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1. We often hear about conflicts among different States in India over river waters. Of the 20 major river systems, 14 are already water-stressed; 75% of the population lives in water-stressed regions, a third of whom live in water-scarce areas. Climate change, the demands of rising population and the need for agriculture to keep pace, and increased rate of urbanization and industrialization will exacerbate water stress. According to the Constitution of India, water is a State subject and not that of the Union, except for regulation of inter-State rivers. Key to ensuring balance between competing demands of various stakeholders is a basin-based approach to allocate water amongst constituent regions and States. Allocating fair share of water to them requires assessments based on objective criteria, such as specificities of the river basin, size of dependent population, existing water use and demand, efficiency of use, projected future use, etc. while ensuring the environmental needs of the river and aquifers.

   Which one of the following statements best reflects the most rational, practical and immediate action required to ensure fair and equitable allocation of water to different stakeholders?

   (a) A national, pragmatic, legal and policy framework for water allocation should be made.

   (b) All river systems of the country should be linked and huge aquifers created.

   (c) Water channels between regions of water surplus and regions of water deficit should be created.

   (d) To mitigate water crisis, water demand of sectors such as agriculture and industry should be reduced.

2. More than half of Indian women and almost a quarter of Indian men of working age suffer from anaemia. According to studies, they are anywhere from 5-15% less productive than they could be, as a result thereof. India also has the largest tuberculosis burden in the world, costing 170 million workdays to the country annually. But what is just as important as lost productivity now is lost potential in the future. It is becoming increasingly clear that on many measures of cognitive ability, malnourished Indian children perform two or three times worse than their adequately nourished peers. For an economy that will be more dependent on highly skilled workers, this poses a significant challenge. And it is one that really should be addressed given India's demographic outlook.

   Which one of the following statements best reflects what is implied by the passage?

   (a) Education system must be strengthened in rural areas.

   (b) Large scale and effective implementation of skill

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development programme is the need of the hour.

(c) For economic development, health and nutrition of only skilled workers needs special attention.

(d) For rapid economic growth as envisaged by us, attention should be paid to health and nutrition of the people.

3. In India, a majority of farmers are marginal and small, less educated and possess low adaptive capabilities to climate change, perhaps because of credit and other constraints. So, one cannot expect autonomous adaptation to climate change. Even if it was possible, it would not be sufficient to offset losses from climate change. To deal with this, adaptation to climate change is paramount, alongside at fast mitigation response. Another solution is to have a planned or policy-driven adaptation, which would require the government to come up with policy recommendations. Perception is a necessary pre-requisite for adaptation. Whether farmers are adapting agricultural practices to climate change depends on whether they perceive it or not. However, this is not always enough for adaptation. It is important how a farmer perceives the risks associated with climate change.
Which one of the following statements best reflects the most logical and rational message conveyed by the author of the passage?
(a) Adaptation to climate change

and mitigation response are basically the responsibilities of the government.

(b) Climate change causes a change in government policies regarding land use patterns in the country.

(c) Risk perceptions of farmers are important for motivating them for taking adaptation decisions.

(d) Since mitigation is not possible, governments should come policies for quick response to climate change.

4. Raj has ten pairs of red, nine pairs of white and eight pairs of black shoes in a box. If he randomly picks shoes one by one (without replacement) from the box to get a red pair of shoes to wear, what is the maximum number of attempts he has to make?
(a) 27
(b) 36
(c) 44
(d) 45

5. In how many ways can a batsman score exactly 25 runs by scoring single runs, fours and sixes only, irrespective of the sequence of scoring shots?
(a) 18
(b) 19
(c) 20
(d) 21

6. There are four letters and four envelopes and exactly one letter is to be put in exactly one

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envelope with the correct address. If the letters are randomly inserted into the envelopes, then consider the following statements:

1. It is possible that exactly one letter goes into an incorrect envelope.
2. There are only six ways in which only two letters can go into the correct envelopes.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

7. What is the remainder when 85 X 87 X 89 X 91 X 95 X 96 is divided by 100?

(a) 0
(b) 1
(c) 2
(d) 4

8. What is the unit digit in the expansion of $(57242)9x7x5x3x1$?

(a) 2
(b) 4
(c) 6
(d) 8

9. If ABC and DEF are both 3-digit numbers such that A. B. C. D. E and F are distinct non-zero digits such that ABC + DEF = 1111, then what is the value of A + B + C + D + E + F ?

(a) 28
(b) 29
(c) 30
(d) 31

10. D is a 3-digit number such that the ratio of the number to the sum of its digits is least. What is the difference between the digit at the hundred's place and the digit at the unit's place of D?

(a) 0
(b) 7
(c) 8
(d) 9

11. The emissions humans put into the atmosphere now will affect the climate in the middle of the century and onwards. Technological change, meanwhile, could make a future. transition away from fossil fuels cheap or it might not, leaving the world with a terrible choice between sharply reducing emissions at huge cost or suffering through the effects of unabated warming. Businesses that do not hedge against the threat of uncertain outcomes fail. The world cannot afford such recklessness on climate change.

Which one of the following statements best reflects the crucial message conveyed by the author of the passage ?

(a) Businesses that cause emissions may need to close down or pay for pollution in future.

(b) The only solution is technological development

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related to the issues of climate change.

(c) Waiting to deal with carbon emissions until technology improves is not a wise strategy.

(d) Since future technological change is uncertain, new industries should be based on renewable energy sources.

12. Environmental problems cause health problems. Substantial changes in lifestyle can reduce environmental or health problems, but this idea appears almost impossible to adopt. With environmental problems, individual efforts can be perceived as having a negligible effect and therefore lead to inertia. With health, on the other hand, individual choices can make the difference between life and death, literally. And yet, barring a few, there seems to be the same collective lethargy towards making their choices.

Which one of the following statements best implies the most rational assumption that can be made from the passage

(a) We are likely to spend more money on cure than prevention

(b) It is the job of the government to solve our environmental and public health problems

(c) Health can be protected even if environmental problems go on unattended.

(d) Loss of traditional lifestyle and the influence of western values led to some unhealthy ways of living.

13. Many people are not eating the right food. For some, it is simply a decision to stick with food they enjoy but which is not too healthy. This is leading to an increase in non-communicable diseases. This in turn leads to major burden on our health-care systems that have the potential to derail the economic progress which is essential for the poor to improve their lives. For others, it is about limited access to nutritious food or a lack of affordability, leading to monotonous diets that do not provide the daily nutrients for them to develop fully. Part of the reason nutrition is under threat worldwide is that our food systems are not properly responding to nutritional needs. Somewhere along that long road from farm to fork, there are serious detours taking place.

Which one of the following statements best reflects the crux of the passage?

(a) The scheme of Universal Basic Income should be implemented worldwide as a way of poverty alleviation

(b) We must place food-based nutrition at the centre of our policy debate.

(c) Nutritional status of food should be improved by creating appropriate genetically modified crops.

(d) Using modern food processing technologies, we must fortify food items with required nutrient elements.

14. Three of the five positive integers p, q, r. s. t are even and

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two of them are odd (not necessarily in order). Consider the following

1. $p + q + r - s - t$ is definitely even
2. $2p + q + 2r - 2s + t$ is definitely odd.

Which of the above statements is/are correct ?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

15. Consider the following in respect of prime number p and composite number c

1. $(p+c)/(p-c)$ can be even
2. $2p+c$ can be odd.
3. pc can be odd.

Which of the statements given above are correct ?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

16. A 3-digit number ABC, on multiplication with D gives 37DD where A, B, C and D are different non-zero digits. What is the value of A+B+C ?

(a) 18
(b) 16
(c) 15
(d) Cannot be determined due to insufficient data

17. For any choices of values of X, Y and Z, the 6-digit number of the form XYZXYZ is divisible by

(a) 7 and 11 only
(b) 11 and 13 only
(c) 7 and 13 only
(d) 7, 11 and 13

18. 125 identical cubes are arranged in the form of a cubical block. How many cubes are surrounded by other cubes form each side?

(a) 27
(b) 25
(c) 21
(d) 18

19. How many distinct 8-digit numbers can be formed by rearranging the digits of the number 11223344 such that odd digits occupy odd positions and even digits occupy even positions?

(a) 12
(b) 18
(c) 36
(d) 72

20. A, B, C working independently can do a piece of work in 8, 16 and 12 days respectively. A alone works on Monday. B alone works on Tuesday, C alone works on Wednesday, A alone, again works on Thursday and so on.

Consider the following statements:

1. The work will be finished on Thursday.
2. The work will be finished in 10 days.

Which of the above statements

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is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

21. To tackle the problem of pollution in cities, policy makers think that drastic actions like temporary use of odd-even number scheme for vehicles, closing schools, factories, construction activities, and banning the use of certain type of vehicles are a way forward. Even then the air is not clean. Vehicles more than 15 years old comprise one percent of the total; and taking them off the road will not make any difference. Banning certain fuels and car types arbitrarily is not proper. Diesel engines produce more PM 2-5 and less CO_2 than petrol or CNG engines. On the other hand, both diesel and CNG engines produce more NO, than petrol engines. No one has measured the amount of NOx that CNG engines are emitting. Arbitrary bans on vehicles that have passed mandated fitness tests and periodic pollution tests are unfair. What is needed is the scientific and reliable information about the source of pollutants on a continuing basis and the technologies that will work to reduce pollution from them.
Which one of the following statements best reflects the most logical and rational implication conveyed by the passage?

(a) Arbitrary curbs on vehicles to reduce pollution are difficult to implement.
(b) Knee-jerk reactions cannot solve the problem of pollution but an evidence-based approach will be more effective.
(c) A heavy penalty should be enforced on those driving without periodic pollution tests.
(d) In the absence of laws to deal with the problems of pollution, the administration tends to make arbitrary decisions.

22. Good corporate governance structures encourage companies to provide accountability and control. A fundamental reason why corporate governance has moved onto the economic and political agenda worldwide has been the rapid growth in international capital markets. Effective corporate governance enhances access to external financing by firms, leading to greater investment, higher growth and employment. Investors look to place their funds where the standards of disclosure, of timely and accurate financial reporting, and of equal treatment to all stakeholders are met.
Which of the following statements best reflects the logical inference from the passage given above?

(a) It is an important agenda of the countries around the world to ensure access to good external financing.
(b) Good corporate governance improves the credibility of the

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firms.

(c) International capital markets ensure that the firms maintain good corporate governance.

