## Prelimsure 2020

1. C

- Option A can be eliminated because the theme of passage deals with the resource crunch and ensuing conflicts. Resource crunch could lead to political conflicts but it will not be the sole reason.
- Passage talks only about conflicts and does not mention about solutions to these conflicts. Therefore, we cannot conclude the idea conveyed in option B from the passage.
- Straightforward summary of the passage. Environmental issues contribute to the resource stresses and political conflict.
- Option D also can be eliminated because conflicts over resources are actually disguised as that occurring due to identity or ideology. Also, there is no mention about solutions arising from these conflicts in the passage.
- Therefore, the best possible answer is C.


## 2. A

- The keynote of the passage can be picked directly from the passage itself.
- Passage mentions three different types of people out of which only one is likely to succeed. The man who hesitates between the options will neither do any of these options.
- The second type of person- who resolves initially but however he changes his opinions and decisions from time to time. He also will not achieve anything significant.
- But the passage says that those who consults firmly and then resolves firmly and then continue to execute it with immense perseverance will advance to eminence.
- The best possible option from the given set is Option A because it conveys the exact idea of the passage itself literally.

3. D

- We can use eliminations in this as well. When we check the passage it clearly mentions that summer period in Arctic is increasing year by year. Therefore, option A can be eliminated.
- Arctic faces trouble due to climate change. The passage does not talk about shifting polar bears to alternate locations. So, option $B$ is also wrong.
- The passage in the last sentence mentions that the whole Arctic food web will be affected and that the polar bears stand on top of the food web. Thus, the effect or break of food webs or chains in the Arctic region eventually affects the polar bears and not the other way round. So, option $C$ can also be eliminated.
- Option D is therefore the right answer. It is the closest option which resembles the idea mentioned in the passage.

4. B

- The given passage conveys the idea that people prefer open defecation because of the concept of purity and pollution and also of not wanting to septic tanks to fill because they have to be emptied.
- Towards the end of passage, the focus shifts to changing the old habits among the people. Therefore, option C can be eliminated first.


## Prelimsure 2020

- Option D can also be eliminated because the idea that people have no civic sense or sense of privacy is also not mentioned in the passage.
- Option A and B are most close among all. Option A can be eliminated because passage focuses towards changing the old beliefs like purity and pollution among the people but the statement says such such ideas cannot be removed at all which is not right.
- Thus, Option B is the right answer.

5. B

- The key idea of the passage is the disproportion between the world's GDP growth and growth of inclusive wealth in the last two decades. The passage underlines the statement with facts.
- It finds that growth driven by GDP has harmed inclusive wealth like human capital and natural capital. The natural capital even registered a decline in the growth. The most crucial inference which we get from the entire passage is that growth driven by GDP will be unsustainable and undesirable considering its impacts on natural and human capital.
- So the answer is B.
- Options like A can be tricky. It says the focus should be on development of natural capital. That is true, but the crucial inference which we get explicitly from the passage is the disadvantages of the GDP focused economic growth. So, better answer is B.

6. B

- Answer can be reached through elimination.
- Option A can be eliminated because population control is not explicitly mentioned in the passage as an idea to reduce the unemployment rate.
- Option C is also wrong because key component of double digit growth is by introducing labour reforms. Double digit growth wont come automatically.
- India has an opportunity to be the labour capital of the world because global labour force continues to be in decline. India cannot supply skilled young people unless proper skilling missions are implemented. The passage talks about labour reforms and does not deal with skilling reforms. So D can be eliminated as well.
- Option B is the crucial idea mentioned in the passage.


## 7. A

- Passage mentions that complete freedom from the obligation to work is not possible in this world. If we don't work, we will be doomed. For example, famine will be caused if farmers don't work. Therefore, human beings have to work for their own existence.
- Hence, the answer is option A.

8. C

- The author brings out the relevance of habits.
- The suggestion made by author is that making our own habits is a good thing to have. The habits thus make our life easier and meaningful. Thus, option A and D can be eliminated easily because it says negative things about habits.


## Prelimsure 2020

- Passage mentions that the habits simplify the mechanism of life. Thus, answer is C .


