Sl. No.	Questions
1.	**Read the following 2 passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.** Passage–1 The main threat to maintaining progress in human development comes from the increasingly evident unsustainability of production and consumption patterns. Current production models rely heavily on fossil fuels. We now know that this is unsustainable because the resources are finite. The close link between economic growth and greenhouse gas emissions needs to be served for human development to become truly sustainable. Some developed countries have begun to alleviate the worst effects by expanding recycling and investing in public transport and infrastructure. But most developing countries are hampered by the high costs and low availability of clean energy sources. Developed countries need to support developing countries' transition to sustainable human development. Unsustainability in production pattern is due to which of the following? 1. Heavy dependence on fossil fuels 2. Limited availability of resources 3. Expansion of recycling Select the correct answer using the code given below. (a) 1 and 2 only (b) 2 only (c) 1 and 3 only (d) 1, 2 and 3
2.	Consider the following statements: Developed countries can support developing countries' transition to sustainable human development by 1. making clean energy sources available at low cost 2. providing loans for improving

their public transport at nominal interest rates

3. encouraging them to change their production and consumption patterns

Which of the statements given above is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

3. Passage–2

Unless the forces and tendencies which are responsible for destroying the country's environment are checked in the near future and afforestation of denuded areas is taken up on a massive scale, the harshness of the climatic conditions and soil erosion by wind and water will increase to such an extent that agriculture, which is the mainstay of our people, will gradually become impossible. The desert countries of the world and our own desert areas in Rajasthan are a grim reminder of the consequences of large-scale deforestation. Pockets of desert-like landscape are now appearing in other parts of the country including the Sutlej-Ganga Plains and Deccan Plateau. Where only a few decades back there used to be lush green forests with perennial streams and springs, there is only brown earth, bare of vegetation, without any water in the streams and springs except in the rainy season.

According to the passage given above, deforestation and denudation will ultimately lead to which of the following?

1. Depletion of soil resource

2. Shortage of land for the common man

3. Lack of water for cultivation

Select the correct answer using the code given below.

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

4. What is the value of X in the sequence 20, 10, 10, 15, 30, 75, X?

(a) 105

(b) 120
(c) 150
(d) 225

5. An Identity Card has the number ABCDEFG, not necessarily in that order, where each letter represents a distinct digit (1, 2, 4, 5, 7, 8, 9 only). The number is divisible by 9. After deleting the first digit from the right, the resulting number is divisible by 6. After deleting two digits from the right of original number, the resulting number is divisible by 5. After deleting three digits from the right of original number, the resulting number is divisible by 4. After deleting four digits from the right of original number, the resulting number is divisible by 3. After deleting five digits from the right of original number, the resulting number is divisible by 2. Which of the following is a possible value for the sum of the middle three digits of the number?
(a) 8
(b) 9
(c) 11
(d) 12

6. Two friends X and Y start running and they run together for 50 m in the same direction and reach a point. X turns right and runs 60 m, while Y turns left and runs 40m. Then X turns left and runs 50m and stops, while Y turns right and runs 50 m and then stops. How far are the two friends from each other now?
(a) 100 m
(b) 90 m
(c) 60 m
(d) 50 m

7. Which date of June 2099 among the following is Sunday?
(a) 4
(b) 5
(c) 6
(d) 7

8. A bill for 1,840 is paid in the denominations of 50, 20 and 10 notes. 50 notes in all are used. Consider the following statements:
1. 25 notes of 50 are used and the

remaining are in the denominations of 20 and 10.

2. 35 notes of 20 are used and the remaining are in the denominations of 50 and 10.

3. 20 notes of 10 are used and the remaining are in the denominations of 50 and 20.

Which of the above statements are not correct?

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

9. Which number amongst 2^40, 3^21, 4^18 and 8^12 is the smallest?

(a) 2^40

(b) 3^21

(c) 4^18

(d) 8^12

10. The digits 1 to 9 are arranged in three rows in such a way that each row contains three digits, and the number formed in the second row is twice the number formed in the first row; and the number formed in the third row is thrice the number formed in the first row. Repetition of digits is not allowed. If only three of the four digits 2, 3, 7 and 9 are allowed to use in the first row, how many such combinations are possible to be arranged in the three rows?

(a) 4
(b) 3
(c) 2
(d) 1

11. Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.

Passage–1

"In simple matters like shoe-making, we think only a specially trained person will serve our purpose, but in politics, we presume that everyone who knows how to get votes knows how to administer a State. When we are ill, we call for a trained

physician, whose degree is a guarantee of specific preparation and technical competence – we do not ask for the handsomest physician, or the most eloquent one: well then, when the whole State is ill should we not look for the service and guidance of the wisest and the best?"

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

(a) We assume that in a democracy, any politician is qualified to administer a State.

(b) Politicians should be selected from those trained in administration.

(c) We need to devise a method of barring incompetence from public office.

(d) As voters select their administrators, the eligibility of politicians to administer a State cannot be questioned.

12. Passage –2

The poverty line is quite unsatisfactory when it comes to grasping the extent of poverty in India. It is not only because of its extremely narrow definition of 'who is poor' and the debatable methodology used to count the poor, but also because of a more fundamental assumption underlying it. It exclusively relies on the notion of poverty as insufficient income or insufficient purchasing power. One can better categorize it by calling it income poverty. If poverty is ultimately about deprivations affecting human well-being, then income poverty is only one aspect of it. Poverty of a life, in our view, lies not merely in the impoverished state in which the person actually lives, but also in the lack of real opportunity given by social constraints as well as personal circumstances–to choose other types of living. Even the relevance of low incomes, meagre possessions, and other aspects of what are standardly seen as economic poverty relate ultimately to their role in curtailing

capabilities, i.e., their role in severely restricting the choices people have to lead variable and valued lives.

Why is the methodology adopted in India to count the 'poor' debatable?

(a) There is some confusion regarding what should constitute the 'poverty line'.

(b) There are wide diversities in the condition of the rural and urban poor.

(c) There is no uniform global standard for measuring income poverty.

(d) It is based on the proposition of poverty as meagre income or buying capacity.

13. Why is income poverty only one measure of counting the 'poor'?

(a) It talks of only one kind of deprivation ignoring all others.

(b) Other deprivations in a human life have nothing to do with lack of purchasing power.