(d) Good corporate governance paves the way for robust supply chains.

23. Elephants are landscape architects, creating clearings in the forest, preventing overgrowth of certain plant species and allowing space for the regeneration of others, which in turn provide sustenance to other herbivorous animals. Elephants eat plants, fruits and seeds, propagating the seeds when they defecate in other places as they travel. Elephant dung provides nourishment to plants and animals and acts as a breeding ground for insects. In times of drought, they access water by digging holes which benefits other wildlife.

Which one of the following statements best reflects the most logical and rational inference that can be drawn from the passage?

(a) The home range of elephants needs to be a vast area of rich biodiversity.

(b) Elephants are the keystone species and they benefit the biodiversity.

(c) Rich biodiversity cannot be maintained in the forests without the presence of elephants.

(d) Elephants are capable of regenerating forests with species as per their requirement.

24. If $7 \oplus 9 \oplus 10=8$, $9 \oplus 11 \oplus 30=5$, $11 \oplus 17 \oplus 21 = 13$, what is the value of $23 \oplus 4 \oplus 15$?
(a) 6
(b) 8
(c) 13
(d) 15

25. Let x be a positive integer such that $7x+ 96$ is divisible by x. How many values of x are possible?
(a) 10
(b) 11
(c) 12
(d) Infinitely many

26. If p, q, r and s are distinct single digit positive numbers, then what is the greatest value of $(p+q)(r+s)$?
(a) 230
(b) 225
(c) 224
(d) 221

27. A number N is formed by writing 9 for 99 times. What is the remainder if N is divided by 13?
(a) 11
(b) 9
(c) 7
(d) 1

28. Each digit of a 9-digit number is 1. It is multiplied by itself. What is the sum of the digits of the resulting number?

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(a) 64
(b) 80
(c) 81
(d) 100

29. What is the sum of all digits which appear in all the integers from 10 to 100?
(a) 855
(b) 856
(c) 910
(d) 911

30. ABCD is a square. One point on each of AB and CD; and two distinct points on each of BC and DA are chosen. How many distinct triangles can be drawn using any three points as vertices out of these six points?
(a) 16
(b) 18
(c) 20
(d) 24

31. In India, the segregation of municipal waste at source is rare. Recycling is mostly with the informal sector. More than three-fourths of the municipal budget goes into collection and transportation, which leaves very little for processing/resource recovery and disposal. Where does waste-to-energy fit into all this? Ideally it fits in the chain after segregation (between wet waste and the rest), collection, recycling, and before getting to the landfill. Which technology is most appropriate in converting waste to energy depends on what is in the waste (that is biodegradable versus non-biodegradable component) and its calorific value. The biodegradable component of India's municipal solid waste is a little over 50 per cent, and biomethanation offers a major solution for processing this.

Based on the above passage, the following assumptions have been made:

1. Collection, processing and segregation of municipal waste should be with government agencies.
2. Resource recovery and recycling require technological inputs that can be best handled by private sector enterprises.

Which of the assumptions given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

32. Which one of the following statements best reflects the crux of the passage?
(a) Generation of energy from municipal solid waste is inexpensive.
(b) Biomethanation is the most ideal way of generating energy from municipal solid waste.
(c) Segregation of municipal solid waste is the first step in ensuring the success of waste-to-energy plants.
(d) The biodegradable component of India's municipal

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solid waste is not adequate to provide energy efficiently/effectively.

33. There is a claim that organic farming is inherently safer and healthier. The reality is that because the organic farming industry is still young and not well-regulated in India, farmers and consumers, alike, are not only confused about what products are best for them. but sometimes use products in ways that could harm them as well. For example, since organic fertilizers are difficult to obtain on a large scale in India, farmers often use farmyard manure, which may contain toxic chemicals and heavy metals. Certain plant sprays, such as Datura flower and leaf spray, have an element called atropine. If it is not applied in the right dose, it can act on the nervous system of the consumer. Unfortunately, how much and when to use it are not well-researched or regulated issues.

Based on the above passage, the following assumptions have been made:

   1. Organic farming is inherently unsafe for both farmers and consumers.
   2. Farmers and consumers need to be educated about eco-friendly food.

Which of the assumptions given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

34. Which one of the following statements best reflects the most logical, rational and practical message conveyed by the author of the passage?

(a) In India, organic farming should not be promoted as a substitute for conventional farming.

(b) There are no safe organic alternatives to chemical fertilizers.

(c) In India, farmers need to be guided and helped to make their organic farming sustainable.

(d) The aim of organic farming should not be to generate huge profits as there is still no global market for its products.

35. Food consumption patterns have changed substantially in India over the past few decades. This has resulted in the disappearance of many nutritious foods such as millets. While food grain production has increased over five times since independence, it has not sufficiently addressed the issue of malnutrition For long, the Which of the assumptions given above is/are agriculture sector focussed on increasing food production particularly staples, which led to lower production and consumption of indigenous traditional crops/grains, fruits and other vegetables, impacting food and nutrition security in the process. Further, intensive, monoculture agriculture practices can perpetuate the food and nutrition security problem by degrading the

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quality of land, water and food derived through them.

Based on the above passage, the following assumptions have been made :

1. To implement the Sustainable Development Goals and to achieve zero-hunger goal, monoculture agriculture practices are inevitable even if they do not address malnutrition.

2. Dependence on a few crops has negative consequences for human health and the ecosystem.

3. Government policies regarding food planning need to incorporate nutritional security

4. For the present monoculture agriculture practices, farmers receive subsidies in various ways and government offers remunerative prices for grains and therefore they do not tend to consider

Which of the above assumptions are valid ?

(a) 1,2 and 4 only

(b) 2 and 3 only

(c) 3 and 4 only

(d) 1,2,3 and 4

36. A box contains 14 black balls, 20 blue balls, 26 green balls, 28 yellow balls, 38 red balls and 54 white balls. Consider the following statements:

1. The smallest number n such that any n balls drawn from the box randomly must contain one full group of at least one colour is 175.

2. The smallest number m such that any m balls drawn from the box randomly must contain at least one ball of each colour is 167.

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

37. If 'ZERO' is written as 'CHUR, then how is 'PLAYER' written?

(a) SOCAGT

(b) SODBGT

(c) SODBHT

(d) SODBHU

38. Consider the following statements:

1. A is older than B.

2. C and D are of the same age.

3. E is the youngest

4. F is younger than D.

5. F is older than A.

How many statements given above are required to determine the oldest person/persons?

(a) Only two

(b) Only three

(c) Only four

(d) All five

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39. Consider the following including the Question and the Statements:There are 5 members A, B, C, D, E in a family.

    Question: What is the relation of E to B?

    Statement-1: A and B are a married couple.

    Statement-2: D is the father of C.

    Statement-3: E is D's son.

    Statement-4: A and C are sisters.

    Which one of the following is correct in respect of the above Question and Statements?

    (a) Statement-1, Statement-2 and Statement-3 are sufficient to answer the Question.

    (b) Statement-1, Statement-3 Statement-4 are sufficient to answer the Question.

    (c) All four statements together are sufficient to answer the question.

    (d) All four statements are not sufficient to answer the Question.

40. Choose the group which is different from the others:

    (a) 17,37,47,97

    (b) 31, 41, 53, 67

    (c) 71, 73, 79, 83

    (d) 83, 89, 91, 97

41. Scientists studied the vernal window transition period from winter to the growing season. They found that warmer winters with less snow resulted in a longer lag time between spring events and a more protracted vernal window. This change in the spring timetable has ecological, social and economic consequences for agriculture, fisheries and tourism. As the ice melts earlier the birds don't return, causing a delay, or lengthening in springtime ecological events.

    With reference to the above passage, the 42 following assumptions have been made:

    1. Global warming is causing spring to come early and for longer durations.

    2. Early spring and longer period of spring is not good for bird populations.

    Which of the above assumptions is/are correct?

    (a) 1 only

    (b) 2 only

    (c) Both 1 and 2

    (d) Neither 1 nor 2

42. A global analysis of nitrogen use efficiency- a measure of the amount of nitrogen a plant takes in to grow versus what is left behind as pollution - says that using too much fertilizers will lead to increased pollution of waterways and the air. Currently, the global average for nitrogen use efficiency is approximately 0.4, meaning 40 per cent of the total nitrogen added to cropland goes into the harvested crop while 60 per cent is lost to the environment, says a study. More than half of the world's population is nourished by food grown with fertilizers

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containing synthetic nitrogen, which is needed to produce high crop yields. Plants: take the nitrogen they need to grow, and the excess is left in the ground, water and air. This results in significant emissions of nitrous oxide, a potent greenhouse and ozone depleting gas, and other forms of nitrogen pollution, including eutrophication of lakes and rivers and contamination of river water. Which one of the following statements best reflects the most logical, rational and crucial message implied by the passage?

(a) An enhanced efficiency of use of nitrogen is imperative for both food production and environment.

(b) Production of synthetic nitrogen fertilizers cannot be stopped as it will adversely affect global food security.

(c) Alternatives to crops that require excess of nitrogen should be identified and cultivated.

(d) Conventional agriculture using synthetic fertilizers should be replaced with agroforestry, agroecosystems and organic farming.

43. Along with sustainable lifestyles, climate justice is regarded as a significant principle in environmental parlance. Both the principles have bearings on political and economic choices of the nation. So far, in our climate change summits or compacts, both the principles have eluded consensus among nations. Justice, in the judicial sense, is well defined. However, in the context of climate change, it has scientific as well as socio-political connotations. The crucial question in the next few years will be how resources, technologies and regulations are used to support the victims of climate change. Justice in climate is not confined to actions relating to mitigation. but includes the wider notion of support for adaptation to climate change and compensation by these natural numbers? for loss and damage.

Which one of the following statements best reflects the most logical, rational and crucial message conveyed by the passage?

(a) Climate justice should be ingrained in detail in the rules of all the new climate compacts/agreements.

(b) Environmental resources are unevenly distributed and exploited across the globe.

(c) There is an impending issue of dealing with a huge number of climate change victims/climate refugees.

(d) Climate change in all its connotations is mostly due to developed countries and therefore their share of burden should be more.

44. A principal P becomes Q in 1 year when compounded half-yearly with R annual rate of interest. If the same principal P becomes Q in 1 year when compounded annually with 8% annual rate of interest, then

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which one of the following is correct?