## 9. B

- Out of the four given options, one statement holds true irrespective of the conditions applied- that is option B.
- While checking the options, three of them can be eliminated.
- Option D is wrong because statement clearly mentions that Party X members knew Z.
- Option A is also wrong. The supporters of Party Y and their agreement to ally with the partners are not mentioned in the passage.
- C can also be eliminated. Statements say that supporters of Party X knew Z supported his campaign strategy.

10. C

- Statement mentions that some supporters of Party X knew $Z$. Therefore, 1 is true- so option A and D can be eliminated.
- Out of remaining two options, statement 3 is present in both. So check only the 2nd statement.
- The informations in initial statements does not mention that all the supporters of Party $X$ who knew $Z$ supported Z's campaign strategy. Therefore, it is a possibility that some supporters of $X$ opposed $Z$ 's campaign strategy and also knew $Z$.

11. B

- Minimum number of working days in any month in any year is asked in the question.
- All the Sundays and 2nd and 4th Saturdays are holidays as well.
- Consider a February month of 28 days.
- Let the initial day of the month be a Sunday. Thus, 1st, 8th , 15th and 22nd of the month is holiday.
- Also, 14th and 28th of the month is holiday(2nd and 4th Saturdays).
- Thus, minimum possible working days $=28-(4+2)=22$ days.

12. D

- Let the initial population be ' $X$ '.
- One-third of the population migrated after the first year. remaining population $=2 / 3$ * $X$.
- After second year the population remaining will be, $=(2 / 3 * X)-(1 / 3 * 2 / 3 * X)=4 / 9 * X$.
- This will go on like a G.P. with common factor of $2 / 3$.
- Thus, the population remaining by the end of 6 th year will be $64 / 729$ * $X$.

13. C

- Chemistry is conducted on the third day(mentioned in the question).
- Another statement indicates that an exam is definitely conducted after Biology. So, Biology is not on the last day.
- Also it mentions that Physics Test is conducted before the tests conducted after Biology. Thus, it also cannot be on the last day. So, remaining option is C- Mathematics.


## Prelimsure 2020

14. B

- Take some numbers which satisfy the conditions.
- Let the income of $A=200, B=300, C=200, D=100$.
- It satisfies all the conditions mentioned in the statements.
- In such a scenario, we can find that $B$ earns the highest income.


## 15. A

- The idea mentioned in the statement is that good voice is a natural gift but it needs practise to excel and improve in the field of music.
- Only conclusion 1 follows. Natural gifts need nurturing and care.
- Conclusion 2 does not follow. The statements does not mention about the cases where a person's voice is not good. So it does not include in conclusions.

16. B

- Net distance climbed by $A$ in one chance $=5 \mathrm{~cm}$.
- Net distance climbed by B in one chance $=4 \mathrm{~cm}$.
- Net distance climbed by $C$ in one chance $=4.5 \mathrm{~cm}$.
- The minimum height of the pillar will be that belonging to $B$.
- Distance climbed by B in 39 chances $=4 * 39=156 \mathrm{~cm}$.
- In the 40th chance, B climbed up to reach the top.
- Therefore, the distance climbed by $B$ without coming down $=7 \mathrm{~cm}$.
- Therefore, minimum height of the pillar is $=156+7=163 \mathrm{~cm}$.

17. C

- Statement says rights are conditions required for social well being which is a key stone for the true development of a citizen. Social good and individual good are both intended with the provisions of rights.
- Hence, the answer is option C.

18. C

- Total number of students $=52$.
- Number of failed students $=15$.
- Remaining number of students $=37$.
- Ramesh is $22 n$ from the top out of the remaining 37 students.
- Therefore, 15 students scored lower marks than Ramesh.
- Position of Ramesh from the bottom is $15+1=16$ th.

19. C

- The expression $P+R-Q$ means that $P$ is the son of $R$. And $R$ is the wife of $Q$.
- Therefore, P is the Son.
- $R$ is the mother and $Q$ is the father of $P$.
- Thus, Option C holds true.


