**1.4 COMPLEX ARRANGEMENT**

**Solution Exercise – Easy**

**Solutions for 1 – 3:**

By using the given conditions we get the following arrangement:

|  |  |  |
| --- | --- | --- |
| **Compound** | **Alkaline Level** | **Major Component** |
| C1 | A4 | Oxygen |
| C2 | A1 | Carbon |
| C3 | A3 | Hydrogen |
| C4 | A2 | Cadmium |
| C5 | A5 | Sodium |

1. (a) ; 2. (b) ; 3. (b)

**Solutions for 4 – 5:**

4. (b)

Option (a) is eliminated as Monika is neither getting G1 nor G5. Option (c) is eliminated as both Niveditha and Jaya are getting guides. Option (d) is eliminated as Monika is not provided with G1 or G5.

5. (d)

If Jaya gets G4 then Supriya must get G2 and hence option (d) is the incorrect combination.

**Solutions for 6 – 8:**

By using the given conditions we get the following arrangement:

|  |  |  |  |
| --- | --- | --- | --- |
| **Game** | **Score** | **Person** | **Mobile** |
| Temple Run | 120000 | Nakul | Nexus 7 |
| Temple Run 2 | 240000 | Rahul | Note 4 |
| Subway Surfer | 360000 | Siddharth | Alpha 5 |
| Gold Rush | 480000 | Vamsi | Zenfone 2 |

6. (a) ; 7. (a) ; 8. (c)

**Solutions for 9 – 10:**

9. (b)

As Ankit and Rekha have to use the same ingredients its only option (b) in which it is possible. Also the condition of only 1 person using peas is being met in the option.

10. (b)

As only 1 person has to use peas it has to be Kamna, because if either of Ankit or Rekha uses peas the other will have to use it.

**Solutions for 11 – 15:**

By using the given conditions we get the following arrangement:

|  |  |  |
| --- | --- | --- |
| **Person** | **Living** | **Renting Out** |
| Raj | Tulip | R.G. |
| Mannan | Tulip | R.P. |
| Karan | Tulip | Ajnara |
| Pratap | R.G. | Tulip |
| Seth | Amara | Ajnara |
| Puneet | Ajnara | Amara |

11. (a) ; 12. (a) ; 13. (c) ; 14. (d) ; 15. (c)

**Solutions for 16 – 20:**

|  |  |  |
| --- | --- | --- |
| **Player** | **Skill** | **Runs Score** |
| Root | Batsman | 18 |
| Taylor | Wicket- keeper | 51 |
| Morgan | Opener | 21 |
| Finn | Bowler | 42 |
| Butler | Floater | 10 |
| Ali | All-Rounder | 14 |

16. (a) ; 17. (b) ; 18. (d) ; 19. (b) ; 20. (b)

**Solutions for 21 – 23:**

|  |  |  |
| --- | --- | --- |
| **Movie** | **Director** | **Actor** |
| Kaaka kaaka | Gautham | Ajith |
| Nandha | Murgadoss | Jiva |
| Mudhalvan | Shankar | Arya |
| K O | Bala | Vijay |
| Ghajini | K V Anand | Surya |

21. (d) ; 22. (b) ; 23. (b)

**Solutions for 24 – 26:**

From the given data, we get the following table:

|  |  |  |
| --- | --- | --- |
| Batsmen | Bowler | Dismissal |
| Raza | Naveed | Caught Behind |
| Chakabva | Aziz | Caught Behind |
| Masakadza | Javed/Tauqir | Caught & Bowled |
| Taylor | Chandran |  |
| Williams | Javed/Tauqir | Hit Wicket |

24. (a) ; 25. (c) ; 26. (d)

**Solutions for 27 – 29:**

From the given data, we get the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **College** | **Course** | **Airlines** | **Time of Flight** |
| Oxford | Engineering | Air India | 1 am |
| Stanford | Management | Lufthansa | 2:30 am |
| Kellog | Economics | Emirates | 5 am |
| MIT | Statistics | KLB | 3:45 am |

27. (a) ; 28. (b) ; 29. (d)

**Solutions for 30 – 34:**

From the given data, we get the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Wine** | **Country** | **Year** | **Trait** |
| Sula | Australia | 1851 | not red; bubbly taste |
| Riveria | Belgium | 1873 | White |
| Bollinger | France | 1779 | Not White |