(a) R = S

(b) R > S

(c) R < S

(d) R ≤ S

45. How many natural numbers are there which give a remainder of 31 when 1186 is divided by these natural numbers?

(a) 6

(b) 7

(c) 8

(d) 9

46. Let pp, qq and rr be 2-digit numbers where $p < q < r$. If pp + qq + rr = tto, where tto is a 3-digit number ending with zero, consider the following statements:

1. The number of possible values of p is 5.
2. The number of possible values of q is 6.

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

47. What is the sum of all 4-digit numbers less than 2000 formed by the digits 1, 2, 3 and 4, where none of the digits is repeated?

(a) 7998

(b) 8028

(c) 8878

(d) 9238

48. What is the number of selections of 10 consecutive things out of 12 things in a circle taken in the clockwise direction?

(a) 3

(b) 11

(c) 12

(d) 66

49. If today is Sunday, the which day is it exactly on 1010 th day?

(a) Wednesday

(b) Thursday

(c) Friday

(d) Saturday

50. There are three traffic signals. Each signal changes colour from green to red and then. from red to green. The first signal takes 25 seconds, the second signal takes 39 seconds and the third signal takes 60 seconds to change the colour from green to red. The durations for green and red colours are same. At 2:00 p.m, they together turn green. At what time will they change to green next, simultaneously?

(a) 4:00 p.m.

(b) 4:10 p.m.

(c) 4:20 p.m.

(d) 4:30 p.m.

51. Sourcing food from non-agricultural lands (uncultivated systems such as forests, wetlands, pastures, etc) in addition to agricultural lands

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enables a systemic approach to food consumption. It allows rural and tribal communities to sustain themselves for the whole year and steer clear of natural disasters and season-induced shortfalls of agricultural food. Since the productivity of trees is often more resilient to adverse weather conditions than annual crops, forest foods often provide a safety net during periods of food shortages caused by crop failure, forest foods also make important contributions during seasonal crop production gaps.

Which one of the following statements best reflects the most logical and rational message conveyed by the author of the passage?

(a) Food yielding trees should replace other trees in rural and tribal areas and community owned lands.

(b) Food security cannot be ensured in India with the present practice of conventional agriculture.

(c) Wastelands and degraded areas in India should be converted into agroforestry systems to help the poor.

(d) Agroecosystems should be developed in addition to or along with conventional agriculture.

52. While awareness on use/misuse and abuse of antibiotics is common knowledge, as is the impact of dosing poultry with antibiotics, the environmental impact of antibiotics-manufacturing companies not treating their waste has scarcely been discussed at any length or seriousness thus far Pollution from antibiotics factories is fuelling the rise of drug-resistant infections. The occurrence of drug-resistant bacteria surrounding the pharma manufacturing plants is well known.

Which one of the following statements best reflects the most logical and practical message conveyed by the passage?

(a) It is necessary to put proper effluent treatment protocols in place.

(b) It is necessary to promote environmental awareness among people.

(c) Spread of drug-resistant bacteria cannot be done away with, as it is inherent in modern medical care.

(d) Pharma-manufacturing companies should be set up in remote rural areas, away from crowded towns and cities.

53. Benefits of good quality school education accrue only when students complete and leave school after having acquired the gateway skills Like one learns to walk before running, similarly one picks up advanced skills only after picking the basic foundational skills. The advent of the knowledge economy poses new challenges, and one of the severe consequences of having an uneducated workforce will be our inability to keep pace with the global economy. Without a strong learning foundation at the primary level, there can be

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no improvement in higher education or skill development.

Which one of the following statements best reflects the crux of the passage?

(a) To become a global power, India needs to invest in universal quality education.

(b) India is unable to become a global power because it is not focussing or promoting knowledge economy.

(c) Our education system should focus more on imparting skills during higher education.

(d) Parents of many school children are illiterate and are unaware of the benefits of quality education.

54. 40 children are standing in a circle and one of them (say child-1) has a ring. The ring is passed clockwise. Child-1 passes on to child-2, child-2 passes on to child-4, child-4 passes on to child-7 and so on. After how many such changes (including child-1) will the ring be in the hands of child-1 again?

(a) 14

(b) 15

(c) 16

(d) 17

55. What is the middle term of the sequence Z, Z, Y, Y. Y. X, X, X, X, W, W, W, W, W,.....,A ?

(a) H

(b) I

(c) J

(d) M

56. Question: Is p greater than q?

Statement-1: p X q is greater than zero.

Statement-2: p^2 is greater than q^2

Which one of the following is correct in respect of the above Question and the Statements?

(a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

(b) The Question can be answered by using either Statement alone.

(c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

(d) The Question cannot be answered even by using both the Statements together.

57. Question: Is (p+q-r) greater than (p-q+r), where p q and r are integers?

Statement 1: (p-q) is positive

Statement-2: (p-r) is negative.

Which one of the following is correct in respect of the above Question and the Statements?

(a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

(b) The Question can be answered by using either Statement alone.

(c) The Question can be answered by using both the

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Statements together, but cannot be answered using either Statement alone.

(d) The Question cannot be answered even by using both the Statements together.

58. In a party, 75 persons took tea, 60 persons took coffee and 15 persons took both tea and coffee. No one taking milk takes tea. Each person takes at least one drink.

Question: How many persons attended the party?

Statement-1: 50 persons took milk.

Statement-2: Number of persons who attended the party is five times the number of persons who took milk only.

Which one of the following is correct in respect of the above Question and the Statements?

(a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

(b) The Question can be answered by using either Statement alone.

(c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

(d) The Question cannot be answered even by using both the Statements together.

59. Consider a 3-digit number.

Question: What is the number?

Statement-1: The sum of the digits of the number is equal to the product of the digits.

Statement-2: The number is divisible by the sum of the digits of the number.

Which one of the following is correct in respect of the above Question and the Statements?

(a) The Question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

(b) The Question can be answered by using either Statement alone.

(c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.

(d) The Question cannot be answered even by using both the statement together.

60. For five children with ages $a < b < c < d < e$; any two successive ages differ by 2 years.

Question: What is the age of the youngest child?

Statement-1: The age of the eldest is 3 times the youngest.

Statement-2: The average age of the children .

Which one of the following is correct in respect of the above Question and the statements

(a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.

(b) The Question can be answered by using either Statement alone.

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(c) The Question can be answered by using both the Statements together, but I cannot be answered using either Statement alone.

(d) The Question cannot be answered even by using both the Statements together.

61. The paradox of choice is illustrated by the (a) The Question can be answered by using story of Buridan's ass. Jean Buridan, the 14th one of the Statements alone, but cannot century philosopher, wrote about free will and be answered using the other Statement the inability to choose due to numerous choices and uncertainties. In the story, a donkey stands between two equally appealing stacks of hay. Unable to decide which to eat, it starves to death. Changes in technology and innovations such as smart phones and tablets only exacerbate our glut of choices. Constant connectivity and by using both the Statements together. overconsumption of real-time data and social media can leave little room for self-reflection and rest, making decisions more difficult. Life is about choices. Many people are overwhelmed with attractive life choices, yet find themselves unhappy and anxious.

Which one of the following statement best reflects the most logical message implied by the above passage?

(a) Modern technology enfeebles societal structure and makes life difficult

(b) Modern life is full of uncertainties and endless difficult choices.

(c) We are influenced by the opinion of others and have no courage to follow our own convictions.

(d) In our lives, having too few choices may not be a good thing, but having too many can be equally as difficult.

62. Household finance in India is unique. We have a tendency to invest heavily in physical assets such as gold and property. Steps to encourage the financialization of savings are critical. A populace accustomed to traditional processes will not simply jump into financialization. Hurdles to change include onerous bureaucracy, a scepticism of organized financial institutions, a lack of basic information about which of the myriad services and providers is best for each family, and how (and even if) one can make the transition between them if necessary.

Regarding the financialization of household savings, which of the following statements best reflect the solutions that are implied by the passage?

1. A flexible environment is needed to develop solutions.
2. Households need customised solutions.
3. Innovations in financial technology are required.

Select the correct answer using the code given below:

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(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1,2 and 3

63. Pharmaceutical patents grant protection to the patentee for the duration of the patent term The patentees enjoy the liberty to determine the prices of medicines, which is time-limited to the period of monopoly, but could be unaffordable to the public. Such patent protection offered to the patentees is believed to benefit the public over the longer term through innovations and research and development (R&D), although it comes at a cost, in the nature of higher prices for the patented medicine. The patent regime and price protection through a legally validated high price for the medicine during the currency of the patent provide the patentee with a legitimate mechanism to get returns on the costs incurred in innovation and research.

Based on the above passage, the following assumptions have been made:

1. Patent protection given to patentees puts a huge burden on public's purchasing power in accessing patented medicines.
2. Dependence on other countries for pharmaceutical products is a huge burden for developing and poor countries.
3. Providing medicines to the public at affordable prices is a key goal during the public health policy design in many countries.
4. Governments need to find an appropriate balance between the rights of patentees and the requirements of the patients.

Which of the above assumptions are valid?
(a) 1 and 2
(b) 1 and 4
(c) 3 and 4
(d) 2 and 3

64. India should ensure the growth of the digital economy while keeping personal data of citizens secure and protected. No one will innovate in a surveillance-oriented environment or in a place where an individual's personal information is compromised. The ultimate control of data must reside with the individuals who generate it; they should be enabled to use, restrict or monetise it as they wish. Therefore, data protection laws should enable the right kind of innovation- that is user-centric and privacy protecting.

Based on the above passage, the following assumptions have been made:

1. Protection of privacy is not just a right, but it has value to the economy.
2. There is a fundamental link between privacy and innovation.

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Which of the above assumptions is/are valid?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

65. In an examination, the maximum marks for each of the four papers namely P, Q, R and S are 100. Marks scored by the students are in integers. A student can score 99% in n different ways. What is the value of n?

(a) 16

(b) 17

(c) 23

(d) 35

66. A flag has to be designed with 4 horizontal stripes using some or all of the colours red, green and yellow. What is the number of different ways in which this can be done so that no two adjacent stripes have the same colour?

(a) 12

(b) 18

(c) 24

(d) 36

67. A rectangular floor measures 4 m in length and 2-2 m in breadth. Tiles of size 140 cm by 60 cm have to be laid such that the tiles do not overlap. A tile can be placed in any orientation so long as its edges are parallel to the edges of the floor. What is the maximum number of tiles that can be accommodated on the floor?