(c) Income poverty is not a permanent condition; it changes from time to time.

(d) Income poverty restricts human choices only at a point of time.

14. What does the author mean by 'poverty of a life'?

(a) All deprivations in a human life which stem not only from lack of income but lack of real opportunities

(b) Impoverished state of poor people in rural and urban areas

(c) Missed opportunities in diverse personal circumstances

(d) Material as well as non-material deprivations in a human life which restrict human choices permanently.

15. X and Y run a 3 km race along a circular course of length 300m. Their speeds are in the ratio 3:2. If they start together in the same direction, how many times would the first one pass the other (the start-off is not counted as passing)?

(a) 2

(b) 3

(c) 4

(d) 5

16. If the order of the letters in the English alphabet is reversed and each letter represents the letter whose position it occupies, then which one of the following represents 'LUCKNOW'?
(a) OGXPMLD
(b) OGXQMLE
(c) OFXPMLE
(d) OFXPMLD

17. In a tournament of Chess having 150 entrants, a player is eliminated whenever he loses a match. It is given that no match results in a tie/draw. How many matches are played in the entire tournament?
(a) 151
(b) 150
(c) 149
(d) 148

18. How many 3-digit natural numbers (without repetition of digits) are there such that each digit is odd and the number is divisible by 5?
(a) 8
(b) 12
(c) 16
(d) 24

19. Consider the Question and two Statements given below:
Question: Is x an integer?
Statement-1: x/3 is not an integer.
Statement-2: 3x is an integer.
Which one of the following is correct in respect of the Question and the Statements?
(a) Statement-1 alone is sufficient to answer the Question
(b) Statement-2 alone is sufficient to answer the Question
(c) Both Statement-1 and Statement-2 are sufficient to answer the Question
(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

20. The increase in the price of a certain item was 25%. Then the price was decreased by 20% and then again increased by 10%. What is the resultant increase in the price?
(a) 5%
(b) 10%
(c) 12.5%

(d) 15%

21. Directions for the following 3 (three) items:

Read the following passage and answer the items that follow the passage. Your answers to these items should be based on the passage only.

Passage

In some places in the world, the productivity of staples such as rice and wheat has reached a plateau. Neither new strains nor fancy agrochemicals are raising the yields. Nor is there much unfarmed land left that is suitable to be brought under the plough. If global temperature continues to rise, some places will become unsuitable for farming. Application of technology can help overcome these problems. Agricultural technology is changing fast. Much of this change is brought about by affluent farmers in the West/Americas. Techniques developed in the West are being adapted in some places to make tropical crops more productive. Technology is of little use if it is not adapted. In the developing world, that applies as much to existing farming techniques as it does to the latest advances in genetic modification. Extending to the smallholders and subsistence farmers of Africa and Asia the best of today's agricultural practices, in such simple matters as how much fertilizers to apply and when, would lead to a greatly increased availability of food for humanity. So would things like better roads and storage facilities, to allow for the carriage of surpluses to markets and reduce wastage.

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

1. Development of agricultural technology is confined to developed countries.
2. Agricultural technology is not adapted in developing countries.

Which of the above assumptions is/are valid?

(a) 1 only

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

22. Based on the above passage, the following assumptions have been made:
1. Poor countries need to bring about change in their existing farming techniques.
2. Developed countries have better infrastructure and they waste less food.
Which of the above assumptions is/are valid?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

23. Based on the above passage, the following assumptions have been made:
1. Growing enough food for future generation will be a challenge.
2. Corporate farming is a viable option for food security in poor countries.
Which of the above assumptions is/are valid?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

24. The letters A, B, C, D and E are arranged in such a way that there are exactly two letters between A and E. How many such arrangements are possible?
(a) 12
(b) 18
(c) 24
(d) 36

25. Consider the Question and two Statements given below:
Question: Is Z brother of X?
Statement-1 : X is a brother of Y and Y is a brother of Z.
Statement-2 : X, Y and Z are siblings.
Which one of the following is correct in respect of the Question and the Statements?
(a) Statement-1 alone is sufficient to answer the Questions
(b) Statement-2 alone is sufficient to

answer the Question

(c) Both Statement-1 and Statement-2 are sufficient to answer the Question

(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

26. On one side of a 1.01 km long road, 101 plants are planted at equal distance from each other. What is the total distance between 5 consecutive plants?

(a) 40 m

(b) 40.4 m

(c) 50 m

(d) 50.5 m

27. A, B and C are three places such that there are three different roads from A to B, four different roads from B to C and three different roads from A to C. In how many different ways can one travel from A to C using these roads?

(a) 10

(b) 13

(c) 15

(d) 36

28. A has some coins. He gives half of the coins and 2 more to B. B gives half of the coins and 2 more to C. C gives half of the coins and 2 more to D. The number of coins D has now, is the smallest two-digit number. How many coins does A have in the beginning?

(a) 76

(b) 68

(c) 60

(d) 52

29. In the series AABABCABCDABCDE…, which letter appears at the 100th place?

(a) G

(b) H

(c) I

(d) J

30. Three persons A, B and C are standing in a queue not necessarily in the same order. There are 4 persons between A and B, and 7 persons between B and C. If there are 11 persons ahead of C and 13 behind A, what could be the minimum number of persons in the queue?

(a) 22
(b) 28
(c) 32
(d) 38

31. *Directions for the following 4 (four) Items:*

The following two passages and answer items that follow the passages. Your answers to these items should be based on the passages only.

Passage-1

Natural selection cannot anticipate future environments on the earth. Therefore, the set of existing organisms can never be fully prepared for environmental catastrophes that await life. An outcome of this is the extinction of those species which cannot overcome environmental adversity. This failure to survive, in modern terms, can be attributed to the genomes which are unable to withstand geological vagaries or biological mishaps infections, diseases and so on). In biological evolution on the earth, extinction of species has been a major feature. The earth may presently have up to ten million species, yet more than 90% of species that have ever lived on the earth are now extinct. Once again, the creationist doctrines fail to satisfactorily address why a divine creator will firstly bother to create millions of species and then allow them to perish. The Darwinian explanation for extinct life is once again simple, elegant and at once convincing organisms go extinct as a function of environmental or biological assaults for which their inheritance deems them ill-equipped. Therefore, the so-called Darwinian theory of evolution is not a theory at all. Evolution happens- this is a fact. The mechanism of evolution (Darwin proposed natural selection) is amply supported by scientific data. Indeed, to date no single zoological, botanical, geological, paleontological, genetic or physical evidence has refuted either of the central two main Darwinian ideas. If religion is not taken into consideration, Darwinian laws are

acceptable just like the laws proposed by Copernicus, Galileo, Newton and Einstein-sets of natural laws that explain natural phenomena in the universe.