30. (b) ; 31. (a) ; 32. (a) ; 33. (c) ; 34. (a)

**Solutions for 35 – 40:**

From the given data, we get the following table:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Countries** | **Directions** | **Continents** |
| Rajan | UAE/Pakistan | West | Africa |
| Kamal | UAE/Pakistan | East | Asia |
| Asif | Scotland | South | Europe |
| Devy | Afghanistan | North | Ocieana |

35. (b) ; 36. (a) ; 37. (d) ; 38. (a) ; 39. (d) ; 40. (b)

**Solutions for 1 – 3:**

If we were to number the houses 1-2-3-4 from left to right, the information given in the question can be depicted as:

|  |  |  |  |
| --- | --- | --- | --- |
| Nationality | House Colour | Favourite Drink | House No. |
| English | Red | Milk | 3 |
| Italian | Blue | Tea | 2 |
| Norwegian | Yellow | Cocoa | 1 |
| Spanish | White | Fruit Juice | 4 |

Knowing this we can answer all the questions.

1. (a)

The color of the Norwegian’s house is yellow.

2. (b)

Milk is drunk by the Englishman.

3. (b)

The Norwegian drinks Cocoa

**Solutions for 4 – 7:**

Let us first see the combination of states with colour of sarees and the position at which they finished the competition:

|  |  |  |
| --- | --- | --- |
| **State** | **Colour** | **Position** |
| Andhra Pradesh | Yellow | Winner |
| Uttar Pradesh | Green | Runner – Up |
| West Bengal | Red | 3rd or 4th |
| Maharashtra | White | 3rd or 4th |

Also we can find their sitting positions as follows:

Andhra Pradesh West Bengal Uttar Pradesh Maharashtra

**OR**

Maharashtra Uttar Pradesh West Bengal Andhra Pradesh

4. (b) ; 5. (c) ; 6. (a) ; 7. (c)

**Solutions for 8 – 9:**

A, a lawyer is married to D, a housewife. C, an accountant is married to F, a lecturer. E is not a housewife. Hence, E is an architect and B is a housewife. Also, any lady is neither an architect nor an accountant. By using all this we get the following table:

|  |  |  |
| --- | --- | --- |
| **Person** | **Profession** | **Gender** |
| B | Housewife | Female |
| C | Accountant | Male |
| D | Housewife | Female |
| E | Architect | Male |
| F | Lecturer | Female |

8. (b) ; 9. (b) ;

10. (c)

We can find out the time for lunch of respective families from the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Family** | **Time** | **Meal** | **Chinaware** |
| Sharma | 12:00 | Sambar | White |
| Banerjee | 2:00 | Makkai ki roti | Red |
| Pattabhiraman | 1:00 | Fried Brinjal | Blue |

11. (b)

From the information, we get this partially filled table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **W1** | **W2** | **W3** | **W4** | **W5** |
| Rupa  Sonali  Shubhra  Shahira  Shalini | Radha | Renuka  Rupali  Komal | Ruchika  Somya  Sweta  Jyotika | Ritu  Tara |
| Amita | Elina | Chandrika | Babita | Deepika |

**Solutions for 12 – 15:**

By using the given condition we get the following arrangements:

|  |  |  |  |
| --- | --- | --- | --- |
| **Person** | **Time** | **Subject** | **Day** |
| Akhil | 8:40 am | Vocab | Thursday |
| Nitin | 8:50 am | Number Systems | Tuesday |
| Aakanksha | 8:30 am | Permutation &  Combination | Wednesday |
| Prachi | 8:35 am | Cubes & Dice | Monday |

12. (b) ; 13. (b) ; 14. (a) ; 15. (c)

**Solutions for 16 – 18:**

|  |  |  |
| --- | --- | --- |
| **Person** | **Section** | **Institute** |
| Karim | DI | CT |
| Aslam | VA | PL |
| Saba | DS | Hime |
| Atif | LR | KMS |
| Ali | QA | NG |

16. (d) ; 17. (c) ; 18. (b)

**Solutions for 19 – 23:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Firm** | **Year** | **Country** | **Aircraft** |
| Boeing | 1972 | Denmark | DHC4 |
| Airbus | 1962 | France | 787 |
| Bombardier | 1981 | USA | An38 |
| Antonov | 1984 | Germany | F28-4000 |
| Fokker | 1969 | Finland | DA413 |
| Dassault | 1975 | UK | A340 |