(a) 6

(b) 7

(c) 8

(d) 9

68. There are five persons P, Q, R, S and T each one of whom has to be assigned one task Neither P nor Q can be assigned Task-1 Task-2 must be assigned to either R or S. In how many ways can the assignment be done?

(a) 6

(b) 12

(c) 18

(d) 24

69. There are large number of silver coins weighing 2 gm, 5 gm, 10 gm, 25 gm, 50 gm each.

Consider the following statements:

1. To buy 78 gm of coins one must buy at least 7 coins.

2. To weigh 78 gm using these coins one can use less than 7 coins.

Which of the following statement given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

70. Consider the following:

1. A + B means A is neither smaller nor equal to B.

2. A - B means A is not

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greater than B.

3. A × B means A is not smaller than B.
4. A ÷ B means A is neither greater norequal to B.
5. AB means A is neither smaller nor greater than B.

Statement: P × Q, P-T, T ÷ R, R ± S

Conclusion-1: Q ± T

Conclusion-2: S+Q

Which one of the following is correct in respect of the above Statement and the Conclusions?

(a) Only Conclusion-1 follows from the Statement.

(b) Only Conclusion-2 follows from the Statement.

(c) Both Conclusion-1 and Conclusion-2 follow from the Statement.

(d) Neither Conclusion-1 nor Conclusion-2 follows from the Statement.

71. In India, while the unemployment rate is a Which of the statements given above is/are frequently used measure of poor performance of the economy, under conditions of rising school and college enrolment, it paints an inaccurate picture. The reported unemployment rate is dominated by the experience of younger Indians who face higher employment challenges and exhibit greater willingness to wait for the right job than their older peers. The unemployment challenge is greater for people with secondary or higher education, and rising education levels inflate unemployment challenges.

Which one of the following statements most likely reflects as to what the author of the passage intends to say?

(a) Enrolment in schools and colleges is high but there is no quality education.

(b) Unemployment must be seen as a function of rising education and aspirations of young Indians

(c) There are no labour intensive industries to accommodate the huge number of unemployed people.

(d) The education system should be properly designed so as to enable the educated people to be self-employed

72. "Science by itself is not enough, there must be a force and discipline outside the sciences to coordinate them and point to a when the goal itself has not been rightly placed. What science needs is philosophy - the analysis of scientific method and the coordination of scientific purposes and results; without this, any science must be superficial. Government suffers, precisely like science, for lack of philosophy, Philosophy bears to science the same relationship which statesmanship bears to politics: movement guided by total knowledge and perspective, as against aimless and individual seeking. Just as the pursuit of knowledge becomes

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scholasticism when divorced from the actual needs of men and life, so the pursuit of politics becomes a following terms best expresses the ultimate destructive bedlam when divorced from goal of the state? science and philosophy."

Which one of the following statements best reflects the most rational, logical and practical message conveyed by the passage?

(a) Modern statesmen need to be well 74. What is the remainder if 2192 is divided by trained in scientific methods and philosophical thinking to enable them to have a better perspective of their roles, responsibilities and goals,

(b) It is not desirable to have Governments managed by empirical statesmen unless well mixed with others who are 4 grounded in learning and reflect wisdom.

(c) As the statesmen/bureaucrats are the products of a society, it is desirable to have a system of education in a society that focuses on training its citizens in scientific method and philosophical thinking from a very early age.

(d) It is desirable that all scientists need to be philosophers as well to make their work goal-oriented and thus purposeful and useful to the society.

73. "The last end of the state is not to dominate men, nor to restrain them by fear, rather it is so to free each man from fear that he may live and act with full security and without injury to himself or his neighbour. The end of the state, I repeat, is not to make rational beings into brute beasts and machines. It is to enable their bodies and their minds to function safely. It is to lead men to live by, and to exercise, a free reason; that they may not waste their strength in hatred, anger and guile, nor act unfairly toward one another."

Based on the above passage, which one of the following terms best expresses the ultimate goal of the state?

(a) Personal safety
(b) Health of body and mind
(c) Communal harmony
(d) Liberty

74. What is the remainder if 2192 is divided by 6?
(a) 0
(b) 1
(c) 2
(d) 4

75. Consider the sequence ABC_ _ ABC_ DABBCD___ ABCD that follows a certain pattern. Which one of the following completes the sequence?
(a) DACB
(b) CDAB
(c) DCCA
(d) DDCA

76. AB and CD are 2 digit numbers. Multiplying AB with CD results

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in a 3-digit number DBF. Adding DEF to another 3-digit number GHI to results in 375. Further A. B, C, D, E, F, G, H, I are distinct digits, If E= 0, F =. 8, than what is A + B + C equal to?

(a) 6
(b) 7
(c) 8
(d) 9

77. Consider the Following statements in respect of five candidates P, Q, K, S and T Two statements are true and one statement is false.True Statement: One of P and Q was selected for the job,False Statement: At least one of R and S was selected for the job,True Statement: At most two of R, S and T were selected for the Job.Which of the following conclusions can be drawn?

　1. At least four were selected for the job.
　2. S was selected for the job.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

78. Let P, Q, R, S and T be five statements such that;

　1. If P is true, then, both Q and S are true.
　2. If R and S are true, then T is false,

Which of the Following can be

concluded?

　1. If T is true, then at least one of P and R must be false.
　2. If Q is true, then P is true,

Such the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

79. A cuboid of dimensions 7 cm X 5 cm X 3 cm is painted red, green and blue colour on each pair of opposite Faces of dimensions 7 cm X cm, 5 cm X cm, 7 cm X 3 cm respectively- Then the cuboid is cut and separated into various cubes each of side length 1 cm. Which of the following statements is/are correct?

　1. There are exactly 15 small cubes with no paint on any face
　2. There are exactly 6 small cubes with exactly two faces one painted with blue and the other with green.

Select the correct answer using the code given below:

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

80. The letteres of the word "INCOMPREHENSIBILITIES" are arranged alphabetically in reverse order. How many

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positions of the letter/letters will remain unchanged?

(a) None
(b) One
(c) Two
(d) Three

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1.	a	Ans.(a). The best answer option to ensure fair and equitable allocation of water to different stakeholders, based on the passage, is: (a) A national, pragmatic, legal and policy framework for water allocation should be made.
		The passage mentions that the key to ensuring a balance between competing demands of various stakeholders is a basin-based approach to allocate water among constituent regions and states. It further emphasizes the need for assessments based on objective criteria, such as specificities of the river basin, population size, existing water use and demand, efficiency of use, projected future use, and environmental needs of the river and aquifers.
		Therefore, a comprehensive and practical framework at the national level that encompasses legal and policy aspects is necessary to ensure fair and equitable allocation of water. This framework would consider the specific conditions and demands of each region, as well as the environmental concerns related to water resources.
		Option (b) is wrong as it will take decades to build such a vast infrastructure. Same holds for option (c). Option (d) is impossible to achieve in near-term.
2.	d	Ans.(d). The statement that best reflects what is implied by the passage is: (d) For rapid economic growth as envisaged by us, attention should be paid to the health and nutrition of the people.
		The passage highlights the prevalence of anaemia among Indian women and men, the burden of tuberculosis, and the cognitive deficits observed in malnourished Indian children. It points out that these health and nutrition issues not only result in lost productivity but also hinder future potential, which poses a significant challenge for an economy that will rely more on highly skilled workers.
		The passage implies that in order to achieve rapid economic growth as envisioned, it is crucial to address the health and nutrition of the people. This suggests that there should be attention and focus on improving the overall healthcare, nutrition, and well-being of the population.
		Option (d) reflects this implication by emphasizing the importance of paying attention to the health and nutrition of the people for the purpose of rapid economic growth.
		Option (c) is wrong due to the word "only". Options (a) and (b) do not capture the essence of the para at all.
3.	c	Ans.(c). The statement that best reflects the most logical and rational message conveyed by the author of the passage is: (c) Risk perceptions of farmers are important for motivating them to take adaptation decisions.
		The passage discusses the challenges faced by Indian farmers, who are

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		predominantly marginal and small, less educated, and possess low adaptive capabilities to climate change. It states that autonomous adaptation to climate change is unlikely due to various constraints. Additionally, the passage highlights the need for adaptation and fast mitigation responses to climate change. It suggests that a planned or policy-driven adaptation, facilitated by government policies and recommendations, could be a solution. It also emphasizes the importance of farmers' perception of climate change risks for adaptation. From this information, it can be inferred that the author's most logical and rational message is that the risk perceptions of farmers play a crucial role in motivating them to make adaptation decisions. This implies that farmers' awareness and understanding of the risks associated with climate change are essential for them to take appropriate adaptive measures. Option (a) is totally wrong. Option (b) is not wrong, but is not the main idea. Option (d) is wrong as it rules out mitigation.
4.	b	Sol. Ans.(b). To find the maximum number of attempts Raj has to make in order to get a red pair of shoes, we need to consider the worst-case scenario. In this case, Raj would first pick all the shoes that are not red until he finally gets a red pair. Let's calculate the number of non-red shoes he has to pick before obtaining a red pair: Number of non-red shoes = (9 pairs of white shoes) + (8 pairs of black shoes) = 9 x 2 + 8 x 2 = 18 + 16 = 34 In any case the next two will be of Red colour shoes. So, we can say that he has to pick 36 shoes to get the desired result. This problem is based on "Pigeon Hole Principle".
5.	b	Sol. Ans.(b). To determine the number of ways a batsman can score exactly 25 runs by scoring single runs, fours, and sixes only, we need to consider all possible combinations. Let's analyze the possibilities - Scoring only singles - The batsman can score 25 runs by hitting 25 singles. i.e. 1 way. Scoring with fours and singles - The batsman can score 25 runs by hitting 1 four and 21 singles, 2 four and 17 singles, 3 fours and 13 singles, 4 fours and 9 singles, 5 fours and 5 singles, 6 fours and 1 single. So total 6 ways. Scoring with six and singles - The batsman can score 25 runs by hitting 1 six and 19 singles, 2 sixes and 13 singles, 3 sixes and 7 singles, 4 sixes and 1 single. So, total 4 ways. Scoring six, four and singles – 1 six – 1 four – 15 singles, 1 six – 2 fours – 11 singles, 1 six – 3 fours – 7 singles, 1 six – 4 fours – 3 singles, 2 sixes – 1 four – 9 singles, 2 sixes – 2 fours – 5 singles, 2 sixes – 3 fours – 1 single, 3 sixes – 1 four – 3 singles. Total 8 ways.