According to the passage, natural selection cannot anticipate future environments on the earth as

1. species not fully prepared to face the environmental changes that await them will face extinction
2. all the existing species would get extinct as their genomes will not withstand biological mishaps
3. inability of the genome to withstand environmental changes would result in extinction
4. extinction of species is a common feature

Select the correct answer using the code given below.

(a) 1, 2 and 3
(b) 2, 3 and 4
(c) 1, 3 and 4
(d) 1, 2 and 4

32. The passage suggests that Darwinian theory of evolution is not a theory at all because

(a) it does not satisfy the creationist doctrine
(b) extinction is a function of environment and biological assaults
(c) there are no evidences to refute it
(d) existence of organisms is attributed to a creator

33. With reference to the passage, the following assumptions have been made:

1. Only species that have the ability to overcome environmental catastrophes will survive and perpetuate.
2. More than 90% of the species on the earth are in the danger of getting extinct due to drastic changes in the environment.
3. Darwin's theory explains all the natural phenomena,

Which of the above assumptions is/are valid?

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

34. Passage-2

With steady economic growth, higher literacy and increasing skill levels, the number of Indian middle-class families has gone up exponentially. Direct results of the affluence have been changes in dietary patterns and energy consumption levels. People have moved to a higher protein-based diet like milk products, fish and meat, all of which need significantly more water to produce than cereal-based diets. Increasing use of electronic and electric machines/gadgets and motor vehicles needs more and more energy and generation of energy needs water.

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

(a) People should be persuaded to continue with the mainly Indian traditional cereal-based diets.

(b) India needs to focus on developing agricultural productivity and capacity for more energy generation in the coming years.

(c) Modern technological developments result in the change of cultural and social behaviour of the people.

(d) Water management practices in India need to change dramatically in the coming years.

35. How many seconds in total are there in x weeks, x days, x hours. x minutes and X seconds?

(a) 11580x

(b) 11581x

(c) 694860x

(d) 694861x

36. P, Q, R, S, T and U are six members of a family. R is the spouse of Q; U is the mother of T and S is the daughter of U. P's daughter is T and R's son is P. There are two couples in the family. Which one of the following is correct?

(a) is the grandfather of T

(b) is the grandmother of T

(c) R is the mother of P

(d) T is the granddaughter of Q

37. Consider the Question Statements given below in respect of and two

three cities P, Q and R in a State:
Question: How far is city P from city Q?
Statement-1: City Q is 18 km from city R.
Statement-2: City P is 43 km from city R.
Which one of the following is correct in respect of the Question and the Statements?
(a) Statement-1 alone is sufficient to answer the Question
(b) Statement-2 alone is sufficient to answer the Question
(c) Both Statement-1 and Statement-2 are sufficient to answer the Question
(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

38. Two Statements followed by four Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows follow from the Statements, disregarding the commonly known facts:
Statement-1: All pens are books.
Statement-2: No chair is a pen.

Conclusion-I: All chairs are books.
Conclusion-II: Some chairs are pens.
Conclusion-III: All books are chairs.
Conclusion-IV: No chair is a book.

Which one of the following is correct?
(a) Only Conclusion-I
(b) Only Conclusion-II
(c) Both Conclusion-III and Conclusion-IV
(d) None of the Conclusion follows

39. Three Statements followed by three Conclusions are given below. You have to take the Statements to be true even if they seem to be at variance from the commonly known facts. Read all the Conclusions and then decide which of the given Conclusions logically follows/ follow from the Statements, disregarding the commonly known facts:
Statement-1: Some doctors are

teachers.
Statement-2: All teachers are engineers.
Statement-3: All engineers are scientists.

Conclusion-I: Some scientists are doctors.
Conclusion-II: All engineers are doctors.
Conclusion-III: Some engineers are doctors.

Which one of the following is correct?
(a) Only Conclusion-I
(b) Only Conclusion-II
(c) Both Conclusion-I and Conclusion-III
(d) Both Conclusion-I and Conclusion-II

40. Eight students A, B, C, D, E, F, G and H sit around a circular table, equidistant from each other, facing the centre of the table, not necessarily in the same order. B and D sit neither adjacent to C nor opposite to C A sits in between E and D. and sits in between B and H. Which one of the following is definitely correct?
(a) B sits in between A and G
(b) C sits opposite to G
(c) E sits opposite to F
(d) None of the above

41. *directions for Read the following 4 (four) Items:*
following two passages and answer that follow the passages. Your answer to these items should be based on the passages only.
Passage-1
For two or three generations past, ever-increasing number of individuals have been living as workers merely, not as human beings. An excessive amount of labour is rule today in every circle of society, with the result that man's spiritual element cannot thrive. He finds it very difficult to spend his little leisure in serious activities. He does not want to think; or he cannot even if he wants to. He seeks not Self-improvement, but entertainment which would enable

him to be mentally idle and to forget his usual activities. Therefore, the so-called culture of our age is dependent more on cinema than on theatre, more on newspapers, magazines and crime stories than on serious literature.

The passage is based on the idea that

(a) man should not work hard

(b) the great evil of our age is overstrain

(c) man cannot think well

(d) man cannot care for his spiritual welfare

42. Man does not seek self-improvement because he

(a) is not intellectually capable

(b) has no time to do so

(c) is distracted by materialism

(d) loves amusement and is mentally idle

43. Passage-2

The demographic dividend, which has begun in India and is expected to last another few decades, is a great window of opportunity. The demographic dividend is basically a swelling in the working age population, which conversely means that the relative ratio of very young and very old will, for a while, be on the decline. From the experience of Ireland and China, we know that this can be a source of energy and an engine of economic growth. The demographic dividend tends to raise a nation's savings rate since in any nation, it is the working age population that is the main saver. And since the savings rate is an important driver of growth, this should help elevate our growth rate. However, the benefits of demographic dividend depend on the quality of the working age population. And this implies bringing back the importance of education, acquisition of skills and human capital.

