer.

63. Ans. B.
The passage is based on economic development of the bank. It says that the economic growth of the bank in terms of the money is based on the cost of settlement. If this cost is reduced amongst the countries then the flow of payment will be maintained or vice versa. It is nowhere mentioned in the passage about rural or urban areas so we will take a general context. Hence option B is the correct option.

64. Ans. A.
Choice A is correct as it matches with the flow after a statement praising the professionalism of Indians, it is only logical to mention their excellence of working in a competitive environment. It also keeps up with the tone and general subject of the passage. Option B is a bad choice as it talks about being in their company which is not relevant in the context of the paragraph and therefore is incorrect as it is beyond the general theme. Option C is overall correct but we as we have to choose the best option so we have to cancel out on C. Option D is obviously a lengthy reproduction of the sentence preceding the blank. As for option E, it is incorrect as the statement does not keep up with the flow of the paragraph. Neither does it logically follow the previous sentence nor is it related to the next sentence.
65. Ans. A.
Choice A is correct as it matches with the flow of the passage. The whole paragraph is about the devastating effects that nuclear weapons have due to certain curtailments on part of the scientists in the moral and the conscience aspect. It is only logical to mention an argument to support the next statement. It also keeps up with the tone and general subject of the passage.
Option B is a bad choice as it talks about absolutely nothing and is too naïve. Therefore is incorrect as it is beyond the general theme. Option C is incorrect as it obviously does not go with the flow of the Para. As for option D, it is incorrect as the statement is illogical.
As for E, neither does it logically follow the previous sentence nor is it related to the anything in the next sentence.
66. Ans. A.
The correct sequence is ACB.
67. Ans. E.
The correct sequence is CBA.
68. Ans. B.
'Assets' mean things that have earning power or some other value to their owner. 'Auction' means a public sale in which goods or property are sold to the highest bidder. 'Autarky' refers to the idea that a country should be self-sufficient and not take part in international trade. 'Arbitrage' means the simultaneous buying and selling of securities, currency, or commodities in different markets or in derivative forms in order to take advantage of differing prices for the same asset. 'Amortisation' means the running down or payment of a loan by instalments. The given passage includes the presence of an 'auctioneer' who is defined as a person who conducts auctions by accepting bids and declaring goods sold. Thus, option B is the correct fit for all three blanks.
69. Ans. C.
'Brand' refers to a particular identity or image regarded as an asset. 'Stock' refers to the capital raised by a company or corporation through the issue and subscription of shares. 'Bond' is an interest-bearing security issued by governments, companies and some other organisations. 'Barter' refers to exchange (goods or services) for other goods or services without using money. 'Bankruptcy' means the state of being bankrupt. The given blanks can either use 'bond' or 'stock' as both are similar in meaning. Bonds and stocks are both securities, but the major difference between the two is that (capital) stockholders have an equity stake in a company (that is, they are owners), whereas bondholders have a creditor stake in the company (that is, they are lenders). Being a creditor, bondholders have priority over stockholders. Thus, 'bond' is the best fit word for the given blanks as it is clearly stated that it is a form of loan. This makes option C the correct answer.
70. Ans. D.
From the given passage it is evident that we have to take the word filling the blanks in relation to the word 'emission' which means the production and discharge of something, especially gas or radiation. 'Norms' refer to a standard or pattern, especially of social behaviour, that is typical or expected. Thus 'emission norms' cannot be a correct term as it is not related social behaviour. 'Pollutants' mean a substance that pollutes something, especially water or the atmosphere. If this word is used in the given

first blank it does not provide the correct term being defined. 'Factors' refer to a circumstance, fact, or influence that contributes to a result. 'Standards' refer to a required or agreed level of quality or attainment. 'Limits' means a restriction on the size or amount of something permissible or possible. Of all the given options 'factors' and 'standards' can be seen as the most appropriate words for the given blanks. But an emission factor is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. Thus, option D is the best fit answer for the given blanks.

71. Ans. E.

'Aspects' mean a particular part or feature of something. 'Pollutants' mean a substance that pollutes something, especially water or the atmosphere. 'Employ' means give work to (someone) and pay them for it. 'Operate' means (of a person) control the functioning of (a machine, process, or system). 'Manipulate' means control or influence (a person or situation) cleverly or unscrupulously. The passage hints towards unscrupulous usage of the environment for our own betterment. Thus, option E is the best fit answer for the given blanks.

72. Ans. E.

The given blank is to be taken in consideration with the word 'administrative'. 'Administrative Adjudication' means a decision or sentence imposed by a judge. 'Administrative Division' refers to is a portion of a country or other region delineated for the purpose of administration. 'Administrative hearing' refers to an informal way of resolving disputes between agencies and citizens without the strict procedural rules of a court. 'Administrative Service' refer to managing, planning, directing, and coordinating supportive services of an organization. 'Administrative legislation' is the body of law and legal work that deals with government agencies. Thus, option A fits all three blanks correctly.

73. Ans. A.

Subdued means restrained in style or quality.

Softened means being or made softer or less loud or clear.

Dampened means to suppress or constrain so as to lessen in intensity.

Quite means to a degree (not used with a negative).

Silenced means reduced to silence.

The reaction of the authorities is already mentioned, i.e. muted. All the options, except 'quite', are synonymous with 'muted'. But the reaction was toned-down. Hence, the correct answer is (A).

74. Ans. E.

Defragmented means to run a process that collects fragments of files and sorts them into contiguous sections on one or more hard disks or hard disk partitions, thus speeding up file management.

Ambiguous means to be of uncertain nature or significance.

Definitive means clearly defined or formulated.

Anecdotal means to have the character of an anecdote.

Speculative means not based on fact or investigation.

Hence, the correct answer is (E).

75. Ans. B.

Marginal means to be of questionable or minimal quality.

Immaterial means to be of no importance or relevance especially to a law case.

Unrelated means lacking a logical or causal relation.

Extraneous means something that is not pertinent to the matter under consideration.

Academic means marked by a narrow focus on or display of learning especially its trivial aspects.

Despite being young, Bennett's property was already entailed to the male heir. This means that she did not have a significant place in the rural society of 18th century England. Hence, the correct answer is (B).

76. Ans. C.
The passage clearly states that several characteristics are shared between humans and primates with respect to their taste profiles. It also states that it is because of evolution. But to infer that both species share the same profile would be incorrect making option a incorrect. The passage is all about the human ability to discern different tastes. One cannot infer about the likability of certain tastes from the given passage making option b incorrect. In the first sentence itself the passage talks about how majority of the human population can taste a certain artificial flavour. Thus, it can be inferred that majority of the human population have a determinant taste profile making the opposite as stated in option c also correct. This also makes option d incorrect.
77. Ans. A.
The passage states that reality is not an absolute truth, but a result of our consistent experiences. This makes option a is a correct inference made from the passage. Option b is a direct statement already made in the given passage. Option c cannot be inferred from the passage as 'pragmatism' is considered as a philosophy while 'reality' is considered as an amalgamation of our experiences. According to the given passage our experiences enables us to determine what is the reality which may or may not be the truth. This makes option d incorrect.
78. Ans. B.
The meanings of the given words are as follows:
Tremulous: shaking or quivering slightly
Stringent: (of regulations, requirements, or conditions) strict, precise, and exacting
Garrulous: excessively talkative, especially on trivial matters
Quivery: shaking or trembling slightly
Steady: firmly fixed, supported, or balanced; not shaking or moving
Conjunctive: relating to or forming a connection or combination of things
Desist: stop doing something; cease or abstain
Abstain: restrain oneself from doing or enjoying something
Defer: put off (an action or event) to a later time; postpone
Terse: sparing in the use of words; abrupt
Abrupt: sudden and unexpected
Therefore, it can be observed that option B i.e. 'quivery, steady' forms a synonym-antonym pair of 'tremulous'.
79. Ans. A.
The meanings of the given words are as follows:
Histrionic: excessively theatrical or dramatic in character or style
Melodramatic: characteristic of melodrama, especially in being exaggerated or overemotional
Theatrical: exaggerated and excessively dramatic
Conscientious: wishing to do one's work or duty well and thoroughly
Diligent: having or showing care and conscientiousness in one's work or duties
Tenacious: tending to keep a firm hold of something; clinging or adhering closely
Retentive: (of a person's memory) effective in retaining facts and impressions
Thrive: (of a child, animal, or plant) grow or develop well or vigorously
Tussle: a vigorous struggle or scuffle, typically in order to obtain or achieve something
Pertinent: relevant or applicable to a particular matter; apposite
Appropriate: suitable or proper in the circumstances
Therefore, it can be observed that option A i.e. 'melodramatic, theatrical' forms a synonym-synonym pair of 'histrionic'.
80. Ans. E.
The meanings of the given words are as follows:
Nefarious: (typically of an action or activity) wicked or criminal
Sloppy: careless and unsystematic; excessively casual
Flurry: a small swirling mass of something, especially snow or leaves, moved by sudden gusts of wind