## Prelimsure 2020

20. C

- Assume Gopal brought cell phone for Rs. 100.
- Thus, Ram brought it for Rs. 110.
- Ram sold it back at $10 \%$ loss. That is, $10 \%$ of Rs. 110 . So the total loss is Rs. 11.
- So,if Gopal agreed he will buy it for Rs. 99
- Thus, the net gain for Gopal will be Rs. 1 or $1 \%$ gain.

21. D

- Author asks to work hard to achieve peace in the society. Author wants to discourage communalism or narrow mindedness. Thus, it could lead to option D which strives to achieve the brotherhood and national unity.
- Passage already mentions that equal privileges already exists. Therefore, option B will not be likely. Also, option C does not count because it is talking about economic parity which is not the subject of the passage.

22. C

- Option D can be eliminated easily because General Will does not represent the material interests of the community.
- Statement mentions that individuals should put their power around the General Will. So clearly it should be for the collective good of the community and not for the private wills of the individuals.
- Hence, answer is Option C.

23. D

- Statement mentions that in a democratic society with high degree of political maturity, the conflict between the will of people and that of the sovereign law making body will be minimal.
- Therefore, the use of forces will be kept down to minimum in case of a mature and democratic society.

24. A

- Passage emphasises upon the importance of voting in a successful democracy.
- Citizens must play their part in a democracy by exercising their duty to vote. Even though voting is a right conferred as well, the duty to vote is more accurate here because the emphasis is on duty of citizens to vote.

25. D

- Passage distinguishes the rise of a leader to that of a dictator. Leader rises to the top because of his outstanding character whereas a dictator rises to his position of power through chance utilising the unhappy state of his country.
- This idea is explicitly given in the option D.


## Prelimsure 2020

26. B

- The first assumption made from the passage is wrong. Because some people abuse the use of leisure while some use it for creative purposes. Therefore we cannot say that leisure is always used as a gift for acquiring material possessions.
- Second assumption holds true. Creative use of leisure by minority in societies has been the mainspring of human progress. Thus, option B is the best possible answer.

27. D

- Studying the famous battles of history contains the lessons for those who lead or aspire to be a leader in the future. It does not help us understand the modern warfare. But it helps why some people always win but some always lose.
- Studying the history is essential for who aspires to be a leader. However, it is not essential for everyone who aspires to be a leader. Hence, statement 2 is also not correct.

28. C

- Let the weight of persons be $\mathrm{X} 1, \mathrm{X} 2, \mathrm{X} 3, \mathrm{X} 4, \ldots . \mathrm{X} 9$.
- Average weight of 9 persons $=50 \mathrm{~kg}$.
- Total weight of all the 9 persons $=50 * 9=450 \mathrm{~kg}$.
- Average weight of first five persons $=45 \mathrm{~kg}$.
- Therefore, $\mathrm{X} 1+\mathrm{X} 2+\mathrm{X} 3+\mathrm{X} 4+\mathrm{X} 5=225 \mathrm{~kg}$.
- So, $X 6+X 7+X 8+X 9=450 \mathrm{~kg}-225 \mathrm{~kg}=225 \mathrm{~kg}$.
- $\mathrm{So}, \mathrm{X} 5=225-(X 1+X 2+X 3+X 4)$.
- It is also given that the average weight of last five persons $=55 \mathrm{~kg}$.
- Thus, $\mathrm{X} 5+\mathrm{X} 6+\mathrm{X} 7+\mathrm{X} 8+\mathrm{X} 9=275 \mathrm{~kg}$. Replacing the value of $\mathrm{X} 6+\mathrm{X} 7+\mathrm{X} 8+\mathrm{X} 9$ with $\{1\}$ we get,
- $X 5+225=275$.
- Therefore, weight of the fifth persons, $\mathrm{X} 5=50 \mathrm{~kg}$.