Which of the following would invariably happen in a country, when the demographic dividend has

begun to operate?

1. The number of illiterate people will decrease.
2. The ratio of very old and very young will decrease for a while.
3. Population growth rate will quickly stabilize.

Select the correct answer using the code given below.

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

44. With reference to the passage, which of the following inferences can be drawn?

1. Demographic dividend is an essential condition for a country to rapidly increase its economic growth rate.
2. Promotion of higher education is an essential condition for a country for its rapid economic growth.

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

45. Five friends P. O, X, Y and Z purchased some notebooks. The relevant information is given below:

1. Z purchased 8 notebooks more than X did.
2. P and Q together purchased 21 notebooks.
3. O purchased 5 notebooks less than P did.
4. X and Y together purchased 28 notebooks.
5. P purchased 5 notebooks more than X did.

If each notebook is priced 40, then what is the total cost of all the notebooks?

(a) 2,600
(b) 2,400
(c) 2,360
(d) 2,320

46. A man started from home at 14:30 hours and drove to village, arriving there when the village clock indicated 15:15 hours. After staying for 25 minutes, he drove back by a different route of length 1.25 times

the first route at a rate twice as fast reaching home at 16:00 hours. As compared to the clock at home, the village clock is

(a) 10 minutes slow
(b) 5 minutes slow
(c) 10 minutes fast
(d) 5 minutes fast

47. A person X wants to distribute some pens among six children A B C D E and F. Suppose A gets twice the number of pens received by B, three times that of C, four times that of D, five times that of E and six times that of F. What is the minimum number of pens X should buy so that the number of pens each one gets is an even number?

(a) 147
(b) 150
(c) 294
(d) 300

48. Six Persons A, B, C, D, E and F are sitting equidistant form each other around a circular table (facing the centre of the table).

Consider the Question and two statements given below:

Question: Who is sitting on the immediate left of A?

Statement-1: B is sitting opposite to C and D is sitting opposite to E.
Statement -2: F is sitting on the immediate left of B.

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

(a) Statement-1 alone is sufficient to answer the question
(b) Statement-2 alone is sufficient to answer the question
(c) Both Statement-1 and Statement-2 are sufficient to answer the Question
(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

49. Consider the Question and two Statements given below:

Question: What is the age of Manisha?

Statement-1: Manisha is 24 years

younger than her mother.
Statement-2: 5 years later, the ages of Manisha and her mother will be in the ratio 3: 5.

Which one of the following is correct in respect of the Question and the Statement?
(a) Statements-1 alone is sufficient to answer the Question
(b) Statement-2 alone is sufficient to answer the question
(c) Both Statement-1 and Statement-2 are sufficient to answer the Question
(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

50. Six lectures A B C D E and F, each of one hour duration, are scheduled between 8:00 am, and 2:00 p.m.
Consider the Question and two Statements given below:
Question: Which lecture is in the third period?

Statement-1: Lecture F is preceded by A and followed by C
Statement-2: There is no lecture after lecture B.

Which one of the following is correct in respect of the Question and the Statements?
(a) Statement-1 alone is sufficient to answer the question
(b) Statement-2 alone is sufficient to answer the question
(c) Both Statement-1 and Statement-2 are sufficient to answer the Question
(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

51. *Directions for the following 3 (three) Items:*
Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.
Passage-1
In an economic organization, allowing mankind to benefit by the

productivity of machines should lead to a very good life of leisure, and much leisure is apt to be tedious except to those who have intelligent activities and interests. If a leisured population is to be happy, it must be an educated population, and must be educated with a view to enjoyment as well as to the direct usefulness of technical knowledge.

Which of the following statements best reflects the underlying tone of the passage?

(a) Only an educated population can best make use of the benefits of economic progress.

(b) All economic development should be aimed at the creation of leisure.

(c) An increase in the educated population of a country leads to an increase in the happiness of its people.

(d) Use of machines should be encouraged in order to create a large leisured population.

52. Passage-2

If presents bring less thrill now that we are grown up, perhaps it is because we have too much already, or perhaps it is because we have lost the fullness of the joy of giving and with it the fullness of the joy of receiving. Children's fears are poignant, their miseries are acute, but they do not look too forward nor too far backward. Their joys are clear and complete, because they have not yet learnt always to add 'but' to every proposition. Perhaps we are too cautious, too anxious, too sceptical. Perhaps some of our cares would shrink if we thought less about them and entered with more single-minded enjoyment into the happiness that come our way.

With reference to the passage, which one of the following statements is correct?

(a) It is not possible for adults to feel thrilled by presents.

(b) There can be more than one reason why adults feel less thrilled by presents.

(c) The author does not know why adults feel less thrilled by presents.

(d) Adults have less capacity to feel the joy of loving or being loved.

53. The author of the passage is against
(a) worrying too much about the past and future
(b) being in the habit of thinking about presents
(c) not being thrilled by new things
(d) giving and receiving joy only partially

54. Let A, B and C represent distinct non-zero digits. Suppose x is the sum of all possible 3-digit numbers formed by A, B and C without repetition.
Consider the following statements:
1. The 4-digit least value of x is 1332.
2. The 3-digit greatest value of x is 888
Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

55. There is a numeric lock which has a 3-digit PIN. The PIN contains digits 1 to 7. There is no repetition of digits. The digits in the PIN from left to right are in decreasing order. Any two digits in the PIN differ by at least 2. How many maximum attempts does one need to find out the PIN with certainty?
(a) 6
(b) 8
(c) 10
(d) 12

56. There are eight equidistant points on a circle. How many right-angled triangles can be drawn using these points as vertices and taking the diameter as one side of the triangle?
(a) 24
(b) 16
(c) 12
(d) 8

57. 4 men and 12 women can do a piece of work in 30 days. In how many days can 12 men and 24 women do the same piece of work?
(a) 30 days

(b) more than 30 days
(c) Less than 30 days or more than 30 days
(d) Data is inadequate to draw any conclusion

58. What is the remainder when 91x92x93x94x95x96x97x98x99 is divided by 1261?
(a) 3
(b) 2
(c) 1
(d) 0

59. Consider the following statements in respect of a rectangular sheet of length 20 cm and breadth 8 cm:
1. It is possible to cut the sheet exactly into 4 square sheets.
2. It is possible to cut the sheet into 10 triangular sheets of equal area.
Which of the above statements is are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

60. When 70% of a number x is added to another number y, the sum becomes 165% of the value of y. When 60% of the number x is added to another number z, then the sum becomes 165% of the value of z. which one of the following is correct?
(a) $z < x < y$
(b) $x < y < z$
(c) $y < x < z$
(d) $z < y < x$

61. *Directions for the following 3 (three) items:*
Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.
Passage–1
The majority of people who fail to accumulate money sufficient for their needs, are generally, easily influenced by the opinions of others. They permit the newspapers and the gossiping neighbours to do their thinking for them. Opinions are the cheapest commodities on the earth. Everyone has a flock of opinions ready to be wished upon by anyone

who will accept them. If you are influenced by opinions when you reach decisions, you will not succeed in any undertaking.