		So, total 1 + 6 + 4 + 8 = 19 ways.
6.	b	Sol. Ans.(b). Statement 1 is incorrect. Out of four envelopes, exactly one letter is in wrong envelope means that the other three letters are in correct envelopes. But if so then the fourth has to be in the correct envelope (as for it no other way exists). That contradicts the initial condition. So, statement 1 is incorrect. Statement 2 is correct. Only two letters can go in correct envelopes in 4C2 = 6 ways.
7.	a	Sol. Ans.(a). If you will divide 85 × 87 × 89 × 91 × 95 × 96 by 100, it will get divided completely. 100 = 5 x 5 x 4. So divide 85 by 5, it gets divided fully. Now divided 95 by 5, and it is divided fully. Now divide 96 by 4, and it too gets divided fully. So the full product (85 × 87 × 89 × 91 × 95 × 96) is fully divisible by 100 (which is 5x5x4). So the remainder will be zero.
8.	a	Sol. Ans.(a). Here concept of 'power cycles' will be used. Only unit digits are responsible for producing unit digits in the process of multiplication. So, to find the unit's digit of $57242^{9×7×5×3×1}$ we just have to find the unit's digit of $2^{9×7×5×3×1} = 2^{945}$. Now, 2's power cycle is 2-4-8-6. That means if the power is multiple of four, unit digit will be 6. If the power is one more than the multiple of four, unit digit will be 2. If the power is two more than the multiple of four, unit digit will be 4. If the power is three more than the multiple of four, unit digit will 8. In our case 945 = 4×236 + 1, so unit's digit will be 2.
9.	d	Ans.(d). It is given that ABC and DEF are three-digit numbers. A, B, C, D, E, F are distinct non-zero digits. ABC + DEF = 1111 It means that C + F = 11 …(1), Again B + E = 10 …(2), Again A + D = 10 …(3) How? No other combination is possible that will yield 1111 as the sum of these two (ABC and DEF). Try it out. By equations 1, 2 and 3 we have A + B + C + D + E + F = 10 + 10 + 11 = 31.
10.	c	Ans.(c). The ratio will be minimum when numerator is minimum and denominator is maximum. Basically, we have to minimize 100a + 10b + c at the same time maximize a + b + c.

		Let us express the numbers now. And simplify the expression. $(100a+10b+c)/(a+b+c) = (99a+9b)/(a+b+c) + 1 = (9(11a+b))/(a+b+c) + 1$. To minimize this value $((11a+b))/(a+b+c)$ should be minimum. That would be possible when c is maximum and a is minimum. So take $a = 1$ and $c = 9$. Required difference = $9 – 1 = 8$. Note: The number will be 199.
11.	c	Ans.(c). The crucial message conveyed by the author of the passage is best reflected in option (c) "Waiting to deal with carbon emissions until technology improves is not a wise strategy." The author emphasizes that the emissions humans put into the atmosphere today will have long-term impacts on the climate. They suggest that relying solely on future technological advancements to address climate change is not a wise approach. The passage highlights the uncertainty of technological change and its potential to either make a transition away from fossil fuels cheap or leave the world with limited options and the consequences of unabated warming. The author also mentions the importance of businesses hedging against the threat of uncertain outcomes. This suggests that businesses should take proactive measures to address the potential risks associated with climate change, rather than waiting for technological developments to provide a solution. Option (a) is not the best choice because it only focuses on businesses causing emissions, while the passage has a broader perspective on the issue of climate change. Option (b) is not the best choice because it oversimplifies the solution by suggesting that only technological development can address climate change. Option (d) is not the best choice because it introduces the idea of new industries based on renewable energy sources, which is not explicitly discussed in the passage.
12.	a	Ans.(a). Options (b) and (d) can be directly ruled out as there is no direct mention of 'government doing the job or possibility of government doing the job'. Similarly considering option (d), passage is not about 'traditional lifestyle of western values.' Now from the remaining options (c) can be ruled out because the very first sentence of the passages says that "Environment problems cause health problem".
13.	b	Ans.(b). The passage discusses the issue of people not eating the right food, leading to an increase in non-communicable diseases and burdening healthcare systems. It mentions that some individuals choose to stick with unhealthy food they enjoy, while others face limited access to nutritious food or lack affordability. It also highlights that food systems are not adequately responding to nutritional needs, causing

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detours along the path from farm to fork.

Option (a) - The passage does not mention Universal Basic Income or poverty alleviation. It focuses on the issue of people not eating the right food, the impact on health, and the deficiencies in food systems. Therefore, this statement cannot be assumed from the passage. So, it is not the correct one.

Option (b) - This statement aligns with the crux of the passage. The passage emphasizes the importance of food-based nutrition and highlights the consequences of people not eating the right food. It also suggests that food systems are not adequately responding to nutritional needs. Therefore, this statement best reflects the central message of the passage.

Option (c) - The passage does not mention genetically modified crops or suggest that they should be created to improve the nutritional status of food. While it highlights the deficiencies in food systems, it does not specify the exact measures that should be taken. Therefore, this statement cannot be assumed from the passage.

Option (d) - The passage does not mention fortifying food items with required nutrient elements or using modern food processing technologies. While it addresses the issue of people not getting the necessary nutrients from their diets, it focuses more on the overall response of food systems rather than specific processing technologies. Therefore, this statement cannot be assumed from the passage. Ans.(b)

| 14. | a | Ans.(a). It is given that out of five positive integers p, q, r, s and t, 3 are even and 2 are odd. |

Let's consider statement 1: $p + q + r - s - t$ is definitely even.

Three cases are possible –

1. s, t are odd; p, q, r are even – In that case even + even + even – odd – odd = Even
2. s, t are even; two of p, q, r are odd and one even – In that odd + odd + even – even – even = even – even = Even.
3. One of s and t are even and other odd; one of p, q, r are odd and other two even – In that case even + even + odd – odd – even = odd – odd = Even

In all possible cases $p + q + r - s - t$ is even. So, statement 1 is correct.

Let's consider statement 2: $2p + q + 2r - 2s + t$ is definitely odd.

In this statement, whether p, r and s are odd or even 2p, 2r and 2s will be even.

If q and t both are even then $2p + q + 2r - 2s + t$ will be even.

If q and t both are odd then $2p + q + 2r - 2s + t$ will be even.

But when, one of q and t is odd and other even then $2p + q + 2r - 2s + t$ will be odd. So, statement 2 is not correct.

15.	d	Ans.(d). Prime Numbers can be even or odd (2 is only even prime number). Composite number can be even or odd. Given, p is a prime number, c is a composite number. 1. If we will take p = 2 and c as any even composite number then (p+c)/(p−c)=(even +even)/(even −even) = even/even, which can be even. So, 1 is true. 2. 2p will always be even. Now if c is even 2p+c will be even. So, this can be even. So, 2 is true. 3. If you will take any odd prime number as 'p' and any odd number as 'c', then pc can be odd. So, 3 is true. All three statements are true.
16.	a	Ans.(a). Given ABC × D = 37DD, where A, B, C and D are different non-zero digits. So, 37DD/D = ABC. Now we will see the possible cases. 3711/1 = 3711 - not matched, 3722/2 = 1861 - not matched, 3744/4 = 936 - matched, 3755/5 = 751 – not matched (B and D became same), 3766/6 = 3788/8 = 3799/9 = no integer value. So, only one such number = 936 × 4 = 3744. So, answer 9 + 3 + 6 = 18.
17.	d	Ans.(d). The number is XYZXYZ. In place value form that will be 1,00,000X + 10,000Y + 1000Z + 100X + 10Y + Z = 100100X + 10010Y + 1001 Z = 1001 (100X + 10Y + Z). Now, 1001 is completely divisible by 7, 11 and 13.
18.	a	Ans.(a). 125 cubes will form 5 cubes in each dimension. Cubes which are surrounded by other cubes from each side will be inside this layer. So, the number of such cubes will $(\sqrt[3]{125} - 2)3 = (5 - 2)3 = 33 = 27$.
19.	c	Ans.(c). We have two 1's and two 3's These can be arranged at odd positions in (4! / 2! 2!) = 6 ways. Similarly, two 2's and two 4's can be arranged in even positions in (4! / 2! 2!) = 6 ways. So, total number of ways possible = 6 × 6 = 36.
20.	a	Ans.(a). First take the LCM of 8, 16 and 12, to start solving the question. LCM will be 48. Let the total amount of work = 48 units. A alone can complete the piece of work in 8 days, so A's rate = 48/8 = 6 units per day. B alone can complete the piece of work in 16 days, so B's rate = 48/16 = 3 units per day.

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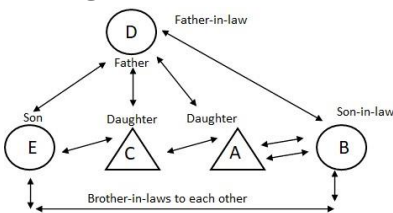
		C alone can complete the piece of work in 12 days, so A's rate = 48/12 = 4 units per day. In first three days (Monday, Tuesday and Wednesday) work done = 6 + 3 + 4 = 13 units In next three days (Thursday, Friday and Saturday) work done = 6 + 3 + 4 = 13 units. In next three days (Sunday, Monday and Tuesday) work done = 6 + 3 + 4 = 13 units. Total work done = 39 units Next day (Wednesday) A will work, work done = 6 units. Total work done = 39 + 6 = 45 units. 10 days are complete but work is not done completely. So, statement 2 is not correct. Remaining work = 48 – 45 = 3 units will be complete by B (Rate 3 units per day) on 11th day i.e., Thursday. So, statement 1 is correct. (The other approach will be to assume the total work as 1 unit, and work with that.)
21.	b	Ans.(b). The passage discusses the drastic policies thought by policy makers to tackle the problem of air pollution in cities. With policies such as temporary use of odd-even number scheme for vehicles, banning the use of certain type of vehicles, closing schools, factories, construction activities, banning certain fuels and car types arbitrarily without scientific and evidence-based approach thinking that it will resolve the problem. Option (a) Arbitrary curbs on vehicles to reduce pollution are difficult to implement because a certain type or category cannot be banned as it can be used for a prolonged time for different uses that might not have better alternatives available currently. Option (b) – It is the correct answer. Knee-jerk reactions cannot solve the problem of pollution but an evidence-based approach will be more effective to tackle the problem of pollution as it can be used to ban the cars/fuels that are really harmful and have a major portion of the pollution as well and it also enables the policy makers to take the right decisions that are evident based and will have drastic impacts on reducing pollution. Option (c) – charging a heavy penalty on those driving without periodic pollution tests will also not provide solutions to tackle the pollution as the amount of such population will be very less and improving them will have a little to no effect on tackling the problem of pollution. Option (d) – the option states the absence of laws to deal with pollution while there are certain laws to deal with the problems associated with pollution but even the administration taking arbitrary decisions will not help solve the problem of pollution.
22.	b	Ans.(b). The given passage states that Good corporate governance

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structures encourage companies to provide accountability and control. A fundamental reason why corporate governance has moved onto the economic and political agenda worldwide has been the rapid growth in international capital markets. Effective corporate governance enhances access to external financing by firms, leading to greater investment, higher growth and employment. Investors look to place their funds where the standards of disclosure, of timely and accurate financial reporting, and of equal treatment to all stakeholders are met.