19. (c) ; 20. (c) ; 21. (d) ; 22. (a) ; 23. (d)

**Solutions for 24 – 28:**

Rajni worked with Visu but not against Tabu or Shriya. Kamal and Ajit can work with anyone of Sneha, Tabu, Shriya or Meena. Anjaan and Isai feature Shriya, Trisha, Visu has directed Rajni, who can’t work with Shriya, hence Rajni worked against Trisha. Also, Nassar must be the 6th remaining director and hence worked with Parkash. If Vijay did not work with Shankar, he must have worked with Sivam.

24. (c) ; 25. (a) ; 26. (d) ; 27. (b) ; 28. (a)

**Solutions for 29 – 33:**

Statement 1: F5 goes to H1, and he can go by rail or car.

Statement 2: F1 can travel in M1, M3, M4 or M6.

Statement 3: F6 and F2 families did not go to H5 or H3.

Statement 4: H4 visited in M4.

Statement 5: Families going to H2 and H5 go by bus and car respectively.

Statement 6: F6 cannot travel in M4. Now F2 and F6 can travel in M4, he must have gone to H2. Also H2 was visited by bus. F4 must have going to H5. F1 prefer bus journey.

Two families travel by bus, out of which one is the F6 family. There for F1 family goes to H3 by bus.

Therefore F2 family went to H4 in M4. If F4 travelled by car, F5 must have travelled by rail we get a table as follows:

29. (d) ; 30. (c) ; 31. (b) ; 32. (a) ; 33. (b)

**Solutions for 34 – 39:**

Hence, the final arrangement is:

|  |  |  |  |
| --- | --- | --- | --- |
| S2 | S4 | S3 | S1 |
| Wicket-keeper | Bowler | Batsmen | All-rounder |
| P4 | P2 | P1 | P3 |

Hence, all the questions can be answered.

34. (c) ; 35. (d) ; 36. (a) ; 37. (d) ; 38. (a) ; 39. (c)

**Solutions for 40 – 43:**

From the given data, we get the following table:

|  |  |
| --- | --- |
| Basket | Fruits |
| Winter | Guava, Orange |
| Summer | Banana, Apple |
| Spring | Grapes, Orange |
| Rainy | Apple, Guava |
| Autumn | Banana, Grapes |

40. (d) ; 41. (c) ; 42. (c) ; 43. (a)

**Solutions for 44 – 46:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Thermodynamics** | **Pressure** | **Electricity** | **Gravity** | **Medicine** |
| Newton | × | ✓ | ✓ | × | ✓ |
| Einstein | ✓ | ✓ | ✓ | ✓ | ✓ |
| Volta | ✓ | ✓ | × | ✓ | ✓ |
| Fleming | × | ✓ | × | × | × |
| Pascal | × | × | ✓ | ✓ | × |

44. (b) ; 45. (c) ; 46. (b)

**Solutions for 47 – 50:**

From the given data, we get the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Badge No. | Weight | State | Transported by |
| A1 | 250 kg | Punjab | Auto |
| A2 | 50 kg | MP | Bullock cart |
| A3 | 200 kg | UP/Maharashtra | Truck |
| A4 | 150 kg | UP/Maharashtra | Tractor |
| A5 | 100 kg | Orissa | Tempo |

47. (a) ; 48. (d) ; 49. (b) ; 50. (d)

1. (c)

Statement I tell us that Ashish is not an engineer and Ashish got more offers than the engineers. Hence, Ashish did not have 0 offers. After this the following table can be achieved:

|  |  |  |
| --- | --- | --- |
| **Profession** | **Name** | **Offers** |
| CA | Ashish | 1 offer |
| MD | Dhanraj | 3 offers |
| Economist | Sameer | 2 offers |
| Engineer |  | 0 offers |

2. (c)

Statements V and VI rule out options (a) and (b). Since contestants from Bangalore and Pune did not come first, school from Hyderabad can come first. Convent is not in Hyderabad which rules out option (d).