Which one of the following is implied by the passage?

(a) Most of the people do not accumulate money for their needs.

(b) Most of the people never fail to accumulate money for their needs.

(c) There are people who fail to accumulate money for their needs.

(d) There is no need to accumulate money.

62. What is the main idea of the passage?

(a) People should not be influenced by the opinions of others.

(b) People should accumulate as much money as they can.

(c) People should neither give nor accept the opinions.

(d) People will succeed in any undertaking if they do not accept any opinion at all

63. Passage–2

"The social order is a sacred right which is the basis of all other rights. Nevertheless, this right does not come from nature, and must therefore be founded on conventions."

With reference to the above passage which of the following statements is/are correct?

1. Conventions are the sources of rights of man.
2. Rights of man can be exercised only when there is a social order.

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

64. Two candidates X and Y contested an election. 80% of voters cast their vote and there were no invalid votes. There was no NOTA (None of the above) option. X got 56% of the votes cast and won by 1440 votes. What is the total number of voters in the voters list?

(a) 15000
(b) 12000
(c) 9600
(d) 5000

65. What is the smallest number greater than 1000 that when divided by any one of the numbers 6, 9, 12, 15, 18 leaves a remainder of 3?
(a) 1063
(b) 1073
(c) 1083
(d) 1183

66. Let p be a two-digit number and q be the number consisting of same digits written in reverse order. If p x q = 2430, then what is the difference between p and q?
(a) 45
(b) 27
(c) 18
(d) 9

67. Consider the following statements in respect of two natural numbers p and q such that p is a prime number and q is a composite number:
1. p x q can be an odd number.
2. q / p can be a prime number.
3. p + q can be a prime number.
Which of the above statements are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

68. Consider the following statements:
1. Between 3:16 p.m. and 3:17 p.m., both hour hand and minute hand coincide.
2. Between 4:58 p.m. and 4:59 p.m. both minute hand and second hand coincide.
Which of the above statements is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

69. There are two containers X and Y. X contains 100 ml of milk and Y contains 100 ml of water. 20 ml of milk from X is transferred to Y. After mixing well, 20 ml of the mixture in Y is transferred back to X. If m

denotes the proportion of milk in X and n denotes the proportion of water in Y, then which one of the following is correct?

(a) m=n

(b) m> n

(c) m<n

(d) Cannot be determined due to insufficient data

70. A pie chart gives the expenditure on five different items A, B, Q D and E in a household. If B, C, D and E correspond to 90o, 50o, 45o, and 75o respectively, then what is the percentage of expenditure on item A?

(a) 112/9

(b) 125/6

(c) 155/9

(d) 250/9

71. *Directions for the following 3 (three) items:*

Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.

Passage–1

To encourage research is one of the functions of a university. Contemporary universities have encouraged research, not only in those cases where research is necessary, but on all sorts of entirely unprofitable subjects as well. Scientific research is probably never completely valueless. However silly and insignificant it may seem, however mechanical and unintelligent the labours of the researchers, there is always a chance that the results may be of value to the investigator of talent, who can use the facts collected for him by uninspired but industrious researchers as the basis of some fruitful generalization. But where research is not original, but consists in the mere rearrangement of existing materials, where its objects is not scientific but literary or historical, then there is a risk of the whole business becoming merely futile.

The author's assumption about

scientific research is that
(a) it is never very valuable
(b) it is sometimes very valuable
(c) it is never without some value
(d) it is always very valuable

72. According to the author
(a) not many research results can be of value to an intelligent investigator
(b) a research result is always valuable to an intelligent investigator
(c) any research result can be of value to an intelligent investigator
(d) a research result must always be of some value to an intelligent investigator

73. Passage–2
How best can the problems of floods and droughts be addressed so that the losses are minimal and the system becomes resilient? In this context, one important point that needs to be noted is that India gets "too much' water (about 75% of annual precipitation) during 120 days (June to September) and "too little' for the remaining 245 days. This skewed water availability has to be managed and regulated for its consumption throughout the year.

Which one of the following best reflects the practical, rational and lasting solutions?
(a) Constructing huge concrete storage tanks and canals across the country
(b) Changing the cropping patterns and farming practices
(c) Interlinking of rivers across the country
(d) Buffer stocking of water through dams and recharging aquifers

74. 15 x 14 x 13 x ... x 3 x 2 x 1 = 3m x n
Where m and n are positive integers, then what is the maximum value of m?
(a) 7
(b) 6
(c) 5
(d) 4

75. What is the value of X in the sequence 2, 12, 36, 80, 150, X?

(a) 248
(b) 252
(c) 258
(d) 262

76. One non-zero-digit, one vowel and one consonant from English alphabet (in capital) are to be used in forming passwords, such that each password has to start with a vowel and end with a consonant. How many such passwords can be generated?
(a) 105
(b) 525
(c) 945
(d) 1050

77. There are 9 cups placed on a table arranged in equal number of rows and columns out of which 6 cups contain coffee and 3 cups contain tea. In how many ways can they be arranged so that each row should contain at least one cup of coffee?
(a) 18
(b) 27
(c) 54
(d) 81

78. The sum of three consecutive integers is equal to their product. How many such possibilities are there?
(a) Only one
(b) Only two
(c) Only three
(d) No such possibility is there

79. What is the number of numbers of the form 0. XY, where X and Y are distinct non-zero digits?
(a) 72
(b) 81
(c) 90
(d) 100

80. The average weight of A, B, C is 40 kg, the average weight of B, D, E is 42 kg and the weight of F is equal to that of B. What is the average weight of A, B, C, D, E and F?
(a) 40.5 kg
(b) 40.8 kg
(c) 41 kg
(d) Cannot be determined as data is inadequate

81. Directions for Read the following 4

(four) Items:

following two passages and answer that follow the passages. Your answer to these items should be based on the passages only.