Unassertive: (of a person) not having or showing a confident and forceful personality
Ignoble: not honourable in character or purpose
Modest: unassuming in the estimation of one's abilities or achievements
Subtle: (especially of a change or distinction) so delicate or precise as to be difficult to analyse or describe
Gregarious: (of a person) fond of company; sociable
Magnanimous: generous or forgiving, especially towards a rival or less powerful person
Iniquitous: grossly unfair and morally wrong
Atrocious: horrifyingly wicked
Therefore, it can be observed that option E i.e. 'iniquitous, atrocious' forms a synonym-synonym pair of 'nefarious'.
81. Ans. B.
The meanings of the given words are as follows:
Recalcitrant: having an obstinately uncooperative attitude towards authority or discipline
Peculiar: different to what is normal or expected; strange
Convivial: (of an atmosphere or event) friendly, lively, and enjoyable
Amenable: open and responsive to suggestion; easily persuaded or controlled
Docile: ready to accept control or instruction; submissive
Taciturn: (of a person) reserved or uncommunicative in speech; saying little
Withering: intended to make someone feel humiliated; scornful
Voluble: (of a person) talking fluently, readily, or incessantly
Turgid: swollen and distended or congested
Pendulous: hanging down loosely
Jocular: fond of or characterized by joking; humorous or playful
Therefore, it can be observed that option B i.e. 'amenable, docile' forms an antonym-antonym pair of 'recalcitrant'.
82. Ans. C.
The meanings of the given words are as follows:
Zealous: having or showing zeal
Droopy: hanging down limply
Gigantic: of very great size or extent; huge or enormous
Tenacity: the quality or fact of being able to grip something firmly; grip
Assiduity: constant or close attention to what one is doing
Fervent: having or displaying a passionate intensity
Apathetic: showing or feeling no interest, enthusiasm, or concern
Conceited: excessively proud of oneself; vain
Capacious: having a lot of space inside; roomy
Hilarity: extreme amusement, especially when expressed by laughter
Livid: furiously angry
Therefore, it can be observed that option C i.e. 'fervent, apathetic' forms a synonym-antonym pair of 'zealous'.
83. Ans. A.
To give a benefit of doubt means to decide that you will believe someone, even though you are not sure that what the person is saying is true.
84. Ans. B.
The phrase refers to a specific, rational purpose in what one is doing or planning, even though it may appear crazy or absurd to another person.
85. Ans. C.
If you say that you wouldn't be seen dead or be caught dead in particular clothes, places, or situations, you are expressing strong dislike or disapproval of them.
86. Ans. D.
According to the passage, some of the defence mechanisms against phishing attacks lie with the clients as users often share confidential information voluntarily. Thus, unknown people on friend lists can endanger the user. Hence statement I is an inference. Again, since spammers can often exploit social-engineering tricks to enhance viral marketing's effectiveness it is evident that viruses and malware can find their way into

our computers via the advertisements. This suggests that statement II can also be inferred. But the passage does not explicitly state the various consequences of a cyber-attack on an individual. Though statement III is true, it cannot be said that it can be inferred from the passage. Hence option D is the correct answer.

87. Ans. E.

All the given statements except for E are true with respect to the given passage. Statement A is proven by the first sentence of the passage. The passage also states that users often share confidential information voluntarily which makes statement B true. The passage states that 'spamming' enhances viral marketing's effectiveness. Thus, statement C is also true. Statement D is also true as it falls under the various steps a user can take to protect themselves. But statement E is not true as OSNs often assume that anybody accepted as a friend online is trustworthy, thereby revealing sensitive information to them.

88. Ans. A.

The last sentence of the given passage states that – 'Their future development hinges on their ability to deliver enjoyable services without undermining users' information security.' From this it is evident that option A is the correct answer.

89. Ans. B.

The passage categorically states that, 'Digitally signed emails can prevent spoofed email messages from fooling recipients…'. Thus, option B is the correct answer.

90. Ans. C.

The passage is about the prevalence of online social networks (OSNs) in modern life and the security risks accompanying the same. Option A is very specific in its terminology, whereas the passage goes beyond the scope of the heading. Option B is extremely wide as common security problems can range from thievery to threats to national security. Option E can refer to an introduction to various OSNs. Option D mentions a very specific problem with online users. Only option C encompasses what has been described in the passage making it the ideal title for the passage.

91. Ans. D.

The National Statistics Day (NSD) is celebrated every year in India on 29th June to create public awareness about importance of statistics in socio-economic planning and policy formulation.

Note: The 2017 theme is "Administrative Statistics"

92. Ans. D.

The United States of America, Mexico and Canada have won the right to host the 23rd FIFA 2026 World Cup after beating Morocco in a vote by FIFA member nations in Moscow.

The North American bid received 134 of the 203 votes, while Morocco polled 65 in the ballot at a FIFA Congress held in Moscow.

93. Ans. D.

'Paytm' has launched the first wealth management product 'Digital Gold' on its platform to allow customers to buy and sell gold through electronic platform.

Note: Consumers can purchase 24K 999.9 purity gold online and store it in MMTC—PAMP's secure vaults free of charge.

94. Ans. D.

Veteran journalist and editor of Srinagar based 'Rising Kashmir' newspaper was shot dead by unidentified gunmen outside his office in the Press Enclave area of Srinagar in Jammu & Kashmir.

Bukhari was instrumental in organising several conferences for peace in the Kashmir Valley.

95. Ans. B.

LRS stands for - Liberalised Remittance Scheme.

LRS is a facility provided by the Reserve Bank of India for all resident individuals to freely remit certain amount in terms of US dollar every financial year for a permissible set of current or capital account transactions.

Note:

* **In April 2018,** the Reserve Bank of India (RBI) has tightened reporting norms for the Liberalised Remittance Scheme (LRS) under which individual can transfer up to **US $2,50,000 abroad in a year**.

* The purpose of tightening of norms is to improve monitoring and to ensure compliance with LRS limits.
* The scheme was introduced in February 2004 and its regulations are provided under **Foreign Exchange Management Act (FEMA), 1999.**

96. Ans. A.
Explanation: The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank (MDB) conceived for the 21st century. The Bank's foundation is built on the lessons of experience of existing MDBs and the private sector. Its modus operandi will be lean, clean and green: it is situated in Beijing, China.

97. Ans. B.
The ASEAN India Film Festival 2018 was held in **New Delhi.** It was inaugurated by **Information and Broadcasting Minister Col. (Retd) Rajyavardhan Singh Rathore.**

98. Ans. C.
Bharti Airtel will acquire the business of Telenor India for an undisclosed sum in all seven circles Andhra Pradesh, Bihar, Maharashtra, Gujarat, UP (East), UP (West) and Assam.
Note: Telenor India (formerly known as Uninor) was an Indian mobile network operator based in Gurgaon, Haryana, India. The company is a wholly owned subsidiary of Telenor Group, a telecommunications company headquartered in Oslo, Norway.

99. Ans. D.
The Union Cabinet has approved an ordinance to set up India's first national sports university in Imphal, Manipur. The proposed university will be spread over 325 acres and cost Rs 524 crore.

100. Ans. C.
Punjab state government along with World Wildlife Fund (WWF) India conducted the first organized census for the conservation of Indus dolphins on their population.

101. Ans. B.
National Payments Corporation of India is the umbrella organisation for all retail payment systems in India, which aims to allow all Indian citizens to have unrestricted access to e-payment services

102. Ans. B.
International Conference on Information and Communication Technology (ICT) will be held in Kathmandu, Nepal (from 17th June). The Theme of the two-day conference is "Sustainable Development Goals for Smart Society".
The objective of the conference is to bring government and private sector together for developing a plan of action using sustainable ICT applications.