29. C

- From the given informations, we can construct the below table and find that Nirmala is the only one who is a Tennis player and a bank employee.

| Name of women | Job | Postgraduate | Sports |
| :--- | :--- | :--- | :--- |
| Vimala | Bank | Sociology |  |
| Kamala | Bank | Sociology |  |
| Amala | Unemployed | Sociology | Tennis |
| Komala | Unemployed | Sociology | Tennis |
| Nirmala | Bank | Commerce |  |
| Shyamala |  |  |  |

## Prelimsure 2020

30. D

- Let A be 10 and B be 5 .
- Therefore, $P=4+3.25=7.25$
- And, Q=5+2.5=7.5
- In this case, Q is greater than P .
- Now, take $A$ as 11 and $B$ as 10 .
- Thus, $P=4.4+6.5=10.9$
- And $Q=5.5+5=10.5$
- Therefore, in this case $Q$ is lesser than $P$.
- So, we cannot conclude the conditions with certainty.

31. D

- In one day, the watch $A$ loses 2 minutes whereas the watch $B$ gains 2 minutes.
- Therefore, to lose 1 hour watch A has to run for 30 days.
- 30 days from now, watch $A$ will show 11:00 PM whereas watch $B$ will show 1:00 AM.
- Again, they will be back on the same time when both show 12:00 PM.
- Thus, for watch A it will take 30 days* $12=360$ days to reach to 12:00 PM.

32. B

- $12 \%$ of households earn less than Rs. 30,000 per year.
- $6 \%$ households earn more than Rs. 2,00,000 per year.
- $22 \%$ households earn more than Rs. 1,00,000 per year.
- Therefore, $16 \%$ households earn between Rs. 1,00,000 and Rs. 2,00,000 per year.
- 990 households earn between Rs. 30,000 and Rs. 1,00,000 per year which is equal to 66 \% of total households
- Therefore, $66 / 100$ * total number of households $=990$.
- Therefore, total number of households $=\left(990^{*} 100\right) / 66$
- So, number of households earning between Rs. 1,00,000 and Rs. 2,00,000 per year =
- (990* 100)/ 66 * $\{16 / 100\}=240$ households.

33. B

- Time taken to strike 5 times $=12$ seconds.
- So, time taken for one strike $=2.4$ seconds
- When the clock turns 10 o' clock it strikes 10 times.
- Therefore time taken to strike 10 times $=2.4$ * $10=24$ seconds.

34. D

- Statement says morning walk is good for health. It does not mention that all healthy people go for morning walk.


## Prelimsure 2020

- Also, statement does not mention anything about good health. Therefore second conclusion is also not valid as per the statements.

35. A

- 39 is the mean of the first five consecutive odd numbers in the question.
- So, the numbers will be $35,37,39,41,43$.
- The remaining numbers will hence be $45,47,49,51,53,55,57,59$.
- The complete set of thirteen numbers are $35,37,39,41,43,45,47,49,51,53,55,57,59$.
- The mean of the given set of numbers will be 47 .

36. B

- The number of cards with $A, B, C, D, E$ and $F$ after each set will be like as follows.

| A | B | C | D | F |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 10 | 10 | 10 | 10 | 10 | 10 |
| 8 | 10 | 10 | 10 | 10 | 12 |
| 8 | 10 | 15 | 10 | 10 | 7 |
| 8 | 13 | 12 | 10 | 10 | 7 |
| 8 | 7 | 12 | 16 | 10 | 7 |
| 8 | 7 | 12 | 15 | 11 | 7 |

- Cards with $D$ and $E=26$ cards.
- Number of cards with B,C and F=26 cards.

37. A

- Let the total amount of mixture of milk and water be 600 ml .
- Therefore, 300 ml is water and 300 ml is milk
- $1 / 3 \mathrm{rd}$ of this mixture is taken as sample which is $=200 \mathrm{ml}$.
- It contains 100 ml water and 100 ml milk
- It is added to equal amount of pure milk= 200 ml pure milk
- Therefore, new mixture consists of water added milk + pure milk
- That is, 200 ml water added milk +200 ml pure milk $=100 \mathrm{ml}$ water +100 ml milk +200 ml milk.
- Thus, new mixture will contain 300 ml milk and 100 ml water.
- Percentage of water in this mixture $=100$ out of $400 \mathrm{ml}=25 \%$.