Passage-1

For two or three generations past, ever-increasing number of individuals have been living as workers merely, not as human beings. An excessive amount of labor is rule today in every circle of society, with the result that man's spiritual element cannot thrive. He finds it very difficult to spend his little leisure in serious activities. He does not want to think; or he cannot even if he wants to. He seeks not Self-improvement, but entertainment which would enable him to be mentally idle and to forget his usual activities. Therefore, the so-called culture of our age is dependent more on cinema than on theatre, more on newspapers, magazines and crime stories than on serious literature.

The passage is based on the idea that

(a) man should not work hard

(b) the great evil of our age is overstrain

(c) man cannot think well

(d) man cannot care for his spiritual welfare

82. Man does not seek self-improvement because he

(a) is not intellectually capable

(b) has no time to do so

(c) is distracted by materialism

(d) loves amusement and is mentally idle

83. Passage-2

The demographic dividend, which has begun in India and is expected to last another few decades, is a great window of opportunity. The demographic dividend is basically a swelling in the working age population, which conversely means that the relative ratio of very young and very old will, for a while, be on the decline. From the experience of Ireland and China, we know that this can be a source of energy and

an engine of economic growth. The demographic dividend tends to raise a nation's savings rate since in any nation, it is the working age population that is the main saver. And since the savings rate is an important driver of growth, this should help elevate our growth rate. However, the benefits of demographic dividend depend on the quality of the working age population. And this implies bringing back the importance of education, acquisition of skills and human capital.

Which of the following would invariably happen in a country, when the demographic dividend has begun to operate?

1. The number of illiterate people will decrease.
2. The ratio of very old and very young will decrease for a while.
3. Population growth rate will quickly stabilize.

Select the correct answer using the code given below.

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

84. With reference to the passage, which of the following inferences can be drawn?

1. Demographic dividend is an essential condition for a country to rapidly increase its economic growth rate.
2. Promotion of higher education is an essential condition for a country for its rapid economic growth.

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

85. Five friends P. O, X, Y and Z purchased some notebooks. The relevant information is given below:

1. Z purchased 8 notebooks more than X did.
2. P and Q together purchased 21 notebooks.
3. O purchased 5 notebooks less

than P did.

4. X and Y together purchased 28 notebooks.

5. P purchased 5 notebooks more than X did.

If each notebook is priced 40, then what is the total cost of all the notebooks?

(a) 2,600

(b) 2,400

(c) 2,360

(d) 2,320

86. A man started from home at 14:30 hours and drove to village, arriving there when the village clock indicated 15:15 hours. After staying for 25 minutes, he drove back by a different route of length 1.25 times the first route at a rate twice as fast reaching home at 16:00 hours. As compared to the clock at home, the village clock is

(a) 10 minutes slow

(b) 5 minutes slow

(c) 10 minutes fast

(d) 5 minutes fast

87. A person X wants to distribute some pens among six children A B C D E and F. Suppose A gets twice the number of pens received by B, three times that of C, four times that of D, five times that of E and six times that of F. What is the minimum number of pens X should buy so that the number of pens each one gets is an even number?

(a) 147

(b) 150

(c) 294

(d) 300

88. Six Persons A, B, C, D, E and F are sitting equidistant form each other around a circular table (facing the centre of the table).

Consider the Question and two statements given below:

Question: Who is sitting on the immediate left of A?

Statement-1: B is sitting opposite to C and D is sitting opposite to E.

Statement -2: F is sitting on the

immediate left of B.

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

(a) Statement-1 alone is sufficient to answer the question

(b) Statement-2 alone is sufficient to answer the question

(c) Both Statement-1 and Statement-2 are sufficient to answer the Question

(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

89. Consider the Question and two Statements given below:

Question: What is the age of Manisha?

Statement-1: Manisha is 24 years younger than her mother.

Statement-2: 5 years later, the ages of Manisha and her mother will be in the ratio 3: 5.

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

(a) Statements-1 alone is sufficient to answer the Question

(b) Statement-2 alone is sufficient to answer the question

(c) Both Statement-1 and Statement-2 are sufficient to answer the Question

(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

90. Six lectures A B C D E and F, each of one hour duration, are scheduled between 8:00 am, and 2:00 p.m.

Consider the Question and two Statements given below:

Question: Which lecture is in the third period?

Statement-1: Lecture F is preceded by A and followed by C

Statement-2: There is no lecture after lecture B.

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

(a) Statement-1 alone is sufficient to

answer the question

(b) Statement-2 alone is sufficient to answer the question

(c) Both Statement-1 and Statement-2 are sufficient to answer the Question

(d) Both Statement-1 and Statement-2 are not sufficient to answer the Question

91. Directions for the following 3 (three) Items:

Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.

Passage-1

In an economic organization, allowing mankind to benefit by the productivity of machines should lead to a very good life of leisure, and much leisure is apt to be tedious except to those who have intelligent activities and interests. If a leisured population is to be happy, it must be an educated population, and must be educated with a view to enjoyment as well as to the direct usefulness of technical knowledge.

Which of the following statements best reflects the underlying tone of the passage?

(a) Only an educated population can best make use of the benefits of economic progress.

(b) All economic development should be aimed at the creation of leisure.

(c) An increase in the educated population of a country leads to an increase in the happiness of its people.

(d) Use of machines should be encouraged in order to create a large leisured population.

92. Passage-2

If presents bring less thrill now that we are grown up, perhaps it is because we have too much already, or perhaps it is because we have lost the fullness of the joy of giving and with it the fullness of the joy of receiving. Children's fears are poignant, their miseries are acute, but they do not look too forward nor too far backward. Their joys are

clear and complete, because they have not yet learnt always to add 'but' to every proposition. Perhaps we are too cautious, too anxious, too sceptical. Perhaps some of our cares would shrink if we thought less about them and entered with more single-minded enjoyment into the happiness that come our way.