103. Ans. C.
The headquarter of Organisation for Economic Cooperation and Development (OECD) is in Paris, France.

104. Ans. C.
Patratu Thermal Power Station is a coal-based thermal power plant located near Patratu town in Ramgarh district in the Indian state of Jharkhand. The power plant is operated by the Jharkhand State Electricity Board. It has an installed capacity of 840 MW. The generating units of the power plant are very old and are operating at around 10% PLF, generating about 110 MW per day.

105. Ans. A.
The 2018 theme of the International Yoga Day is "Yoga for Peace".
International Yoga Day (4th) is being celebrated worldwide on 21st June to promote yoga and make it a part of people's daily routine.

106. Ans. C.
Hirakud dam is located in Odisha on Mahanadi.

107. Ans. C.
The Dudhwa National Park is a national park in the Terai of **Uttar Pradesh,** India. It is part of the Dudhwa Tiger Reserve.

108. Ans. C.
The Republic of **Zambia** is a landlocked country in **Southern Africa**. The capital city is **Lusaka** and currency is **Kwacha**.

109. Ans. E.
The Insurance Regulatory and Development Authority (IRDAI) has set up a 10-member committee headed by Suresh Mathur (ED-IMF,

IRDAI) to review norms related to Insurance Marketing Firms (IMF) with an aim to increase insurance penetration in the country.

110. Ans. A.

The SKOCH has conferred the 'Best performing Social Sector Ministry' award to "Ministry of Women and Child Development" as it has delivered the promises made and for its significant achievements and initiatives from the last 4 years. Smt. Maneka Sanjay Gandhi has received the award on behalf of the Ministry.

111. Ans. E.

The ICC Women's World T20 championship 2018 will be held in the West Indies from 9 – 24th November this year.

112. Ans. B.

The Certificate of Deposit (CD) is a negotiable money market instrument and issued in dematerialised form or as a Usance Promissory Note against funds deposited at a bank or other eligible financial institution for a specified time period. (Usance Promissory Note has to be paid after certain time period).

113. Ans. B.

The Indian Science Congress – the largest gathering of Indian scientists – was scheduled to be held at Osmania University in Hyderabad from January 3 to 7. For the first time in its history, it was rescheduled to March 16-March 20 and its venue was moved to the Manipur University, Imphal after the Osmania University administration said it would not be able to host the event fearing agitations on campus.

114. Ans. B.

Life Insurance Corporation of India is all set to become a knight in shining armour for the ailing IDBI Bank. In a first-of-its-kind transaction, the Insurance Regulatory and Development Authority of India (IRDAI) has approved a proposal allowing the former to acquire a majority stake in the bank.

115. Ans. C.

SAARC Development Fund Headquarters are located in Thimpu, Bhutan. SAARC Development Fund (SDF), the umbrella financial institution for projects in SAARC member countries.

SDF has been established

(i) to promote the welfare of the people of SAARC region,

(ii) to improve their quality of life and (iii) to accelerate economic growth, social progress and poverty alleviation in the region.

The Fund is to serve as the umbrella financial institution for SAARC projects and programmes and is aimed to contribute to regional cooperation and integration through project collaboration.

116. Ans. A.

Bhumi Pednekar bagged the best actress at Dada Saheb Phalke award ceremony for Toilet Ek Prem Katha.

117. Ans. B.

A non-trading company used as a vehicle for various financial manoeuvres or kept dormant for future use in some other capacity is known as shell companies.

118. Ans. D.

Indira Sagar dam is located in Madhya Pradesh.

119. Ans. A.

Assumption Island is located in Seychelles. Assumption Island is a small island situated southwest of Seychelles main and largest island of Mahe. It is situated very close to the Mozambique Channel from where much Indian Ocean maritime routes pass. Its location lends its strategic importance for monitoring shipping in the Mozambique Channel.

120. Ans. B.

The two day 'Kabir Mahotsav' in UP organized by Ministry of Culture.

121. Ans. A.

Pilibhit wildlife sanctuary is located in Uttar Pradesh.

122. Ans. C.

Rani Rampal is the captain of Indian women hockey team.

123. Ans. A.

The Victorian Gothic and Art Deco is situated in Mumbai.

India gets its 37th WORLD UNESCO World HERITAGE SITE.

Victorian Gothic and Art Deco Ensemble of Mumbai declared as a World Heritage Property by UNESCO. This **makes Mumbai city the**

second city in India after Ahmedabad to be inscribed on the World Heritage List.
In the past 5 years alone, India has managed to get inscribed seven of its properties/sites on the World Heritage List of UNESCO. India now has overall 37 World Heritage Inscriptions with 29 Cultural, 07 Natural and 01 Mixed sites. While India stands second largest in number after China

124. Ans. B.
IIM Ahmedabad launches Bharat Inclusive Initiative.
IIM-Ahmedabad's Centre for Innovation, Incubation and Entrepreneurship (CIIE) has launched a Bharat Inclusion Initiative to build knowledge and foster innovation and entrepreneurial activity across areas such as financial inclusion, livelihood, education and health.
Centre for Innovation Incubation and Entrepreneurship (CIIE) at IIM Ahmedabad helps entrepreneurs turn ideas into viable businesses.

125. Ans. D.
Ajay Thakur is associated with Kabaddi.

126. Ans. C.
CBLO stands for Collateralized Borrowing and Lending Obligation. CBLO is a money market instrument that represents an obligation between a borrower and a lender as to the terms and conditions of a loan. So, C stands for Collateralized.

127. Ans. E.
PMLA stands for Prevention of Money Laundering Act, 2002. So, L stands for **Laundering**. Prevention of Money Laundering Act, 2002 is an Act of the Parliament of India enacted by the NDA government to prevent money-laundering and to provide for confiscation of property derived from money-laundering.

128. Ans. D.
PMVVY (Pradhan Mantri Vaya Vandana Yojana) pension limit extends to March, 2020.
The Union Cabinet, chaired by Prime Minister Narendra Modi approved extending the investment limit from Rs 7.5 lakh to Rs 15 lakh under the Pradhan Mantri Vaya Vandana Yojana (PMVVY).
It also extended the last date for a subscription to the scheme till March 31, 2020. The time limit was earlier supposed to end on May 4, 2018.
The PMVVY is being implemented through **Life Insurance Corp (LIC)** to provide social security during old age and protect the elderly aged 60 years and above against a future fall in their interest income due to uncertain market conditions.
The scheme provides an assured pension based on a guaranteed rate of return of 8 percent per annum for 10 years.

129. Ans. C.
The Communications Compatibility and Security Agreement dialogue between foreign and defence ministers of India and US scheduled to be held in Washington.

130. Ans. D.
International Organization for Migration Headquarters is located in Geneva, Switzerland.
The International Organization for Migration (IOM) is an intergovernmental organization that provides services and advice concerning migration to governments and migrants, including internally displaced persons, refugees, and migrant workers.
In September 2016, it became a related organization of the United Nations. It was initially established in 1951 as the Intergovernmental Committee for European Migration (ICEM) to help resettle people displaced by World War II. As of June 2018, the International Organization for Migration had 172 member states & eight observer states.

131. Ans. C.
Malabo is the capital of Equatorial Guinea.

132. Ans. B.
Informal summit held in Sochi, Russia.

133. Ans. B.
CAGR stands for Compound Annual Growth Rate. So, C stands for Compound.
Compound annual growth rate (CAGR) is a business and investing specific term for the geometric progression ratio that provides a constant rate of return over the time period.