38. C

## Prelimsure 2020

- To create a rectangle or a square we need to select 2 out of the vertical lines and 2 horizontal lines.
- Hence answer is $4 \mathrm{C} 2 \times 4 \mathrm{C} 2=6 \times 6=36$.

39. C

- Let the time taken for the second train to catch up with the first be $\mathrm{x}(\mathrm{t} 2)$.
- Thus, Time taken for train 1 to travel the distance, $\mathrm{t} 1=\mathrm{x}+2$.
- Average speed of train $1=40 \mathrm{~km} / \mathrm{hr}$.
- Average speed of train $2=60 \mathrm{~km} / \mathrm{hr}$.
- The trains meet at the same time so the distance will be same
- So, $40(x+2)=60 x$
- So, $x=4$ and thus $x+2=6$ hours.
- Thus, distance travelled= $60 * 4=240 \mathrm{~km}$.

40. D

- Data given is inadequate to find out who has the highest mark.
- From the given statements, it is clear that Neha obtained more marks than Randhir.
- Also, Randhir has more marks than Kunal and Debu.
- Therefore, out of these $4, \mathrm{Neha}$ has the highest marks.
- But a proper relation cannot be made among these 4 persons and other students like Shankar, Sonal which is why data is inadequate.

41. A

- Passage talks about the traditional societies and development of new societies.
- The new societies and ideas are developed by political development whereas traditional institutions do not have much linkages with political development.
- Traditional societies are destroyed in certain cases, therefore Option C can be eliminated. The faith in traditional societies is not conducive to political development. Hence, Option D can also be eliminated.
- Political development does not always grow in societies as some prefer traditions and ignore the constructive works played by it like fostering the group awareness about religion, culture etc. So option A is most appropriate.

42. C

- Devolution is most often initiated by the upper tier of government but fails in some aspects because there is not sufficient mobilisation of people in the grass roots level.
- Therefore, for a devolution to be successful, there should be a mass demand from below for the resources and also there should be sufficient political mobilisation which leads us to option C.

43. B

- The relevance of digital media in lives of human beings in the current times are depicted here. Therefore, option $B$ is most suitable in this scenario.


## Prelimsure 2020

## 44. A

- Passage talks about middle income trap in the emerging economies.
- Among the factors discussed, most important factor is the collapse in the growth of productivity which leads to middle income trap.
- Thus, it could lead to stagnant incomes which is mentioned in option A.

45. C

- The passage emphasises on the need on innovation to develop an inclusive and technologically advanced country. It also mentions that Innovation and R\&D can reduce the economic and social inequality prevailing in the country.

46. D

- The impacts of climate change which induces migration of the people within the country and across the borders are not given much emphasis. Infact, climate change triggered migration is not given importance because the world countries did not still take a note of such activities.
- The relation between climate change and induced migration is not yet understood.
- Therefore, the passage emphasises on the need to recognise the protection and welfare of climate change refugees.

47. B

- The passage compares the advantages and disadvantages of types of pesticides. Synthetic pesticides have lot of disadvantages as it affects farm operators, consumers , environment etc.
- But the passage did not explicitly mention that it should be prohibited completely. Therefore, statement 1 cannot be valid which brings us to option B.

48. A

- Passage mentions that synthetic pesticides are persistent in the environment and not biological pesticides.
- Thus, statement 2 is not true.
- Similarly, biological pesticides are not talked of as an essential item to maintain the biodiversity in any ecosystem. Passage suggests biological pesticides as an alternative sustainable suggestion to those ecosystems which uses synthetic pesticides.

49. B

- The series of numbers which are divisible by 7 are $105,112,119,126 \ldots . . .994$.
- Since, all three digits are different, the list narrows down to $105,126,140,147,154,168,175,182,189,196,203,210,217,231 \ldots 987$.
- Manually checking the other conditions we get to know that only 259,952, 168 and 861 satisfy these conditions.
- Hence, answer is B.


## Prelimsure 2020

50. D

- Given that some colours are not pleasant. Therefore, all colours will not be pleasant.
- So, the answer is D. (statement 1 is false).