With reference to the passage, which one of the following statements is correct?

(a) It is not possible for adults to feel thrilled by presents.

(b) There can be more than one reason why adults feel less thrilled by presents.

(c) The author does not know why adults feel less thrilled by presents.

(d) Adults have less capacity to feel the joy of loving or being loved.

93. The author of the passage is against

(a) worrying too much about the past and future

(b) being in the habit of thinking about presents

(c) not being thrilled by new things

(d) giving and receiving joy only partially

94. Let A, B and C represent distinct non-zero digits. Suppose x is the sum of all possible 3-digit numbers formed by A, B and C without repetition.

Consider the following statements:

1. The 4-digit least value of x is 1332.

2. The 3-digit greatest value of x is 888

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

95. There is a numeric lock which has a 3-digit PIN. The PIN contains digits 1 to 7. There is no repetition of digits. The digits in the PIN from left to right are in decreasing order. Any two digits in the PIN differ by at least 2. How many maximum attempts does one need to find out the PIN with certainty?

(a) 6
(b) 8
(c) 10
(d) 12

96. There are eight equidistant points on a circle. How many right-angled triangles can be drawn using these points as vertices and taking the diameter as one side of the triangle?
(a) 24
(b) 16
(c) 12
(d) 8

97. 24 men and 12 women can do a piece of work in 30 days. In how many days can 12 men and 24 women do the same piece of work?
(a) 30 days
(b) more than 30 days
(c) Less than 30 days or more than 30 days
(d) Data is inadequate to draw any conclusion

98. What is the remainder when 91x92x93x94x95x96x97x98x99 is divided by 1261?
(a) 3
(b) 2
(c) 1
(d) 0

99. Consider the following statements in respect of a rectangular sheet of length 20 cm and breadth 8 cm:
1. It is possible to cut the sheet exactly into 4 square sheets.
2. It is possible to cut the sheet into 10 triangular sheets of equal area.
Which of the above statements is are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

100. When 70% of a number x is added to another number y, the sum becomes 165% of the value of y. When 60% of the number x is added to another number z, then the sum becomes 165% of the value of z. which one of the following is correct?
(a) $z < x < y$
(b) $x < y < z$

(c) y < x < z
(d) z < y < x

101. Directions for the following 3 (three) items:
Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.
Passage–1
The majority of people who fail to accumulate money sufficient for their needs, are generally, easily influenced by the opinions of others. They permit the newspapers and the gossiping neighbours to do their thinking for them. Opinions are the cheapest commodities on the earth. Everyone has a flock of opinions ready to be wished upon by anyone who will accept them. If you are influenced by opinions when you reach decisions, you will not succeed in any undertaking.

Which one of the following is implied by the passage?
(a) Most of the people do not accumulate money for their needs.
(b) Most of the people never fail to accumulate money for their needs.
(c) There are people who fail to accumulate money for their needs.
(d) There is no need to accumulate money.

102. Q62. What is the main idea of the passage?
(a) People should not be influenced by the opinions of others.
(b) People should accumulate as much money as they can.
(c) People should neither give nor accept the opinions.
(d) People will succeed in any undertaking if they do not accept any opinion at all

103. Passage–2
"The social order is a sacred right which is the basis of all other rights. Nevertheless, this right does not come from nature, and must therefore be founded on conventions."

With reference to the above passage

which of the following statements is/are correct?

1. Conventions are the sources of rights of man.
2. Rights of man can be exercised only when there is a social order.

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

104. Two candidates X and Y contested an election. 80% of voters cast their vote and there were no invalid votes. There was no NOTA (None of the above) option. X got 56% of the votes cast and won by 1440 votes. What is the total number of voters in the voters list?

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(b) 12000
(c) 9600
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105. What is the smallest number greater than 1000 that when divided by any one of the numbers 6, 9, 12, 15, 18 leaves a remainder of 3?

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(b) 1073
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106. Let p be a two-digit number and q be the number consisting of same digits written in reverse order. If p x q = 2430, then what is the difference between p and q?

(a) 45
(b) 27
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107. Consider the following statements in respect of two natural numbers p and q such that p is a prime number and q is a composite number:

1. p x q can be an odd number.
2. q / p can be a prime number.
3. p + q can be a prime number.

Which of the above statements are correct?

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

108. Consider the following statements :

1. Between 3:16 p.m. and 3:17 p.m., both hour hand and minute hand coincide.

2. Between 4:58 p.m. and 4:59 p.m. both minute hand and second hand coincide.

Which of the above statements is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

109. There are two containers X and Y. X contains 100 ml of milk and Y contains 100 ml of water. 20 ml of milk from X is transferred to Y. After mixing well, 20 ml of the mixture in Y is transferred back to X. If m denotes the proportion of milk in X and n denotes the proportion of water in Y, then which one of the following is correct?

(a) m=n

(b) m> n

(c) m<n

(d) Cannot be determined due to insufficient data

110. A pie chart gives the expenditure on five different items A, B, Q D and E in a household. If B, C, D and E correspond to 90o, 50o, 45o, and 75o respectively, then what is the percentage of expenditure on item A?

(a) 112/9

(b) 125/6

(c) 155/9

(d) 250/9

111. Directions for the following 3 (three) items:

Read the following two passages and answer the items that follow the passages. Your answers to these items should be based on the passages only.

Passage–1

To encourage research is one of the functions of a university. Contemporary universities have encouraged research, not only in those cases where research is necessary, but on all sorts of entirely unprofitable subjects as well.

Scientific research is probably never completely valueless. However silly and insignificant it may seem, however mechanical and unintelligent the labours of the researchers, there is always a chance that the results may be of value to the investigator of talent, who can use the facts collected for him by uninspired but industrious researchers as the basis of some fruitful generalization. But where research is not original, but consists in the mere rearrangement of existing materials, where its objects is not scientific but literary or historical, then there is a risk of the whole business becoming merely futile.

The author's assumption about scientific research is that
(a) it is never very valuable
(b) it is sometimes very valuable
(c) it is never without some value
(d) it is always very valuable

112. According to the author
(a) not many research results can be of value to an intelligent investigator
(b) a research result is always valuable to an intelligent investigator
(c) any research result can be of value to an intelligent investigator
(d) a research result must always be of some value to an intelligent investigator

113. Passage–2
How best can the problems of floods and droughts be addressed so that the losses are minimal and the system becomes resilient? In this context, one important point that needs to be noted is that India gets "too much' water (about 75% of annual precipitation) during 120 days (June to September) and "too little' for the remaining 245 days. This skewed water availability has to be managed and regulated for its consumption throughout the year.