134. Ans. D.
5th International conference on human excellence on Yoga (2019) was held in Uttarakhand.
135. Ans. A.
Kishori amonkar died recently. He was associated with Classical Vocalist.
136. Ans. B.
The Union Cabinet Chaired by Prime Minister Shri Narendra Modi has approved the establishment of National Institute of Mental Health Rehabilitation (NIMHR) at Bhopal.
137. Ans. B.
• SAWEN stands for South Asia Wildlife Enforcement Network. So, E stands for Enforcement.
• The South Asia Wildlife Enforcement Network (SAWEN), an inter-governmental wildlife law enforcement agency, in its first ever meeting in India, adopted many resolutions to curb wildlife crime in the region.
138. Ans. A.
Prime minister Narendra Modi has inaugurated the 15th Pravasi Bharatiya Divas at Varanasi in Uttar Pradesh in January 2019. The theme this year is, 'Role of Indian Diaspora in building New India'.
139. Ans. C.
* Prime Minister Narendra Modi on 25th Dec 2018 inaugurated the 4.94 km long **Bogibeel Bridge** in Assam.
* It is India's longest rail-cum-road road bridge, on the river **Bramhaputra**.
* The bridge is constructed at an estimated cost of 5,800 crore rupees.
* It is situated 17 km downstream of Dibrugarh city in Assam.
140. Ans. B.
Reinsurance is insurance that is purchased by an insurance company from one or more insurance companies (the "reinsurer") directly or through a broker as a means of risk management.
141. Ans. C.
I. $(x - 2)^2 = 9$
$\Rightarrow (x - 2) = \pm 3$
$\Rightarrow x = 5, -1$
II. $(2y + 8)^2 = 16$
$(2y + 8) = \pm 4 \Rightarrow$
$y = -2, -6$
so, $x > y$
142. Ans. E.
I. $x^2 - 16x + 64 = 0$
$x^2 - 8x - 8x + 64 = 0$
$x(x - 8) - 8(x - 8) = 0$
$(x - 8)(x - 8) = 0$
$x = 8, 8$
II. $y^2 - 16y + 63 = 0$
$y^2 - 7y - 9y + 63 = 0$
$y(y - 7) - 9(y - 7) = 0$
$(y - 9)(y - 7) = 0$
$y = 9, 7$
so, No relation can be established between x and y.
143. Ans. D.
I. $25/x^2 - 15/x + 2 = 0$
$\Rightarrow 2x^2 - 15x + 25 = 0$
$\Rightarrow 2x^2 - 10x - 5x + 25 = 0$
$2x(x - 5) - 5(x - 5) = 0$
$(2x - 5)(x - 5) = 0$
$x = 5/2 , 5$
II. $40/y^2 + 1 = 13/y$
$\Rightarrow y\ 2 - 13y + 40 = 0$
$\Rightarrow y\ 2 - 8y - 5y + 40 = 0$
$\Rightarrow y(y - 8) - 5(y - 8) = 0$
$(y - 5)(y - 8) = 0$
$y = 5, 8$
so, $x \leq y$
144. Ans. D.
I. $48/x^2 - 14/x + 1 = 0$
$\Rightarrow x^2 - 14x + 48 = 0$
$\Rightarrow x^2 - 8x - 6x + 48 = 0$
$\Rightarrow x(x - 8) - 6(x - 8) = 0$
$\Rightarrow (x - 8)(x - 6) = 0$
$x = 8, 6$
II. $45/ y^2 + 1/y = 2$
$\Rightarrow 2y^2 - y - 45 = 0$
$\Rightarrow 2y^2 - 10y + 9y - 45 = 0$
$\Rightarrow 2y(y - 5) + 9(y - 5) = 0$
$\Rightarrow (2y + 9)(y - 5) = 0$
$y = 5, -9/2$
so, $x > y$
145. Ans. E.
I. $x^2 + 3x - 4 = 0$
$x^2 + 4x - x - 4 = 0$
$x(x + 4) - 1\ (x + 4) = 0$
$(x - 1)\ (x + 4) = 0$
$x = 1, -4$
II. $y^2 + 10y + 24 = 0$

$y^2 + 4y + 6y + 24 = 0$
$y(y + 4) + 6(y + 4) = 0$
$(y + 6)(y + 4) = 0$
$y = -4, -6$
so, $x \geq y$
146. Ans. B.
Let amount of milk removed = 2x litre
So, amount of water added = x litre
Now $\rightarrow (165 - 2x)/x = 5/3$
x = 45 lit
147. Ans. C.
At least one black can be chosen in two ways from each box:
Now, probability of choosing at least one black ball from first box
$= 1/2 \times [({}^2C_1 \times {}^2C_1)/{}^4C_2 + {}^2C_2/{}^4C_2] = 5/12$
Probability of choosing at least one black ball from 2nd box
$= 1/2 \times [({}^4C_1 \times {}^{12}C_1)/{}^{16}C_2 + {}^4C_2/{}^{16}C_2] = 9/40$
Final probability
$= 5/12 + 9/40 = (50 + 27)/120 = 77/120$
148. Ans. E.
Let speed of train B be x m/s And length of train B be y m
Then length of train A is $2y$ m
Speed of train A = 84 × 5/18 = 210/9 m/s = 70/3 m/s
A.T.Q, $(2y+y)/10 = 70/3 - x$ .....(i)
and $(2y+y)/22.5 = 70/3 - 2x$ .....(ii)
solving (i) and (ii), y = 50 m
149. Ans. C.
Let, inner radius of cylinder be 'x' cm.
$4/3\ \pi(6)^3 = \pi \times 32\ (5^2 - x^2)$
or, $(4 \times 6 \times 6 \times 6) / (3 \times 32) = 25 - x^2$
or, $x^2 = 25 - 9$
or, x = 4 cm
Hence, thickness = 5 – 4 = 1 cm.
150. Ans. B.
Profit ratio X & Y = (700 × 3) + (700 × 5/7 × 3) + (700× 5/7 + 200 × 3/5)× 6 : 600 × 12
X:Y= 7320 : 7200= 183:180
∴ X's share from profit = 183 × 726 /(183+180) = $Rs.$ 366.
151. Ans. A.

Months	Total number of Men worked	Number of men worked on odd number days	Number of men worked on even number days	No. of odd days	No. of even days	Total man-hours (odd days)	Total man-hours (even days)
March	1000	300	700	16	15	300x16x8	700x15x8
April	1500	300	1200	15	15	300x15x8	1200x15x8
August	750	450	300	16	15	450x16x8	300x15x8

Total man-hours on odd days of March = 300 x 16 x 8
And, the total man-hours on even days of April = 1200 x 15 x 8
So,
$$300 \times 16 \times 8 = \frac{x}{100} \times 1200 \times 15 \times 8$$
So,
$$x = \frac{300 \times 16 \times 8 \times 100}{1200 \times 15 \times 8} = 26.667 = 26\frac{2}{3}\%$$
So option (a) is the correct answer.
152. Ans. D.

Months	Total number of Men worked	Number of men worked on odd number days	Number of men worked on even number days	No. of odd days	No. of even days	Total man-hours (odd days)	Total man-hours (even days)
March	1000	300	700	16	15	300x16x8	700x15x8
April	1500	300	1200	15	15	300x15x8	1200x15x8
August	750	450	300	16	15	450x16x8	300x15x8

Total man-hours of April = 1500 x 15 x 8 = 180000
Total man-hours of August = 57600 + 36000 = 93600
So, required difference = 86400
So option (d) is the correct answer.
153. Ans. B.

Months	Total number of Men worked	Number of men worked on odd number days	Number of men worked on even number days	No. of odd days	No. of even days	Total man-hours (odd days)	Total man-hours (even days)
March	1000	300	700	16	15	300x16x8	700x15x8
April	1500	300	1200	15	15	300x15x8	1200x15x8
August	750	450	300	16	15	450x16x8	300x15x8

Total man-hours on even days of March = 700 x 15 x 8
And, the total man-hours on even days of August = 300 x 15 x 8
So, $\text{required ratio} = 7:3$
So option (b) is the correct answer.
154. Ans. C.

Months	Total number of Men worked	Number of men worked on odd number days	Number of men worked on even number days	No. of odd days	No. of even days	Total man-hours (odd days)	Total man-hours (even days)
March	1000	300	700	16	15	300x16x8	700x15x8
April	1500	300	1200	15	15	300x15x8	1200x15x8
August	750	450	300	16	15	450x16x8	300x15x8

Total man-hours on odd days of April = 300 x 15 x 8 = 36000
And, the total man-hours on odd days of August = 450 x 16 x 8 = 57600
So,
$$\text{required percentage} = \frac{57600 - 36000}{57600} \times 100 = 37.5\%$$
So option (c) is the correct answer.