51. C

- Between 100 and 200 there are 10 numbers. 108,118,128,138,148,158,168,178,188 and 198.
- Likewise upto 1000 , there will be $9 * 10=90$ numbers.

52. D

- In a perfectly symmetrical distribution, the mean and the median are the same.
- If the distribution of data is skewed to the left, the mean is less than the median, which is often less than the mode.
- If the distribution of data is skewed to the right, the mode is often less than the median, which is less than the mean.

53. B

- Last year, the age of Mr. X was 25.
- So present year his age is 26 .
- And in the next year age of Mr.X will be 27.
- To have an age of another cube of a number he/she has to turn 64 which will be 38 years from now.

54. A

- $P$ works thrice as fast as Q . Therefore, P should earn three times more than Q .
- $P$ and $Q$ combined works four times fast as $R$. i.e. $P+Q=4^{*} R$; or $3 Q+Q=4 R$.
- Therefore, $Q$ works at a similar rate compared to $R$.
- Therefore, they should share earnings at 3:1:1.

55. B

- There are three males and females.
- Given that $A$ and $E$ are sons of $F$.
- D is the mother of two, a boy and a girl.
- $B$ is the son of $A$.
- There is only one married couple at present.
- The three males are A,E and B.
- Therefore three females are C,D and F.
- $D$ and $A$ are the married couple while $C$ is their daughter.
- Therefore, option B holds.

56. B

- Number of red balls=5


## Prelimsure 2020

- Number of green balls= 8
- Number of white balls= 7
- Minimum number of balls that should be picked to get atleast one out of all the colours are $8+7+1$ = 16 balls.

57. C

- Possible cases are GBBG- 4 cases as boys and girls can exchange seats within the group in 2*2 cases.
- Other possible cases are BGBG and GBGB. Therefore the total number of possible arrangements are 12 cases.

58. A

- Given a 4 cm * $4 \mathrm{~cm}{ }^{*} 4 \mathrm{~cm}$ size cube.
- It is sliced parallel to the faces to yield 64 cubes of $1^{*} 1 * 1 \mathrm{~cm}$ size.
- The number of cubes which do not have a painted face includes the set of 4 cubes in the middle.
- Thus, 4+4=8 cubes in the middle do not have painted face.

59. C

- A,B,C,D,E,F,G and $H$ are facing north.
- $F$ is situated to the right of $G$ and is also the neighbour of $G$.
- Therefore, arrangement will be G-F-E.
- A is sixth to the left of $E$.
- So the arrangement will be $A$ $\qquad$ GFE_
- H is to the sixth of C .
- Thus, H will be at the extreme right and C will be in second from left.
- AC__GFEH.
- $B$ is not the neighbour of $G$.
- So the final arrangement will be ACBDGFEH.

60. B

- 254 represents white colour chalk
- 256 represents red colour chalk
- Hence white is represented by 4.

61. C

- Air Quality Index stays in the dangerous zone for almost all the time in urban India.
- Hence people are used to ignoring the signals posed by the index.
- It is not helpful for the residents which makes option A most relevant inference.

62. C

- Option B can be eliminated because high productivity industry is not being established satisfactorily in India.


## Prelimsure 2020

- Option D is also not correct because passage suggests shifting the excess people from agriculture to other sectors as well.
- Option A and C are closer. Option C is correct because it advices for creating productive jobs outside agriculture as well as improving the productivity of agriculture.

63. A

- Passage talks about improving the landscape based approach for land use. Even in the case of natural disasters, eco agricultural practises have lead to significantly lesser destruction.
- This idea is mentioned in option A as well. Agricultural practises that are friendly to nature can increase farm output and reduce the vulnerability of disasters.

64. C

- Option D is wrong because India has not already gained majority share in global markets.
- Option B is explicitly wrong because the passage suggests for improving capital intensive manufacturing.
- India's manufacturing has to move to the high tech industries and also it should move from lower to higher value added sectors. Therefore, answer will be C.

65. A

- Option $B$ is wrong because passage mentions about the increase in production and anot about the productivity.
- Similarly, allocations to social welfare programmes and poverty alleviation programmes are not mentioned in the passage. Hence, D is wrong as well.
- Option A is the best suited one because the increased production has till now not removed the poverty or malnutrition issues. So we need solutions to improve the food to fork value chain.