**Solutions for 3 – 6:**

Sentence 1 – Family with 2 kids before no kids

Sentence 2 – Shanthi with no kids came before Sridevi

Sentence 3 – Sunil and wife came last with only kid

Sentence 4 – Anil and Joya not husband and wife

Sentence 5 – Anil and Raj are fathers – hence cannot be the family with no kids

Sentence 6 – Sridevi and Anita cannot be the persons with no kid

Sentence 7 – Joya before Shanti and Anita was already present.

Using the above info – Anil and Raj cannot be married to Shanthi as Shanthi has no kids! Hence, Sunil has to be married to Sridevi (not with Joya already stated) and Raman with Shanthi.

|  |  |  |  |
| --- | --- | --- | --- |
| **Arrival Order** | **Husband** | **Wife** | **Kids** |
| 1 | Anil | Anita | 1 |
| 2 | Raj | Joya | 2 |
| 3 | Raman | Shanthi | 0 |
| 4 | Sunil | Sridevi | 1 |

3. (a) ; 4. (b) ; 5. (c) ; 6. (b)

**Solutions for 7 – 10:**

As the labour expert is half of each of the other, so the only possible combination is:

L – 3

H, P and R – 6 each

If the number of Australia expert is 1 less then Americas be twice as each of other. The only combined possible for Americas

Is 8.So:

Americas – 8

Australia – 4 + 1 = 5

Europe – 4

Africa – 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Africa** | **America** | **Australia** | **Europe** | **Total** |
| L | 0 | 1 | 1 | 1 | 3 |
| H |  |  | 1 | 1 | 6 |
| P |  |  | 2 | 1 | 6 |
| R |  |  | 1 | 1 | 6 |
|  | 4 | 8 | 5 | 4 | 21 |

Now, we need to work out the various options possible in the blank cells.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Africa** | **America** | **Australia** | **Europe** | **Total** |
| L | 0 | 1 | 1 | 1 | 3 |
| H | 2 | 2 | 1 | 1 | 6 |
| P | 1 | 2 | 2 | 1 | 6 |
| R | 1 | 3 | 1 | 1 | 6 |
|  | 4 | 8 | 5 | 4 | 21 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Africa** | **America** | **Australia** | **Europe** | **Total** |
| L | 0 | 1 | 1 | 1 | 3 |
| H | 1 | 3 | 1 | 1 | 6 |
| P | 1 | 2 | 2 | 1 | 6 |
| R | 2 | 2 | 1 | 1 | 6 |
|  | 4 | 8 | 5 | 4 | 21 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Africa** | **America** | **Australia** | **Europe** | **Total** |
| L | 0 | 1 | 1 | 1 | 3 |
| H | 1 | 3 | 1 | 1 | 6 |
| P | 2 | 1 | 2 | 1 | 6 |
| R | 1 | 3 | 1 | 1 | 6 |
|  | 4 | 8 | 5 | 4 | 21 |

**7**. (d) ; 8. (c) ; 9. (d) ; 10. (d)

**Solutions for 11 – 15:**

As only Paul Erdös was having an Erdös number of zero so the minimum Erdös number among A, B, C, D, E, F, G, H should be 1 or greater than one. At the end of the third day F coauthored a paper with A and C. F had the minimum Erdös number among the 8 people. So if F's Erdös number is y, then A and C's Erdös number should change to (y + 1) after third day. As A and C decreased the average by maximum possible extent, it means C had the second-height Erdös number among all eight, as A had an Erdös number of infinity. Suppose Erdös numbers of A, B, C, D, E, F, G, H are y + 1, b, y + 1, d, e, y, g, h respectively at the end of third day.

(y + 1 + b + y + 1 + d + e + y + g + h) = 24 = (3 × 8)

3y + 2 + b + d + e + g + h = 24

When E co-authored with F, the average Erdös number reduced again, it means, E's Erdös number was not the same with A & C initially. As at the end of third day, 5 people had same Erdös number, they should be A, C and any 3 out of B, D, G, H. Suppose those 3 people are B, D, G. Then

(3y + 2 + y + 1 + y + 1 + h) = 24

6y + h + e = 19 …(i)

On the fifth day E co-authored a paper with F and hence Erdös number of E changed to (y + 1). Also the average decreased by 0.5 that means the total decreased by

Hence, e - (y + 1) = 4

⇒e – y = 5

Putting the value of e in equation (i), we get

6y + h + (5 + y) = 19

7y + h = 14

Only possible value of y = 1 as h cannot be zero. So after 3rd round Erdös number of A, C, E, F were 2, 2, 2, 1 respectively.