155. Ans. A.

Months	Total man-hours (even days)
March	700x15x8
April	1200x15x8
August	300x15x8

So, required average
$= 15 \times 8 \times \frac{700+1200+300}{3} = 15 \times 8 \times \frac{2200}{3} = 88000$
So option (a) is the correct answer.
156. Ans. C.
From I, II & III
Let speed of Amit and Abhi be 4x and 5x km/hr respectively.
5x – 4x = 20
∴ x = 20 km/hr
So speed of Abhi= 20×5= 100 km/hr
Speed of Amit= 20×4= 80 km/hr
Let distance be D km
D/80 – D/100 = 1
∴ D = 80 × 100/20 = 400 km
All I, II and III required to answer.
157. Ans. B.
From I and II, Let length and breadth be 3x m and 2x m respectively
2πr = 440 [r → radius of circle]
r = 70 m
∴ breadth = 70 ×1/7 =10 m
& length = 15 m
∴ Area = 10 × 15 = 150 m²
From statement III, length : breadth= 150 : 100= 3:2
So Statement I and III are same.
Only II and either I or III required to answer.
158. Ans. A.
From statement I, Passed = 400
From statement III, Let number of appeared & Failed students be 5x and 3x respectively
2x = 400
⇒ x = 200
∴ failed = appeared – passed = 1000 – 400 = 600
So, Only I and III required to answer.
159. Ans. A.
From statement I, PR × 2/100 = 44000
PR = 2200000 .....(i)
From statement II, P + PRT/100 = 154000
.....(ii)
From statement III, Difference = $PR^2/100^2$
$PR^2/100^2 = 120$ .....(iii)
by solving (i)&(iii) R can be found.
Only I and III required to answer
160. Ans. E.
Let the smaller no. is x & bigger no. is y.
From statement I, y = x + 6
From statement II, (40/100) × x = (30/100) × y
From statement III, y/2 : x /3 = 2 : 1
⇒ 3y = 4x
statement II & From statement III give only ratio between the numbers, so we statement I also along one of II or III.
∴ from I and II or I and III we can find the Answer.
161. Ans. C.
Rahul runs 40 minutes.
For starting 15 minutes
Speed = 5 km/hr
Distance = $\frac{15}{60} \times 5 = \frac{5}{4}$ km
For next 25 minutes
Speed = 9 km/hr
Distance = $\frac{25}{60} \times 9 = \frac{15}{4}$ km
Total distance = $\frac{5}{4} + \frac{15}{4} = \frac{20}{4} = 5$ km
So, he runs total 5 km on treadmill.
P1 can complete that work in 6 hours
Efficiency of P1 and P2 = 5: 4.
So, P2 can complete the work in
$6 \times \frac{5}{4} = 7.5$ hours
So, the number of units of work done by them in one hours = $\frac{1}{6} + \frac{1}{7.5} = \frac{3}{10}$
So, they together can complete the work in 10/3 hours
P1 and P2 together complete 75% of that work at 12:30 p.m.
100% of the work is completed in 10/3hours
So, 75% of the work will be completed in $\frac{10}{300} \times 75 = 2.5$ hours

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.
Rahul and P2 together can complete same work in 3 hours.

$$\frac{1}{\text{Rahul}}+\frac{1}{7.5}=\frac{1}{3}$$

$$\frac{1}{\text{Rahul}}=\frac{1}{3}-\frac{1}{7.5}=\frac{1}{3}-\frac{2}{15}=\frac{5-2}{15}=\frac{3}{15}=\frac{1}{5}$$

So, Rahul can complete the whole work in 5 hours
Also, P1 can complete that work in 6 hours
So, ratio of the efficiency of P1 and Rahul=6:5
So, required percentage

$$=\frac{6-5}{5}\times 100=20\%$$

So, Rahul is 20 % more efficient than P1.
Distance between house and office = 45km.
Time taken to reach office = 1.5 hours at 9:30 a.m.

$$\text{Speed}=\frac{45}{1.5}=30\ \text{km/hr}$$

Speed of stream = 3km/hr
Therefore, required time

$$=\frac{45}{30-3}=\frac{45}{27}=\frac{5}{3}\ \text{hours}$$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =
(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
(3, 1) (3, 2) (3, 3) (3, 4) (3, 5) (3, 6)
(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)
So, total number of outcomes in a single throw of two dice = 36
When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72
In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.
So, the required possibility = (2, 6) (3, 5) (4, 4) (5, 3) (6, 2)
Winner is the one who gets highest number as the sum of the square of the number comes in dices.

(2, 6) = $2^2+6^2=40$

(3, 5) = $3^2+5^2=34$

(4, 4) = $4^2+4^2=32$

(5, 3) = $5^2+3^2=34$

(6, 2) = $6^2+2^2=40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)
So, he runs total 5 km on treadmill.
So option (c) is the correct answer.
162. Ans. E.
Rahul runs 40 minutes.
For starting 15 minutes
Speed = 5 km/hr

Distance = $\frac{15}{60}\times 5=\frac{5}{4}$ km

For next 25 minutes
Speed = 9 km/hr

Distance = $\frac{25}{60}\times 9=\frac{15}{4}$ km

Total distance = $\frac{5}{4}+\frac{15}{4}=\frac{20}{4}=5\ \text{km}$

So, he runs total 5 km on treadmill.
P1 can complete that work in 6 hours
Efficiency of P1 and P2 = 5: 4.
So, P2 can complete the work in $6\times\frac{5}{4}=7.5$ hours

So, the number of units of work done by them in one hours = $\frac{1}{6}+\frac{1}{7.5}=\frac{3}{10}$

So, they together can complete the work in 10/3 hours
P1 and P2 together complete 75% of that work at 12:30 p.m.
100% of the work is completed in 10/3 hours
So, 75% of the work will be completed in

$$\frac{10}{300}\times 75=2.5\ \text{hours}$$

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.
Rahul and P2 together can complete same work in 3 hours.

$$\frac{1}{\text{Rahul}}+\frac{1}{7.5}=\frac{1}{3}$$

$$\frac{1}{\text{Rahul}}=\frac{1}{3}-\frac{1}{7.5}=\frac{1}{3}-\frac{2}{15}=\frac{5-2}{15}=\frac{3}{15}=\frac{1}{5}$$

So, Rahul can complete the whole work in 5 hours

Also, P1 can complete that work in 6 hours

So, ratio of the efficiency of P1 & Rahul= 6: 5

So, required percentage

$$=\frac{6-5}{5}\times 100=20\%$$

So, Rahul is 20 % more efficient than P1.

Distance between house and office = 45km.

Time taken to reach office = 1.5 hours at 9:30 a.m.

Speed = $\frac{45}{1.5}=30\ \text{km/hr}$

Speed of stream = 3km/hr

Therefore, required time

$$=\frac{45}{30-3}=\frac{45}{27}=\frac{5}{3}\ \text{hours}$$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =

(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
(3, 1) (3, 2) (3, 3) (3, 4) (3, 5) (3, 6)
(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)

So, total number of outcomes in a single throw of two dice = 36

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.

So, the required possibility = (2, 6) (3, 5) (4, 4) (5, 3) (6, 2)

Winner is the one who gets highest number as the sum of the square of the number comes in dices.

(2, 6) = $2^2+6^2=40$

(3, 5) = $3^2+5^2=34$

(4, 4) = $4^2+4^2=32$

(5, 3) = $5^2+3^2=34$

(6, 2) = $6^2+2^2=40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.

So option (e) is the correct answer.

163. Ans. B.

Rahul runs 40 minutes.

For starting 15 minutes

Speed = 5 km/hr

Distance = $\frac{15}{60}\times 5=\frac{5}{4}$ km

For next 25 minutes

Speed = 9 km/hr

Distance = $\frac{25}{60}\times 9=\frac{15}{4}$ km

Total distance = $\frac{5}{4}+\frac{15}{4}=\frac{20}{4}=5\ \text{km}$

So, he runs total 5 km on treadmill.

P1 can complete that work in 6 hours

Efficiency of P1 and P2 = 5: 4.

So, P2 can complete the work in $6\times\frac{5}{4}=7.5$ hours

So, the number of units of work done by them in one hours = $\frac{1}{6}+\frac{1}{7.5}=\frac{3}{10}$

So, they together can complete the work in $\frac{10}{3}$ hours

P1 and P2 together complete 75% of that work at 12:30 p.m.

100% of the work is completed in $\frac{10}{3}$ hours

So, 75% of the work will be completed in $\frac{10}{300}\times 75=2.5$ hours

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.