Option (a) states it is an important agenda of the countries around the world to ensure access the good external financing while it is not necessarily the case with most of the countries (except those with huge international market capitals and stakeholders).

Option (b) says that "Good corporate governance improves the credibility of the firms". That is the correct option.

You may be confused with (c), but note that it is not just international capital markets that lead to good corporate governance.

| 23. | b | Ans.(b) Correct answer is option (b).
Option (a) says that elephants need to be a vast area of rich biodiversity while the passage above discusses about the benefits that the elephant species make to the environment that they reside in but does not discuss how they are in terms of area and biodiversity.
Ans (b) clearly states that elephants are the keystone species and they benefit the biodiversity.
Option (c) The option is extreme in its scope. Hence rejected.
Option (d) There is no mention of elephants regenerating forests with species as their requirements. |

| 24. | a | Ans.(a) Logic follows as given below -
7@9@10 = 8 => 7 + 9 + 10 = 26 = 2 + 6 = 8
9@11@30 = 5 => 9 + 11 + 30 = 50 = 5 + 0 = 5
11@17@21 = 13 => 11 + 17 + 21 = 49 = 4 + 9 = 13
So, correct answer = 23@4@15 => 23 + 4 + 15 = 42 = 4 + 2 = 6. |

| 25. | c | Ans.(c) 7x + 96 is divisible by x means
(7x + 96)/x = Integer.
So. (7x + 96)/x=7+96/x = integer.
It means x is a factor of 96. So, total number of factors of 96 must be found.
96 = 25 × 31, by comparing with Ap × Bq we find p = 5, q = 1
Formula for total number of factors (p+1)(q+1) = (5+1) (1+1) = 6 × 2 = 12. |

| 26. | b | Ans.(b) For any two digits whose addition is constant, its multiplication will be maximum when they are equal. (standard theory) |

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		For example, if a + b = 8, the product ab will be highest for a = 4 and b = 4 (i.e., 16).
		For any other value of pair of (a, b) like (1, 7), (2, 6) (3, 5) value of ab will be less.
		Similarly when we have to maximize (p+q) x (r+s), first we have to take the largest values of p, q, r and s which are 9, 8, 7 and 6.
		Now arrange these four numbers in such way that p + q = r + s, which can be done like this –
		p + q = 9 + 6 = 15 and r + s = 8 + 7 = 15.
		No other combination will be possible. So, maximum value of (p+q) x (r+s) = 15 × 15 = 225.
27.	a	Ans.(a) There is a pattern. Carefully observe it.
28.	c	Sol. Ans.(c) We have to find the sum of the digits of the number, which is the result of 111111111 × 111111111.
		Observe the pattern 11 × 11 = 121, 111 × 111 = 12321, 1111 × 1111 = 1234321… and so on.
		So, 111111111 × 111111111 = 12345678987654321.
		So, sum of the digits = 2 (1 + 2 + 3 + 4 + 5 + 6 + 7 + 8) + 9 = 81.
29.	b	Sol. Ans.(b) From 10 to 100
		Digit 1 will appear 20 times (10 to 19, 11, 21, 31, 41, 51, 61, 71, 81, 91, 100) = Sum = 20
		Digit 2 will appear 19 times (20 to 29, 12, 22, 32, 42, 52, 62, 72, 82, 92) = Sum = 38
		Digit 3 will appear 19 times (30 to 39, 13, 23, 33, 43, 53, 63, 73, 83, 93) = Sum = 57
		Digit 4 will appear 19 times (40 to 49, 14, 24, 34, 44, 54, 64, 74, 84, 94) = Sum = 76
		Digit 5 will appear 19 times (50 to 59, 15, 25, 35, 45, 55, 65, 75, 85, 95) = Sum = 95
		Digit 6 will appear 19 times (60 to 69, 16, 26, 36, 46, 56, 66, 76, 86, 96) = Sum = 114
		Digit 7 will appear 19 times (70 to 79, 17, 27, 37, 47, 57, 67, 77, 87, 97) = Sum = 133
		Digit 8 will appear 19 times (80 to 89, 18, 28, 38, 48, 58, 68, 78, 88, 98) = Sum = 152

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		Digit 9 will appear 19 times (90 to 99, 19, 29, 39, 49, 59, 69, 79, 89, 99) = Sum = 171 So, desired answer = 38 + 57 + 76 + 95 + 114 + 133 + 152 + 171 + 20 = 19 (2 + 3 + 4 + 5 + 6 + 7 + 8 + 9) + 20 = 19 × 44 + 20 = 836 + 20 = 856.
30.	c	Sol. Ans.(c) Since we have to choose three points out of given six points, hence number of triangles possible will be equal to 6C3 = (6 × 5 × 4)/(3×2×1) = 20.
31.	d	Sol. Ans.(d) Statement (1) Collection, processing and segregation of municipal waste should be with government agencies. Statement (2) Resource recovery and recycling require technological inputs that can be best handled by private sector enterprises. Neither 1 nor 2 is correct because the passage only talks about how the process works in India and how the philosophy of waste to energy fits into the system making it more efficient without talking about who should do it (government or private sector).
32.	c	Sol. Ans.(c) Option (a) its states that generation of energy from municipal solid waste is inexpensive but it is quiet opposite of the fact that the municipal body spends more than three-fourths of the municipal budget in collection and transportation of the waste from source to landfills/ processing plants after which segregation is done that is a much more tedious and expensive process. So, (a) is not the correct answer. Option (b) suggests that "Bio-methanation is the most ideal way of generating energy from municipal solid waste", but that is not a specific fact mentioned in general, anywhere in the para. Option (c) is the correct answer as it is closest to the crux of the para. Option (d) is not correct as there are techniques that can extract energy from India's municipal solid waste.
33.	b	Sol. Ans.(b) Statement 1 – The passage does not claim that organic farming is inherently unsafe, but only indicates that it is too early to tell. Statement 2 – The passage supports this statement.
34.	c	Sol. Ans.(c) The statement that best reflects the most logical, rational and practical message conveyed by the author is option (c) as it clearly talks about educating and guiding the Indian farmer to make their organic farming sustainable while using the correct techniques and using the correct inputs such as manures and natural fertilizers in the right quantity.
35.	d	Sol. Ans.(d) The word "Assumptions" is very wide in scope, and can also mean some ideas not directly mentioned in the paragraph. Here, statement 1 uses "Sustainable Development Goals" and statement

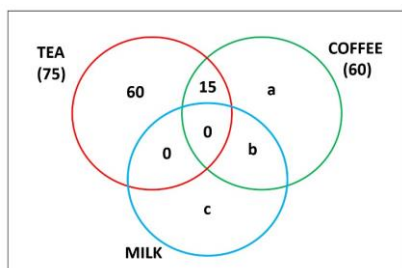|		
		4 uses "subsidies". We cannot ignore these two because they do seem connected with the paragraph's key idea. So both 1 and 4 look right, in context of the paragraph. If SDG goal of "zero hunger" is to be met, temporarily overlooking nutrition angle in production is an inevitable result. Similarly, in statement 4, little crop diversity is a natural corollary of subsidy patterns. Statement 2 – the passage clearly conveys that dependence on a few crops has negative consequences for human health and the ecosystem as monoculture does not address malnutrition and monoculture agriculture practices can perpetuate the food and nutrition security problem by degrading the quality of land, water and food derived through them.
36.	c	Sol. Ans.(c) Both statements are correct. Let's analyze. We have, 14 Black, 20 Blue, 26 Green, 28 Yellow, 38 Red and 54 White balls. Total 180 balls. Remember we are drawing randomly. Statement 1 – The smallest number of balls drawn such that one full group of atleast one colour. This can be done as follows – Reduce all group sizes by 1. So if you got 13 black balls, 19 blue, 25 green, 27 yellow, 37 red and 53 white balls, total = 13 + 19 + 25 + 27 + 37 + 53 = 174 balls. Now in any condition, when you choose the 175th ball, a group of one of the given colours must be completed. So, statement 1 is correct. Statement 2 – The smallest number of balls drawn such that group must contain at least one ball of each colour. This can be done as follows – Suppose first you got 54 white balls, then 38 red balls, then 28 yellow balls, then 26 green balls, then 20 blue balls = 54 + 38 + 28 + 26 + 20 = 166 balls. Now in any condition, when you choose the 167th ball there will be atleast one ball of each colour. So, statement 2 is correct.
37.	d	Sol. Ans.(d) Logic of '+3' is followed in this coding. So every letter is being coded with a letter which is 3 letters ahead of it. Z – A – B – C, E – F – G – H, R – S – T – U, O – P – Q – R So, answer will be P – Q – R – S, L – M – N – O, A – B – C – D, Y – Z – A – B, E – F – G – H, R – S – T – U. SODBHU.
38.	d	Sol. Ans.(d) According to the condition given in question, the order is like -> C = D > F > A > B > E. You can find the oldest person/persons without using the information given in statement 1. So, all five statements are required.