11. (d)

Only A, C, E changed their Erdös number, rest 5 did not change their Erdös number.

12. (b)

At the end of conference 6 people including E were having an Erdös number of 2 and F was having 1 as Erdös number. So 8th person was having an Erdös number of [20 – (2 × 6 + 1)] = 7

13. (b)

As at the end of 3rd round 5 people were having same Erdös number. A and C changed their Erdös number after coauthoring with F. So, the other 3 would have same Erdös number in the beginning.

14. (b)

15. (c)

After co-authoring with F, E was having Erdös number of 2, which was 4 less than initial Erdös number of E. So answer is 2 + 4 = 6.

**Solutions for 16 – 19:**

16. (c)

By using statements I and IV we get, Cardamom Tea will be supplied from switch 1.

17. (c)

By using statements I and IV we get, Coffee is supplied by switch 3.

18. (b)

By using statements I, III and IV, we get switch 2 supplied Cardamom Tea.

19. (d)

By using statements I, III and IV we get switches 2 and 3 supply Ice Tea, Cardamom Tea, Tea and Coffee

**Solutions for 20 – 24:**

|  |  |  |
| --- | --- | --- |
| **Husband** | **Wife** | **Patterns Used** |
| Joseph | Agnes | Dotted, Alpana, Sanskar |
| Emanuel | Clarina | Chowk, Alpana, Sanskar |
| Samuel | Delvina | Chowk, Dotted, Sanskar |
| Martin | Rose | Chowk, Dotted, Alpana |

20. (c) ; 21. (b) ; 22. (a) ; 23. (c) ; 24. (c)

**Solutions for 25 – 29:**

**T = Type, C = Category, S = Safety, P = Pollution, E = Engine, M = Mileage, O = Overall quality**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **T** | **C** | **S** | **P** | **E** | **M** | **O** |
| Tata | Truck | LMV | ✓ | × | ✓ | ✓ | ✓ |
| Ashok | Truck | LGV | ✓ | × | × | × | ✓ |
| Force | Truck | HMV | × | ✓ | × | ✓ | ✓ |
| Mahindra | Truck | HGV | ✓ | × | ✓ | × | ✓ |
| Ace | Truck | LGV | × | × | × | × | × |
| Maruti | Car | HMV | ✓ | ✓ | ✓ | ✓ | × |
| Honda | Car | HMV | ✓ | ✓ | × | ✓ | × |
| Mitsubishi | Car | LMV | ✓ | ✓ | ✓ | ✓ | ✓ |

25. (d) ; 26. (c) ; 27. (a) ; 28. (c) ; 29. (b)

**Solutions for 30 – 35:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Room No.** | **Country** | **Birth Rate** | **Death Rate** |
| 1001 | Zimbabwe | X | Y |
| 1002 | Ethiopia | 24 | Z |
| 1003 | Zaire | 12 | 8 |
| 1004 | Ghana | 4 | 18 |
| 1005 | Sudan | 8 | Y – 2 |
| 1006 | Nigeria | 16 | 24 |

30. (d) ; 31. (c) ; 32. (b) ; 33. (c) ; 34. (d) ;

35. (d)

As the birth rate of Zimbabwe is not known.

**Solutions for 36 – 40:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Car** | **Segment** | **Price (lakhs)** | **Original Engine Size** | **Reduction** | **New Engine Size** |
| A8 | SUV | 64 | 1800 | 120 | 1680 |
| A9 | Luxury | 60 | 1700 | 140 | 1560 |
| A10 | Hatchback | 62 | 1600 | 160 | 1440 |
| A11 | Sedan | 67 | 1500 | 50 | 1450 |

36. (d) ; 37. (b) ; 38. (c) 39. (a) ; 40. (c)

**Solutions for 41 – 45:**

41. (d)

Option (a):

Maren: 4th semster

Stephen, Donald, Jo: 2nd semster

Eric: 3rd semster

This will violate (IV) condition.

Option (b): This violates the (VI) condition.

Option (c): Maren and Eric: 4th semester.

Stephan and Donald: 2nd all semester

John: 4th semester

If the (IV) condition has to be met then both Samy and Jo have to teach during the 4th semester, which will violate (VI) condition.