Rahul and P2 together can complete same work in 3 hours.

$$\frac{1}{\text{Rahul}}+\frac{1}{7.5}=\frac{1}{3}$$

$$\frac{1}{\text{Rahul}}=\frac{1}{3}-\frac{1}{7.5}=\frac{1}{3}-\frac{2}{15}=\frac{5-2}{15}=\frac{3}{15}=\frac{1}{5}$$

So, Rahul can complete the whole work in 5 hours

Also, P1 can complete that work in 6 hours

So, ratio of the efficiency of P1 and Rahul = 6: 5

So, required percentage

$= \frac{6-5}{5} \times 100 = 20\%$

So, Rahul is 20 % more efficient than P1.

Distance between house and office = 45km.

Time taken to reach office = 1.5 hours at 9:30 a.m.

Speed = $\frac{45}{1.5} = 30 \text{ km/hr}$

Speed of stream = 3km/hr

Therefore, required time

$= \frac{45}{30-3} = \frac{45}{27} = \frac{5}{3} \text{ hours}$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =

(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
(3, 1) (3, 2) (3, 3) (3, 4) (3, 5) (3, 6)
(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)

So, total number of outcomes in a single throw of two dice = 36

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.

So, the required possibility = (2, 6) (3, 5) (4, 4) (5, 3) (6, 2)

Winner is the one who gets highest number as the sum of the square of the number comes in dices.

(2, 6) = $2^2 + 6^2 = 40$

(3, 5) = $3^2 + 5^2 = 34$

(4, 4) = $4^2 + 4^2 = 32$

(5, 3) = $5^2 + 3^2 = 34$

(6, 2) = $6^2 + 2^2 = 40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

So, Rahul is 20 % more efficient than P1.

So option (b) is the correct answer.

164. Ans. D.

Rahul runs 40 minutes.

For starting 15 minutes

Speed = 5 km/hr

Distance = $\frac{15}{60} \times 5 = \frac{5}{4}$ km

For next 25 minutes

Speed = 9 km/hr

Distance = $\frac{25}{60} \times 9 = \frac{15}{4}$ km

Total distance = $\frac{5}{4}+\frac{15}{4}=\frac{20}{4}=5 \text{ km}$

So, he runs total 5 km on treadmill.

P1 can complete that work in 6 hours

Efficiency of P1 and P2 = 5: 4.

So, P2 can complete the work

in $6 \times \frac{5}{4} = 7.5$ hours

So, the number of units of work done by them in one hours = $\frac{1}{6}+\frac{1}{7.5}=\frac{3}{10}$

So, they together can complete the work in $\frac{10}{3}$ hours

P1 and P2 together complete 75% of that work at 12:30 p.m.

100% of the work is completed in $\frac{10}{3}$ hours

So, 75% of the work will be completed

in $\frac{10}{300} \times 75 = 2.5$ hours

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.

Rahul and P2 together can complete same work in 3 hours.

$$\frac{1}{\text{Rahul}}+\frac{1}{7.5}=\frac{1}{3}$$

$$\frac{1}{\text{Rahul}}=\frac{1}{3}-\frac{1}{7.5}=\frac{1}{3}-\frac{2}{15}=\frac{5-2}{15}=\frac{3}{15}=\frac{1}{5}$$

So, Rahul can complete the whole work in 5 hours

Also, P1 can complete that work in 6 hours

So, ratio of the efficiency of P1 and Rahul = 6: 5

So, required percentage

$= \frac{6-5}{5} \times 100 = 20\%$

So, Rahul is 20 % more efficient than P1.

Distance between house and office = 45km.

Time taken to reach office = 1.5 hours at 9:30 a.m.

Speed = $\frac{45}{1.5} = 30 \text{ km/hr}$

Speed of stream = 3km/hr

Therefore, required time

$= \frac{45}{30-3} = \frac{45}{27} = \frac{5}{3} \text{ hours}$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =

(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
(3, 1) (3, 2) (3, 3) (3, 4) (3, 5) (3, 6)
(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)

So, total number of outcomes in a single throw of two dice = 36

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.

So, the required possibility = (2, 6) (3, 5) (4, 4) (5, 3) (6, 2)

Winner is the one who gets highest number as the sum of the square of the number comes in dices.

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(5, 3) = $5^2 + 3^2 = 34$

(6, 2) = $6^2 + 2^2 = 40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

So, he takes $1\frac{2}{3}$ hours to reach home.

So option (d) is the correct answer.

165. Ans. A.

Rahul runs 40 minutes.

For starting 15 minutes

Speed = 5 km/hr

Distance = $\frac{15}{60} \times 5 = \frac{5}{4}$ km

For next 25 minutes

Speed = 9 km/hr

Distance = $\frac{25}{60} \times 9 = \frac{15}{4}$ km

Total distance = $\frac{5}{4}+\frac{15}{4}=\frac{20}{4}=5 \text{ km}$

So, he runs total 5 km on treadmill.

P1 can complete that work in 6 hours

Efficiency of P1 and P2 = 5: 4.

So, P2 can complete the work in $6 \times \frac{5}{4} = 7.5$ hours

So, the number of units of work done by them in one hours = $\frac{1}{6}+\frac{1}{7.5}=\frac{3}{10}$

So, they together can complete the work in $\frac{10}{3}$ hours

P1 and P2 together complete 75% of that work at 12:30 p.m.

100% of the work is completed in $\frac{10}{3}$ hours

So, 75% of the work will be completed in $\frac{10}{300} \times 75 = 2.5$ hours

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.

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So, Rahul can complete the whole work in 5 hours

Also, P1 can complete that work in 6 hours

So, ratio of the efficiency of P1 and Rahul = 6: 5

So, required percentage

$= \frac{6-5}{5} \times 100 = 20\%$

So, Rahul is 20 % more efficient than P1.

Distance between house and office = 45km.

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Speed of stream = 3km/hr

Therefore, required time

$= \frac{45}{30-3} = \frac{45}{27} = \frac{5}{3} \text{ hours}$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =

(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
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(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)

So, total number of outcomes in a single throw of two dice = 36

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.

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(5, 3) = $5^2 + 3^2 = 34$

(6, 2) = $6^2 + 2^2 = 40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

So option (a) is the correct answer.

166. Ans. E.

Rahul runs 40 minutes.

For starting 15 minutes

Speed = 5 km/hr

Distance = $\frac{15}{60} \times 5 = \frac{5}{4}$ km

For next 25 minutes

Speed = 9 km/hr

Distance = $\frac{25}{60} \times 9 = \frac{15}{4}$ km

Total distance = $\frac{5}{4}+\frac{15}{4}=\frac{20}{4}=5 \text{ km}$

So, he runs total 5 km on treadmill.

P1 can complete that work in 6 hours

Efficiency of P1 and P2 = 5: 4.

So, P2 can complete the work in

$6 \times \frac{5}{4} = 7.5$ hours

So, the number of units of work done by them in one hours = $\frac{1}{6}+\frac{1}{7.5}=\frac{3}{10}$

So, they together can complete the work in $\frac{10}{3}$ hours

P1 and P2 together complete 75% of that work at 12:30 p.m.

100% of the work is completed in $\frac{10}{3}$ hours

So, 75% of the work will be completed in $\frac{10}{300} \times 75 = 2.5$ hours

So, in office Rahul gives some work to his subordinates P1 and P2 at 12.30 – 2.5 hours = 10 am.

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$$\frac{1}{\text{Rahul}}=\frac{1}{3}-\frac{1}{7.5}=\frac{1}{3}-\frac{2}{15}=\frac{5-2}{15}=\frac{3}{15}=\frac{1}{5}$$

So, Rahul can complete the whole work in 5 hours

Also, P1 can complete that work in 6 hours

So, ratio of the efficiency of P1 & Rahul= 6: 5

So, required percentage

$$=\frac{6-5}{5}\times 100=20\%$$

So, Rahul is 20 % more efficient than P1.

Distance between house and office = 45km.

Time taken to reach office = 1.5 hours at 9:30 a.m.

Speed = $\frac{45}{1.5}=30\ \text{km/hr}$

Speed of stream = 3km/hr

Therefore, required time

$$=\frac{45}{30-3}=\frac{45}{27}=\frac{5}{3}\ \text{hours}$$

So, he takes $1\frac{2}{3}$ hours to reach home.