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39.	d	Sol. Ans.(d) As per the condition given in question, all the statements will be required to find relation between E and B. You will get the following arrangement.
40.	d	Sol. Ans.(d) Option (d) is different. In all other options, all numbers are primes but in option (d) out of 83, 89, 91 and 97, 91 is not prime. Here, if you remembered the list of primes upto 100, you could have solved fast.
41.	d	Sol. Ans.(d) The passage explains the vernal window which is a transition period from winter to the growing season talking about what the scientists studied. Statement (1) "Global warming is causing spring to come early and for longer durations." Statement (2) "Early spring and longer period of spring is not good for bird populations." Correct answer is option (d) as neither the passage mentions anything explicitly about global warming nor anything about bird populations. It just explains what the studies found about the vernal window.
42.	a	Sol. Ans.(a) Correct answer is option (a), because an enhanced efficiency of use of nitrogen is imperative for both food production and environment as it will ensure the proper crop yields and will leave less to no traces of excess nitrogen in the soil or air. The passage does not talk about 'to stop the production of synthetic nitrogen fertilizer', 'alternative crops' or 'agroforestry etc.'. So, (b), (c) and (d) can be ruled out.
43.	c	Sol. Ans.(c) Correct answer is option (c). Option (a) can be ruled out as, there is no mention 'to ingrain climate justice in the rules of climate compacts and agreements.' Option (b) can be ruled out as, passage no where talks about 'environmental resources or uneven distribution of environmental resources. Option (d) can be ruled out as, there is no mention of 'developed countries' in the passage.
44.		Sol. Ans.(c) According to the condition given –

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		$P\left(1 + \frac{R/2}{100}\right)^2 = Q$ or $$R = 200\left(\sqrt{\frac{Q}{P}} - 1\right)$$ $P\left(1 + \frac{S}{100}\right) = Q$ or $$S = 100\left(\frac{Q}{P} - 1\right)$$ For any value of Q/P, S will be greater than R.
45.	d	Ans.(d) We have to find such numbers which when they divide 1186 leave a remainder of 31. It means that those numbers should completely divide 1186 – 31 = 1155. So we have to find the factors of 1155, which are greater than 31. Now prime factors are: $1155 = 3^1 \times 5^1 \times 7^1 \times 11^1$ So by standard theory, total factors will be = 2 × 2 × 2 × 2 = 16 Listing all factors of 1155, we get = (1, 3, 5, 7, 11, 15, 21, 33, 35, 55, 77, 105, 165, 231, 385, 1155) out of which (33, 35, 55, 77, 105, 165, 231, 385, 1155), i.e. a total of 9 numbers exist which will satisfy the condition given in question.
46.	c	Sol. Ans.(c) Both the statements are correct – As per the condition given in question pp < qq < rr and pp + qq + rr = tt0. This can be possible n following ways: 11 + 22 + 77 = 110 11 + 33 + 66 = 110 11 + 44 + 55 = 110 22 + 33 + 55 = 110 33 + 88 + 99 = 220 44 + 77 + 99 = 220 55 + 66 + 99 = 220 So, p can have five values (1, 2, 3, 4, 5) and q can have 6 values (2, 3, 4, 6, 7, 8).
47.	a	Sol. Ans.(a) 4-digit number less than 2000, using digits 1, 2, 3 and 4 without repetition are 1234, 1243, 1324, 1342, 1423, 1432. So required sum = 1234 + 1243 + 1324 + 1342 + 1423 + 1432 = 6000 + 1800 + 180 + 18 = 7998.
48.	c	Sol. Ans.(c) Let there be 12 things numbered 1 to 12 in a circle arranged

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		as shown in the diagram given. Now, for 10 consecutive things in clockwise direction, we can have 1 to 10, 2 to 11, 3 to 12, 4 to 1, 5 to 2, 6 to 3, 7 to 4, 8 to 5, 9 to 6, 10 to 7, 11 to 8 and 12 to 9. So, total 12 selections are possible.
49.	b	Sol. Ans.(b) Every seventh day is same day as today. For 8 days there will be remainder of 1, so day will be next day from today. For 9 days there will remainder of 2, so day will 2 days after today and so on. Basically we have to look at the remainders when divided by 7. If there is one remainder days is next day from today, if there is 2 remainder day is two day after today etc. $10^{10} = (3 \mod 7)^{10} = 3^{10} \mod 7 = 3^9 \times 3 \times \mod 7 = (3^3)^3 \times 3 \times \mod 7 = 27^3 \times 3 \times \mod 7$. Now as $27 = -1 \mod 7$, we have $27^3 \times 3 \times \mod 7 = (-1 \mod 7)^3 \times 3 \times \mod 7 = (-1)^3 \times 3 \times \mod 7$ (as $\mod x \times \mod x = \mod x$) $= (-1)^3 \times 3 \times \mod 7 = -3 \mod 7 = 4 \mod 7$. So, remainder = 4. Since today is Sunday, so required day = Sunday + 4 = Thursday.
50.	b	Sol. Ans.(b) We have to take LCM of 25, 39 and 60, which is 3900. So, after 3900 seconds of 2:00 pm, the lights will show red colour and 3900 seconds after it will show green colour again. So, 3900 + 3900 = 7800 seconds after 2:00 pm, the lights will show green colour again. 7800 seconds = 7800/60 = 13 minutes. So in every 13 minutes after 2:00 pm the lights will show green colour together i.e, at 2:13 pm, 2:26 pm, 2:39 pm, 2:52 pm, 3:05 pm, 3:18 pm, 3:31 pm, 3:44 pm, 3:57 pm, 4:10 pm.
51.	d	Sol. Ans.(d) Option (a) "Food yielding trees should replace other trees in rural and tribal areas and community owned lands", is not practically possible as it will need to take down the current flourishing flora of the ecosystem that might lead to ecological imbalance as well affect the overall productivity of the land. Moreover, passage doesn't suggest that. Option (b) "Food security cannot be ensured in India with the present practice of conventional agriculture" – the passages does not mention anything in relation to any nation's food security. Option (c) "Wastelands and degraded areas in India should be converted into agroforestry systems to help the poor" – the passage also does not mention anything related to helping the poor. Correct answer is option (d). Agro ecosystems should be developed in

		addition to or along with conventional agriculture as it will act as a safety net in adverse times or during major crop failures that will ensure a sustainable backup for the population.
52.	a	Sol. Ans.(a) Option (a) is the correct answer. It is necessary to put proper effluent treatment protocols in place that will keep a check on the pollution caused by pharma companies that can stop fuelling the rise of drug-resistant infections. Option (b) – creating awareness among people will not solve the issue of pollution causes by these manufacturing plants. Moreover, passage does not suggest this. Option (c) – Spread of drug-resistant bacteria cannot be done away with, as it is inherent in modern medical care from the passage that cannot be said evidently. Option (d) – passages does not talk about setting up Pharma-manufacturing companies should be set up in remote rural areas.
53.	a	Sol. Ans.(a) Option (a) – this is the only option that seems correct. Option (b) – this option concludes that India has already failed, which is not mentioned in the passage. Option (c) – the passage talks about the progression of skills and learning, and not only higher education, hence this is incorrect. Option (d) – parents are not discussed in the passage, hence this option is incorrect.
54.	b	Sol. Ans.(b) The ring will go in this way: Child 1 – Child 2 – Child 4 – Child 7 – Child 11 – Child 16 – Child 22 – Child 29 – Child 37 – Child 6 – Child 16 – Child 27 – Child 39 – Child 12 – Child 26 – Child 1. Every time the number between the children is increasing by 1. (pattern) So, after 15 such changes the ring will again in the hand of child 1.
55.	b	Sol. Ans.(b) Z is written 2 times, Y is written 3 times, X is written 4 times. Following this pattern, A will be written 27 times. So, 2 + 3 + 4 + 5 …. + 27 terms are there. That is equal to (27×28)/2-1 (Formula is - Sum of first n natural numbers = (n(n+1))/2) So, there are 27 × 14 - 1 = 378 – 1 = 377 terms. Middle term will (377 + 1)/2 = 378/2 = 189th term. Means 189th term from both left and right side. Now count from right hand side 27 (As) + 26 (Bs) + 25 (Cs) + 24 (Ds) + 23 (Es) + 22 (Fs) + 21(Gs) + 20 (Hs) = 188 terms. So, 189th term will be I.
56.	d	Sol. Ans.(d) Question: Is p > q?

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		Statement I: p × q is greater than 0. Means either p and q both are positive or p and q both are negative. If p and q are positive, we can't say p is greater than q or not. Take example of 2 and 3. If p = 2 and q = 3 then p < q and if p = 3 and q = 2 then p > q. So, statement 1 alone is not sufficient to answer the question. So, answer can't be option (b). Statement II: p2 > q2. Means either p and q both are positive or p and q both are negative. Take example of p = 3, and q = 2, here p > q and p2 > q2. But if p = - 3 and q = 2, here p < q, but then too p2 > q2. So, by statement 2 alone we can't say p is greater than q or not. So, answer can't be option (a). By combining both the statements – If p = 3, and q = 2, here p > q and p2 > q2. If p = - 3, and q = - 2, here p < q and p2 > q2 So, even after combining both the statements we can't answer whether p > q or not.
57.	c	Sol. Ans.(c) Question: Is p + q – r is greater than p – q + r? where p, q and r are integers Statement I: p – q > 0 => p > q or - p < - q Example 1: If p = 3, q = 2, r = 0 then p + q – r > p – q + r Example 2: If p = 3, q = 2, r = 100 then p + q – r < p – q + r. So, statement 1 alone is not sufficient to answer the question. So, answer can't be option (b). Statement II: p – r < 0 => p < r or – p > - r Example 1: If p = 2, r = 3, q = 0 then p + q – r < p – q + r Example 2: If p = - 3, r = - 1, q = 0 then p + q – r > p – q + r. So, statement 2 alone is not sufficient to answer the question. So, answer can't be option (a). By combining both the statements – We have p – q is positive, p – r is negative or r > p > q For any values of r, p and q such that r > p > q, p + q - r < p – q + r. So, we can answer even using both the statements.
58.	c	Sol. Ans.(c) We have this initial information –

Statement 1 – 50 persons took milk. This give us b + c = 50 and a + b = 45. We can't find the values of a, b, c individually nor the combined value of a + b + c. So we can't find the answer. Statement 1 alone is not sufficient.

Statement 2 – It adds the following information (Total = 5 x c, where c = milk only)

5 x c
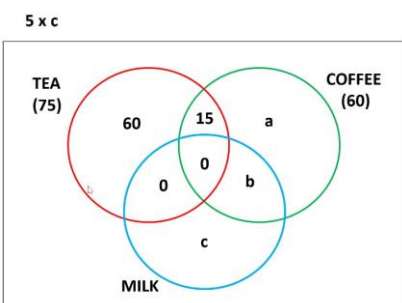
Which gives us a + b = 45 and 5c = 60 + 15 + a + b + c => 4c = 75 + a + b.

We can't find the values of a, b, c individually nor the combined value of a + b + c. So we can't find the answer. Statement 2 alone is not sufficient.