Option: (d)

Maren, Stephen and Donald: 4th semester:

Samy: 2nd semester

John: 3rd semester

Jo: 2nd semester

Eric: 4th semester

Hence, option (d) is the correct choice.

42. (a)

Option (a): This cannot be trueMaren: 4th semester

Stephan and Donald: 2nd semester

Also, Jo does not teach during the 4th semester and Samy and Eric teach during different semester.

Therefore, there cannot be 4 professors who teach during the 4th semester and this will violate the condition.

Option (b) this can be true.

Samy , Stephan, Donald and JO : 4th semester

Maren and John: 4th semester

Eric: 2nd Semester

Option (c): This can be true.

Maren, Stephan, John and Eric: 4th semester

Samy and JO: 2nd semester

John : 4th semester

Option (d) this can be true.

Maren, Stephan, Donald and Eric: 4th semester

Samy and Jo: 2nd semester

John 3rd semester

Given that there is exactly 1 professor who teachers during the 4th semester, we get the following cases:

**Case 1:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 3rd | 4th | 4th | 4th | 4th | 2nd | 2nd |

**Case 2:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 3rd | 4th | 4th | 4th | 2nd | 4th | 3rd |

**Case 3:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 2nd | 4th | 4th | 4th | 3rd | 4th | 2nd |

**Case 4:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 2nd | 4th | 4th | 4th | 4th | 4th | 2nd |

**Case 5:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 4th | 4th | 4th | 4th | 2nd | 2nd | 3rd |

**Case 6:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Samy | Maren | Stephen | Donald | John | Eric | Jo |
| 4th | 4th | 4th | 4th | 3rd | 2nd | 2nd |

43. (c)

In all the 6 cases, Donald teaches during the 4th semester. Hence, option correct choice.

44. (a)

Given that Samy teaches during the 3rd semester, which implies that it is case1.

Therefore John teaches during the 4th semester.

45. (d)

Option (a) it could be possibility.

Samy, Maren, Stephen and Donald: 4th semester

John and Eric: 2nd semester

Jo: 3rd semester

Option (b) it could be possibility.

Samy, Stephen, Donald and Eric: 4th semester

Maren and John: 3rd semester

Eric: 2nd semester

Option (c): it could be a possibility.

Samy, Stephen, Donald and Eric: 4th semester

Samy and Jo: 2nd semester

John: 3rd semester

Option (d) it cannot be a possibility

Maren teaches during the 4th semester, so if Maren, Eric and Jo teach during the 4th semester, then Eric and Jo teach during the same semester, then Eric and Jo both will teach during the 4th semester. But for (iii) condition we know that Jo does not teach during the 4th semester. So, Maren, Eric and Jo cannot be simultaneously taught during the same semester.

**Solutions for 46 – 50:**

By observation it can be analyzed that the person having all the attributes starting with the first alphabet of his name is Brian.

The attribute that Gavin will have that starts with the first alphabets of his name will be Gardenia because in city attribute, no other city matches with the first alphabet of any body's name.

Agnes is the one who has no attribute starting with the first alphabet of his name because Agnes cannot be an Artist as the Artist stays in Dallas.

Freedie has only two attributes starting with the first alphabet of his name, *i.e*., Fairfield and Firefighter, but since, Agnes stays in Fairfield, Freedie is a Firefighter.

Now, as Danny, Freedie and Gavin cannot have the company Steyn Inc., so Christopher will have the company Steyn Inc.

Therefore, we can also conclude that Christopher stays in Campa Bay.

Now, as Danny cannot stay in Dallas and is neither a Dentist so he owns the company Doggers Inc.

Since, Freedie cannot be an Artist and can neither stay in Dallas, so he owns the company Creative Inc.  
And so we get the final table as:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Agnes | Metallergist/Caterer | Sam Inc. | Fairfield | Riveira/Whitefield |
| Brian | Banker | Broom Inc. | Boston | Boston |
| Christopher | Dentist | Steyn Inc. | Campa Bay | Riveira/Whitefield |
| Danny | Metallergist/Caterer | Doggers Inc. | Kansas | Yosmite |
| Freedie | Firefighter | Creative Inc. | Geneva | Bestow |
| Gavin | Artist | Micro Inc. | Dallas | Gardenia |

46. (b) ; 47. (d) ; 48. (a) ; 49. (d) ; 50. (d)