Total outcomes in a single throw of 2 dice =

(1, 1) (1, 2) (1, 3) (1, 4) (1, 5) (1, 6)
(2, 1) (2, 2) (2, 3) (2, 4) (2, 5) (2, 6)
(3, 1) (3, 2) (3, 3) (3, 4) (3, 5) (3, 6)
(4, 1) (4, 2) (4, 3) (4, 4) (4, 5) (4, 6)
(5, 1) (5, 2) (5, 3) (5, 4) (5, 5) (5, 6)
(6, 1) (6, 2) (6, 3) (6, 4) (6, 5) (6, 6)

So, total number of outcomes in a single throw of two dice = 36

When first Rahul and then Aman throw their respective dices, total number of outcomes = 36 + 36 = 72

In a game, all three throw their dices and each one of them get 8 as the sum of numbers in their dices and any one of two not get same outcomes.

So, the required possibility = (2, 6) (3, 5) (4, 4) (5, 3) (6, 2)

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(4, 4) = $4^2+4^2=32$

(5, 3) = $5^2+3^2=34$

(6, 2) = $6^2+2^2=40$

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

So, Raman will get (2, 6) and the other two will get (3, 5) and (4, 4)

So option (e) is the correct answer.

167. Ans. C.

$3^{x+5}.9^{2x-4}=9^{5x-14}$

$9^{(x+5)/2}.9^{2x-4}=9^{5x-14}$

Comparing powers,

(x+5)/2 + 2x-4 = 5x-14

x = 5

And, $2y^2-15y-28=3y^2-23y-13$

$\Rightarrow y^2-8y+15=0$

$\Rightarrow y^2-3y-5y+15=0$

$\Rightarrow y(y-3)-5(y-3)=0$

$\Rightarrow (y-5)(y-3)=0 \Rightarrow y=5, 3$

Quantity I: - Value of x = 5

Quantity II: - Value of y = 5 , 3

So option C Quantity I ≥ Quantity II

168. Ans. B.

Quantity I: Let C.P. → Rs 100

So, S.P. → (100+ 29.6)=Rs 129.6

ATQ, M.P. → 129.6/72 ×100 ⇒ Rs 180

'x' ⇒ [180 × (100 – 30)/100] -100 ⇒ 26%

Quantity I: 26%

Quantity II: 38

So Quantity I < Quantity II

169. Ans. A.

Let efficiency of 1 man, 1 woman and 1 child is m, w and c respectively

ATQ, 10 × 12m = 18w × 20 = 27c × 20

2m = 6w = 9c

So, 9w=3m & 9c=2m

Let total work = 120 m

Quantity I: (9w + 9c) × 16 = (3m + 2m) × 16 = 80 m

Remaining work = 120 m – 80 m = 40 m

Number of men required to complete remaining work in one day = 40

Quantity I= 40

Quantity II = 36

Quantity I > Quantity II

170. Ans. A.
Quantity I:-
Let total capacity of tank be 60 unit.
A capacity= 60/20= 3 unit/min
B capacity= 60/15= 4 unit/min
C capacity= 60/12= 5 unit/min
Units filled in first three minutes = 3 + 4 + 5 = 12 unit
12 unit filled time= 3 min
60 unit filled time= 3×60/12= 15 min
Hence, total time taken= 15 minutes
Quantity II:- Let waste pipe can empty the cistern in x min
$1/10 + 1/15 - 1/x = 1/18$
$\Rightarrow 1/x = (9+6-5)/90 = 10/90$
$\Rightarrow x = 9$ minutes
Quantity I= 15
Quantity II=9
Quantity I > Quantity II
171. Ans. A.
Total units consumed by House A: 250
Units consumed by Fans in House A: 50
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120
Total units consumed by House B: 270
Units consumed by Fans in House B: 80
Units consumed by Lights in House B: 80
Units consumed by Other Appliances in House B: 110
Total units consumed by House C: 170
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
Units consumed by Other Appliances in House C: 90
Units consumed by Lights in House B: 80
Units consumed by Lights in House C: 40
Therefore, required percentage
$= \frac{80-40}{40} \times 100 = 100\%$
So option (a) is the correct answer.
172. Ans. C.
Total units consumed by House A: 250
Units consumed by Fans in House A: 50
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120
Total units consumed by House B: 270
Units consumed by Fans in House B: 80
Units consumed by Lights in House B: 80
Units consumed by Other Appliances in House B: 110
Total units consumed by House C: 170
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
Units consumed by Other Appliances in House C: 90
Units consumed by Other Appliances in House B: 110
Units consumed by Other Appliances in House C: 90
Units consumed by Other Appliances in House D: x
Given,
$\frac{110+90+x}{3} = 110$
$200 + x = 330$
$x = 330 - 200 = 130$
So option (c) is the correct answer.
173. Ans. E.
Total units consumed by House A: 250
Units consumed by Fans in House A: 50
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120
Total units consumed by House B: 270
Units consumed by Fans in House B: 80
Units consumed by Lights in House B: 80
Units consumed by Other Appliances in House B: 110
Total units consumed by House C: 170
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
Units consumed by Other Appliances in House C: 90
Total units consumed by House A: 250
Total units consumed by House C: 170
So, required sum = 250 + 170 = 420 units
So option (e) is the correct answer.
174. Ans. B.
Total units consumed by House A: 250
Units consumed by Fans in House A: 50
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120

Total units consumed by House B: 270
Units consumed by Fans in House B: 80
Units consumed by Lights in House B: 80
Units consumed by Other Appliances in House B: 110
Total units consumed by House C: 170
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
Units consumed by Other Appliances in House C: 90
Units consumed by Other Appliances in House B: 110
Units consumed by Other Appliances in House C: 90
So, required difference = 110-90 = 20 units
So option (b) is the correct answer.
175. Ans. D.
Total units consumed by House A: 250
Units consumed by Fans in House A: 50
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120
Total units consumed by House B: 270
Units consumed by Fans in House B: 80
Units consumed by Lights in House B: 80
Units consumed by Other Appliances in House B: 110
Total units consumed by House C: 170
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
Units consumed by Other Appliances in House C: 90
Units consumed by Lights in House A: 80
Units consumed by Other Appliances in House A: 120
So, total units consumed by Lights and Other appliances together in House 'A' = 200
Units consumed by Fans in House C: 40
Units consumed by Lights in House C: 40
So, total units consumed by Fans and Lights together in House 'C' = 80
So, required percentage
$= \frac{200-80}{200} \times 100 = \frac{120}{200} \times 100 = 60\%$
So option (d) is the correct answer.
176. Ans. B.
Total investment = 80000
Investment of A
$= 80000 \times \frac{25}{100} = 20000$
Investment of B
$= 80000 \times \frac{35}{100} = 28000$
Investment of C = $80000 \times \frac{15}{100} = 12000$
Investment of D = $80000 \times \frac{10}{100} = 8000$
Investment of E = $80000 \times \frac{15}{100} = 12000$
Investment of B
$= 80000 \times \frac{35}{100} = 28000$
Investment of E = $80000 \times \frac{15}{100} = 12000$
Total investment of B = 28000 × 9
Total investment of E = 12000 × 12
Ratio of profit of B and E
= 28 × 9 : 12 × 12 = 7 : 4
Profit of B = $\frac{7}{11} \times 15400$
Profit of E = $\frac{4}{11} \times 15400$
So, required difference
$= \frac{3}{11} \times 15400 = 4200$
So option (b) is the correct answer.
177. Ans. D.
Total investment = 80000
Investment of A = $80000 \times \frac{25}{100} = 20000$
Investment of B = $80000 \times \frac{35}{100} = 28000$
Investment of C = $80000 \times \frac{15}{100} = 12000$
Investment of D = $80000 \times \frac{10}{100} = 8000$
Investment of E = $80000 \times \frac{15}{100} = 12000$
Investment of A = $80000 \times \frac{25}{100} = 20000$
Investment of C = $80000 \times \frac{15}{100} = 12000$
Investment of D = $80000 \times \frac{10}{100} = 8000$
Total investment of A = 20000 × 6