66. B

- Cooperation between Centre and States are necessary for a proper working of the federation.
- Strong Centre can bind together all the States like a thread binds together the necklace. Hence option B is right.

67. B

- The passage clearly mentions that the poor people under a government has to rule according to his/her consent.
- The consent of the governed is ideal for the governance.

68. C

- Total rainfall in the first four days= 0.40 inch* $4=1.60$ inch.
- Average rainfall for the six days $=0.50$ inch.
- Therefore total rainfall received for the six days= 3.00 inch.


## Prelimsure 2020

- Total rainfall received in the last two days-= $3-1.60=1.40$ inch.
- The ratio of rainfall received in the last two days $=4: 3$.
- Thus, rainfall received on the fifth day $=\left(4^{\star} 1.4\right) / 7=0.8$ inch.

69. A

- Lecturer B is specialised in Geography.

| Lecturer |  | City |  | Subject |
| :--- | :--- | :--- | :---: | :---: |
| A | Mumbai | Geography |  |  |
| B | Kanpur | Sociology |  |  |
| C | Delhi |  |  |  |
| D | Shillong |  |  |  |
| E | Hyderabad | Commerce |  |  |
| F | Srinagar | Statistics |  |  |
| G | Chennai |  |  |  |

70. B

- Lecturer specialised in Economics belong to Mumbai.

71. B

- The lecturer who belongs to Hyderabad is E .

72. B

- Teacher B teaches English, Geography and French- that is three subjects.

73. D

- Try putting some numbers to reach the answer.
- Consider the number 49.
- The reverse of the number is 94 .
- So, the remainder when the largest is divided by the smallest will be 45.

74. B

- Let the monthly incomes of $X$ and $Y$ be 4a and 3a.
- Let the monthly expenditures of $X$ and $Y$ be $3 b$ and $2 b$.
- Therefore, $4 \mathrm{a}-3 \mathrm{~b}=6000$.
- Also, 3a-2b=6000.
- Therefore, $4 \mathrm{a}-3 \mathrm{~b}=3 \mathrm{a}-2 \mathrm{~b}$; therefore $\mathrm{a}=\mathrm{b}$.


## Prelimsure 2020

- Thus, putting this value in $\{1\}$, therefore $\mathrm{a}=6000$.
- Thus monthly income of $X=4 a=24000$
- Thus monthly income of $Y=3 a=18000$
- Total monthly income of $X$ and $Y=42000$.

75. A
76. B

- One way passages: C-A, E-G, B-F, D-H, G-C, E-C and H-G.
- Two way passages: $A=E, G=B, F=D$ and $E=D$.
- To travel from C to H , there is only one possibility that is to travel to A .
- From A, there is only one possibility that is to travel to E. From E, there is different pathways.
- So $E$ is the only station which it has to mandatorily pass through.

77. D

- The different pathways are $\mathrm{F}=\mathrm{D}=\mathrm{E}=\mathrm{A}, \mathrm{F}=\mathrm{D}-\mathrm{H}-\mathrm{G}-\mathrm{C}-\mathrm{A}, \mathrm{F}=\mathrm{D}=\mathrm{E}-\mathrm{C}-\mathrm{A}$ and $\mathrm{F}=\mathrm{D}=\mathrm{E}-\mathrm{G}-\mathrm{C}-\mathrm{A}$.
- Total number of pathways are equal to 4 .

78. C

- If the route between $G$ and $C$ is closed, the alternate pass will be through $G=B-F=D=E-C$.
- So it need not pass through A.

79. D

- The possible numbers are 14 and 41,25 and 52,36 and 65,47 and 74,58 and 85,69 and 96.
- Therefore, the number of possible such cases are more than 5 which gives the answer as D.

80. B

- Number of digits printed from 1-9 is $=9$.
- Number of digits printed from $10-99=2^{*} 90=180$.
- Number of digits printed from $100-150=3 * 51=153$.
- Total number of digits $=153+180+9=342$.