By combining both the statements we have –

4c = 75 + a + b …(1)

b + c = 50 …(2) and

a + b = 45 …(3)

By 1 and 3 – we have 4c = 75 + 45 => 4c = 120 => c = 30 and 5c = total number of persons attended the party = 150.

So, we can answer the question by using both the statements together.

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59. | **d**

Sol. Ans.(d) Let the number is abc, where a, b and c are the digits of the number.

Statement 1 - a + b + c = abc
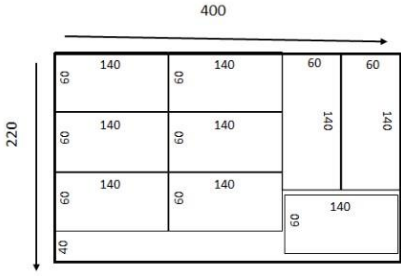
Ex 1. Number can be 123 : 1 + 2 + 3 = 1 × 2 × 3 or 6 = 6

Ex. 2 Number can be 132 : 1 + 3 + 2 = 1 × 3 × 2 or 6 = 6

So, from statement 1 alone we can't find the number uniquely. So it is not sufficient to answer the question. Answer can't be option (b).

Statement 2 – Atleast two examples are possible 108 / 9 = 12, 110 / 2 =

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		55.
		So we can't answer the question using statement 2 alone. Answer can't be option (a).
		Even after combining both the statements we can't answer the questions. Take two examples –
		Ex 1. 312 : 3 + 1 + 2 = 3 × 2 × 1 or 6 = 6 and also 312/6 = 52.
		Ex. 2 132 : 1 + 3 + 2 = 1 × 3 × 2 or 6 = 6 and also 132/6 = 22
		So, we can't uniquely determine the number.
60.	b	Sol. Ans.(b) Both statements independently are sufficient to answer the question.
		According to question we have a < b < c < d < e, b = a + 2, c = a + 4, d = a + 6 and e = a + 8
		Statement 1: a + 8 = 3a or a = 4. So, statement 1 alone is sufficient to answer the question.
		Statement 2: (a + a + 2 + a + 4 + a + 6 + a + 8)/ 5 = 8 or 5a + 20 = 40 or a = 4. So, statement 2 alone is sufficient to answer the question.
61.	d	Sol. Ans.(d) Option (a) – Passage does not talk about 'social structures'. So, option (a) can't be the correct answer.
		Option (b) – Passage does not say anything about modern life being uncertain. So, option (b) can't be the correct answer
		Option (c) – the statement that we are influenced by the opinion of others and have no courage to follow our own convictions does not come to light in the above passage as it talks about the increasing number of choices we have at our disposal.
		Correct answer is option (d). The option implies the fact that in our lives, having too few choices may not be a good thing, but having too many can be equally as difficult that is what the most logical messages is from the passage.
62.	a	Sol. Ans.(a). 'Innovation of financial technology' is not mentioned in the passage. So 3, can't be true. So, option (b), (c) and (d) are ruled out in one shot.
63.	b	Sol. Ans.(b) Correct answer is option (b), 1 and 4, because -
		Patent protection given to patentees puts a huge burden on public's purchasing power in accessing patented medicines that is clearly mentioned in the passage.
		Governments need to find an appropriate balance between the rights of patentees and the requirements of the patients so as to keep healthcare affordable for the public but also profitable to those who put in the resources required for the innovations.
		'Dependence on other countries' as mentioned in statement 2 is not given

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		in passage. Also, there is no mention of 'providing medicine at affordable rate to public' as given in statement 3.
64.	c	Sol. Ans.(c) Correct answer is option (c), both 1 and 2, because – Statement 1 - Protection of privacy is not just a right, but it has value to the economy and Statement 2 - There is a fundamental link between privacy and innovation, both are true because it is mentioned in the passage that "No one will innovate in a surveillance-oriented environment or in a place where an individual's personal information is compromised." That further leads to better environments for innovation to grow more. It is mentioned in the passage that "There is a fundamental link between privacy and innovation.
65.	d	Sol. Ans.(d) According to the condition given in question, we have P + Q + R + S = 396 (i.e. 99% of 400), where P, Q, R and S are the marks obtained by student in the four subjects. By Permutation and Combination theory – This can be done in $7!/(4!\times3!)$ = 35.
66.	c	Sol. Ans.(c) This first-most strip can have 3 options (red, or green, or yellow) while other three strips will have 2 options each. So, total number of ways 3 × 2 × 2 × 2 = 24.
67.	d	Sol. Ans.(d) 4 m = 400 cm, 2.2 m = 220 cm Size of tile = 140 cm × 60 cm. So, 9 tiles can be accommodated in the following ways:
68.	d	Sol. Ans.(d) Neither P nor Q can be assigned Task 1 and Task 2 must be assigned either R or S. P can do Task 3, 4, 5. Q can do Task 3, 4, 5. One of R and S will do Task 2 and other any of the task 1, 3, 4 or 5. T can do Task 1, 3, 4, 5 Case I – When R does the Task 2 - P can have task in 3 ways, Q can have task in 2 ways, R can have task in 1 way, S can have task in 2 ways and

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		T can have Task in 1 way. So, total 3 × 2 × 1 × 2 × 1 = 12 ways. Case II – When S does the Task 2 – Similar 12 ways. Total number of ways = 12 + 12 = 24.
69.	a	Sol. Ans.(a) 78 gm can be made by atleast by 7 coins like this – 1 × 50 gm + 2 × 10 gm + 4 × 2 gm = 78 gm. So, statement 1 is correct and 2 is not.
70.	b	Sol. Ans.(b) According to the information given in question we have – Statement -- P ≥ Q, P ≤ T, T < R, R = S, which can be written as S = R > T ≥ P ≥ Q Conclusion 1: Q = T, is not always true hence not follows. Conclusion 2: S > T, is true hence follows.
71.	b	Sol. Ans.(b) Option (a) is not the correct answer as it does not talk about 'quality education'. Correct answer is option (b). It states that unemployment must be seen as a function of rising education and aspirations of young Indians that are qualified and willing to work but are not getting the desired jobs as the job market can not accommodate such a large input. Option (c) is not correct as passage does not talk about 'labour-intensive industries.' Option (d) is not correct as passage does not talk about 'design of education system' anywhere
72.	a	Sol. Ans (a). Option (b) is just opposite of what the passage says. So, it's not true. There is no mention of 'system of education' in passage, so (c) can be ruled out. The passage doesn't suggest that all scientists should be philosophers as given in option (d), so it's incorrect.
73.	d	Sol. Ans (d) The end of the state, is not to make rational beings into brute beasts and machines, hints at Liberty. The passage obviously hits of 'harmony' but doesn't say anything about the nature of it (communal or racial or any other type). The use of words like "free" or "free reason" also supports option (d).
74.	d	Sol. Ans.(d) $(2^{192})/6 = 8^{64}/6 = (2 \bmod 6)^{64}/6$ (as $8 = 2 \bmod 6$) = $2^{64} \bmod 6/6$ (as $(\bmod x)^n = \bmod x$) = $2^{63} × 2 \bmod 6/6 = 8^{21} × 2 \bmod 6/6 = (2 \bmod 6)^{21} × 2 \bmod 6/6 = 2^{21} × 2 \bmod 6/6$ (as $\bmod x × \bmod x = \bmod x$) = $8^7 × 2 \bmod 6/6 = (2 \bmod 6)^7 × 2 \bmod 6/6 = 2^7 × 2 \bmod 6 / 6 = 2^6 × 2 × 2 \bmod 6/6 = 8^2 × 2 × 2 \bmod 6/6 = (2 \bmod 6)^2 × 2 × 2 \bmod 6/6 = 2^4 \bmod 6/6 = 16 \bmod 6/ 6 = 4 \bmod 6$. So remainder = 4.

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75.	d	Sol. Ans.(d) Series goes like this – ABCDD - ABCCD - ABBCD - AABCD Hence fill the blanks as -> ABC DD ABC C DABBCD A ABCD. Ans.(d)
76.	a	Sol. Ans.(a) Given AB x CD = DEF and DEF + GHI = 975, and also E = 0, F = 8 So, AB × CD = D08, and D08 + GHI = 975. D08 + GHI = 975, is possible only when I = 7. If I = 7 then H must be 6. So H = 6. And D + G = 9. But 8, 7, and 6 are occupied, so only pair available for D and G is of 4 and 5 or vice versa. Which leaves only 1, 2 and 3 for the value of A, B and C. So, A + B + C = 1 + 2 + 3 (in any order) = 6.
77.	d	Sol. Ans.(d) Statement "Atleast one of R and S was selected for the job" is false. Which means that "Neither of R or S is selected for the job". True statements – One of P and Q were selected for the job. Means one person selected. True statements – At most two of R, S and T were selected for the job means only T is selected for the job (as neither of R or S is selected for the job) – one selection So, only two persons are selected for the job, one of P or Q and the other is T. Hence both conclusions can't be drawn.
78.	a	Sol. Ans.(a) By the definition of If ... then From the given statements we can conclude that Conclusion from Statement 1 – If P is true, Q and S are true and If Q and S are false, P is false. Conclusion from Statement 2 – If R and S are true, T is false and If T is true then R and S are false. So, clearly only conclusion 1 follows.
79.	a	Sol. Ans.(a) Total number of small cubes = 7 × 5 × 3 = 105 Number of 3 faces colured cubes = 8 (They come from corners) All 8 cubes will have red, green and blue colour on surfaces. Number of 2 coloured face cubes (They come from edges) = 4 × (7 - 2) + 4 (5 - 2) + 4 (3 - 2) = 20 + 12 + 4 = 36. 20 Red and Blue, 12 Red and Green, 4 Blue and Green. Number of 1 coloured face cubes (They come from faces) = 30 + 6 + 10 = 46. 30 Red, 6 Green, 10 Blue. Number of 0 coloured face cubes (They come from inside) = (7 – 2) (5 – 2) (3 – 2) = 5 × 3 × 1 = 15. So, only statement 1 is true.

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80.	c	Sol. Ans.(c) After arranging the word INCOMPREHENSIBILITIES in reverse alphabetical order we get TSSRPONNMLIIIIIHEEECB.
		INCOMPREHENSIBILITIES
		TSSRPONNMLIIIIIHEEECB
		The two Is which are shown in bold (7th and 9th position from right side) will not change their position.