Total investment of D = 8000 × 8
Total investment of C = 12000 × x
Ratio of profit of A, D and C = 120: 64: 12x = 30: 16: 3x
Total profit = 13050
Share of A = $\frac{30}{46+3x} \times 13050 = 6750$
So, $391500 = 310500 + 20250x$
So, $81000 = 20250x$
So, x = 4
So option (d) is the correct answer.
178. Ans. A.
Total investment = 80000
Investment of A = $80000 \times \frac{25}{100} = 20000$
Investment of B = $80000 \times \frac{35}{100} = 28000$
Investment of C = $80000 \times \frac{15}{100} = 12000$
Investment of D = $80000 \times \frac{10}{100} = 8000$
Investment of E = $80000 \times \frac{15}{100} = 12000$
Investment of A = $80000 \times \frac{25}{100} = 20000$
Investment of C = $80000 \times \frac{15}{100} = 12000$
Investment of F = 12000 + 4000 = 16000
Total investment of A = 20000×12
Total investment of C = 12000×8
Total investment of F = 16000×6
Ratio of profit = 20 x 12: 12 x 8: 16 x 6 = 20: 8: 8 = 5: 2: 2
Profit of A and C = $\frac{7}{9} \times x = 8750$
So, total profits = $8750 \times \frac{9}{7} = 11250$
So option (a) is the correct answer.
179. Ans. A.
C.P. of 10 note books ⇒ 140 × 10 = 1400 Rs.
Profit on selling one pen ⇒ 50×200/100 = Rs 100
Number of pen required ⇒ 1400/100 = 14
180. Ans. D.
Let speed of slower train = 2x
⇒ speed of faster train = 5x
ATQ, (150 + 200)/(2x + 5x) = 15
x = 10/3
Time required=350/[50/3–20/3]= 35 seconds
181. Ans. E.
Let length and breadth of rectangle be L cm and B cm respectively So, ATQ
$Area_1$= (L-6)×B
But this is square, so L-6=B
$Area_1$= (L-6) × (L-6)
Case 2, $Area_2$= L × (B+6),
L=B+6
So, $Area_2$= L × L,
Given, $Area_2$-$Area_1$= 252
$(L)^2-(L-6)^2=252$
Solving this, L= 24
B= 18
Perimeter= 2(L+B)= 2(24+18)= 84 cm
182. Ans. A.
Diagonal of Square = Side √2= 2.5√2 × √2 = 5 cm
Breadth = 5 cm
Length of rectangle = 5 × 3 = 15 cm
Area of rectangle = 15 × 5 = 75 cm^2
183. Ans. B.
let speed of boat= X, speed of stream= Y
Upstream speed= X-Y
Downstream speed= X+Y
Sum of upstream & downstream= (X-Y) + (X+Y)= 2X
So, 2X= 40
X= 20 km/hr
Speed of boat : speed of stream= 600+100 : 100= 7:1
So speed of Stream= 20/7 km/hr
ATQ, D/(X-Y) + D/(X+Y) = 5
D/(120/7) + D/(160/7)= 5
D= 480×5/49= 48.97 km= 50 Km(approx)
184. Ans. C.
Ratio of profit,
A : B = (800 × 8+ 900+ 1000+ 1100+ 1200) : (1600 × 8+ 1700+ 1800+ 1900+ 2000)
A : B = 53 : 101
Profit of A ⇒ 7700 ×53/154 = 2650 Rs.

185. Ans. C.
Let initial investment of A = x
Ratio of profit A : B : C = 12 × x : 6×4500 : 4×4500
A :B:C = x : 2250: 1500
Now ATQ
x/(x+2250+1500) = 4900/10000
solving this we get,
x ≈ Rs 3600

186. Ans. C.

$$CP = \frac{SP \times 100}{100 + \text{Profit Percentage}}$$

Selling price of A = 105
Profit Percentage = 40%
CP = $\frac{105\times100}{140} = 75$
Selling price of B = 60
Profit Percentage = 20%
CP = $\frac{60\times100}{120} = 50$
Selling price of C = 150
Profit Percentage = 25%
CP = $\frac{150\times100}{125} = 120$
Selling price of D = 120
Profit Percentage = 60% CP = $\frac{120\times100}{160} = 75$
Selling price of E = 90
Profit Percentage = 80%
CP = $\frac{90\times100}{180} = 50$
Selling price of D = 120
Profit Percentage = 60%
CP = $\frac{120\times100}{160} = 75$
For Ravi,
Profit = 120 – 75 = 45
CP of Shyam = 120
Profit = 25%
SP = $120 \times \frac{125}{100} = 150$
For Shyam,
Profit = 150 – 120 = 30
So, required difference = 45 – 30 = 15
So option (c) is the correct answer.

187. Ans. B.

$$\mathbf{CP = \frac{SP \times 100}{100 + Profit\ Percentage}}$$

Selling price of A = 105
Profit Percentage = 40%
CP = $\frac{105\times100}{140} = 75$
Selling price of B = 60
Profit Percentage = 20%
CP = $\frac{60\times100}{120} = 50$
Selling price of C = 150
Profit Percentage = 25%
CP = $\frac{150\times100}{125} = 120$
Selling price of D = 120
Profit Percentage = 60%
CP = $\frac{120\times100}{160} = 75$
Selling price of E = 90
Profit Percentage = 80%
CP = $\frac{90\times100}{180} = 50$
CP of article A = $\frac{105\times100}{140} = 75$
CP of article C = $\frac{150\times100}{125} = 120$
Required percentage
= $\frac{120-75}{120} \times 100 = 37.5\%$
So option (b) is the correct answer.

188. Ans. D.

$$\mathbf{CP = \frac{SP \times 100}{100 + Profit\ Percentage}}$$

Selling price of A = 105
Profit Percentage = 40%
CP = $\frac{105\times100}{140} = 75$
Selling price of B = 60
Profit Percentage = 20%
CP = $\frac{60\times100}{120} = 50$
Selling price of C = 150
Profit Percentage = 25%
CP = $\frac{150\times100}{125} = 120$
Selling price of D = 120

Profit Percentage = 60%

CP = $\frac{120\times100}{160} = 75$

Selling price of E = 90

Profit Percentage = 80%

CP = $\frac{90\times100}{180} = 50$

Selling price of B = 60

Profit Percentage = 20%

CP = $\frac{60\times100}{120} = 50$

Profit = 60 – 50 = 10

Marked price = $50 \times \frac{150}{100} = 75$

Let, the percentage discount given = x

$75 \times \frac{x}{100} = 75 - 60 = 15$

$x = 15 \times \frac{100}{75} = 20\%$

So option (d) is the correct answer.

189. Ans. E.

$$CP = \frac{SP \times 100}{100 + \text{Profit Percentage}}$$

Selling price of A = 105

Profit Percentage = 40% CP = $\frac{105\times100}{140} = 75$

Selling price of B = 60

Profit Percentage = 20%

CP = $\frac{60\times100}{120} = 50$

Selling price of C = 150

Profit Percentage = 25%

CP = $\frac{150\times100}{125} = 120$

Selling price of D = 120

Profit Percentage = 60%

CP = $\frac{120\times100}{160} = 75$

Selling price of E = 90

Profit Percentage = 80%

CP = $\frac{90\times100}{180} = 50$

Selling price of C = 150

Profit Percentage = 25%

CP = $\frac{150\times100}{125} = 120$

Profit = 150 – 120 = 30

Selling price of E = 90

Profit Percentage = 80%

CP = $\frac{90\times100}{180} = 50$

Profit = 90 – 50 = 40

Required difference = 40 – 30 = 10

So option (e) is the correct answer.

190. Ans. B.

$$CP = \frac{SP \times 100}{100 + \text{Profit Percentage}}$$

Selling price of A = 105

Profit Percentage = 40%

CP = $\frac{105\times100}{140} = 75$

Selling price of B = 60

Profit Percentage = 20%

CP = $\frac{60\times100}{120} = 50$

Selling price of C = 150

Profit Percentage = 25%

CP = $\frac{150\times100}{125} = 120$

Selling price of D = 120

Profit Percentage = 60%

CP = $\frac{120\times100}{160} = 75$

Selling price of E = 90

Profit Percentage = 80%

CP = $\frac{90\times100}{180} = 50$

Selling price of A = 105

Profit Percentage = 40%

CP = $\frac{105\times100}{140} = 75$

Let marked price = x

So, $x \times \frac{100-16}{100} = 105$

So, x = $105 \times \frac{100}{84} = 125$

Required percentage

= $\frac{125-75}{75} \times 100 = 66\frac{2}{3}\%$

So option (b) is the correct answer