Which one of the following best reflects the practical, rational and lasting solutions?
(a) Constructing huge concrete

storage tanks and canals across the country

(b) Changing the cropping patterns and farming practices

(c) Interlinking of rivers across the country

(d) Buffer stocking of water through dams and recharging aquifers

114. 15 x 14 x 13 x ... x 3 x 2 x 1 = 3m x n

Where m and n are positive integers, then what is the maximum value of m?

(a) 7

(b) 6

(c) 5

(d) 4

115. What is the value of X in the sequence 2, 12, 36, 80, 150, X?

(a) 248

(b) 252

(c) 258

(d) 262

116. One non-zero-digit, one vowel and one consonant from English alphabet (in capital) are to be used in forming passwords, such that each password has to start with a vowel and end with a consonant. How many such passwords can be generated?

(a) 105

(b) 525

(c) 945

(d) 1050

117. There are 9 cups placed on a table arranged in equal number of rows and columns out of which 6 cups contain coffee and 3 cups contain tea. In how many ways can they be arranged so that each row should contain at least one cup of coffee?

(a) 18

(b) 27

(c) 54

(d) 81

118. The sum of three consecutive integers is equal to their product. How many such possibilities are there?

(a) Only one

(b) Only two

(c) Only three

(d) No such possibility is there

119. What is the number of numbers of the form 0.XY, where X and Y are distinct non-zero digits?
(a) 72
(b) 81
(c) 90
(d) 100

120. The average weight of A, B, C is 40 kg, the average weight of B, D, E is 42 kg and the weight of F is equal to that of B. What is the average weight of A, B, C, D, E and F?
(a) 40.5 kg
(b) 40.8 kg
(c) 41 kg
(d) Cannot be determined as data is inadequate

Answers and Explanations of PRELIMS CSAT 2022 & 2023 (41-80) :

Sl. No.	Ans	Explanations
1.	A	Statement 1 is correct: The author says "Current production models rely heavily on fossil fuels". Therefore, this is a correct answer. Statement 2 is correct: Again, passage mentions, "We now know that this is unsustainable because the resources are finite" i.e. limited availability of resources. This statement is correct. Statement 3 is incorrect: Expansion of recycling is a solution and not the reason as per the passage. So, this is incorrect.
2.	B	This Question is essentially Inference based. Based on the passage, you need to draw inference as to which statements can be a valid inference w.r.t Developed Countries supporting Developing Countries. Statement 1 is correct: The author mentions high costs and low availability of clean energy sources. Immediately after that, he states that "Developed countries need to support developing countries' transition to sustainable human development". Therefore, the first statement can be inferred from the passage. Statement 2 is correct: The passage mentions, "But most developing countries are hampered by the high costs…." Therefore, author is focusing high costs as hindrances for developed countries in transitioning towards sustainable human development. Also, Author mentioned the alleviation by developed countries using public transport. Using these two pieces of information in the light if the passage, we can infer statement 2 also. Statement 3 is incorrect: Encouraging developing countries to change their production and consumption patterns would help them transition to sustainable human

		development. However, this cannot be inferred directly from the starting line of the passage.
3.	**C**	The passage talks about the problem of deforestation and its impact on climate and soil. It warns that unless deforestation is reversed by measures like afforestation, the harshness of climate and erosion of soil will aggravate to such an extent that the staple occupation of agriculture would become impossible in the long run. We are asked to identify the consequences of deforestation and denudation. Let us have a look at the options given. Statement 1 is correct because the passage mentions that unless afforestation of denuded areas is not taken up, the harsh climatic conditions and soil erosion by wind and water will increase to a great extent. Statement 2 is incorrect because the passage does not mention anything about the availability of land for the common man in general. It only talks about the possibility of depletion of agriculture as a result of worsening climatic conditions and soil erosion, in turn caused by deforestation. Statement 3 is correct. The concluding lines mention the fast-depleting water resources– "Where only a few decades ago there used to be lush green forests with perennial streams and springs, there is only brown earth, bare of vegetation, without any water in the streams and springs except in the rainy season." Drying up of natural water resources would decrease the availability of water for irrigation of crops and hence this statement is logical.
4.	**D**	The gap between the numbers is variable so we can check multiplication relationship rather than addition/subtraction. Also, terms are decreasing initially, and then increase rapidly.

		Start with a number below 1 and check. The pattern is as follows: 20 × 0.5 = 10 10 × 1 = 10 10 × 1.5 = 15 15 × 2 = 30 30 × 2.5 = 75 75 × 3 = 225 Therefore, answer is (d) - 225.
5.	**A**	This is a tough question especially from time perspective. This question is made verbose purposefully and can be solved without using all the information given though. In any such long questions (including in the reasoning section) focus should be on what we need for the answer and no need to needlessly solve for all the variables. Divisibility rules are used to solve this question. Divisibility Rule of 2 - If a number is even or a number whose last digit is an even number i.e. 2,4,6,8 including 0, it is always completely divisible by 2. Divisibility Rule of 3 - A number is divisible by 3 if the sum of its digits is divisible by 3 Divisibility Rule of 5 - Numbers, which last with digits, 0 or 5 are always divisible by 5. The 7-digit number is ABCDEFG and we have to find the value of C + D + E (middle 3 digits) After deleting 1 digit from the right, the resulting number (ABCDEF) is divisible by 6. Hence by divisibility rule of 2, F = 2, 4 or 8 (i.e. an even number).

		The remaining number (ABCDEF) is divisible by 3, then G must be 9 to satisfy the divisibility test of 3. After deleting 2 digits from the right, the resulting number (ABCDE) is divisible by 5. It means that, E = 5. Now, C+D can be between 3 to 7 (as per 4 choices given) After deleting 3 digits from the right, the resulting number (ABCD) is divisible by 4. It means that, D = 2 or 4 (as per divisibility test and 8 can be dropped due to above condition) After deleting 5 digits from the right, the resulting number (AB) is divisible by 2. It means that, B = 2, 4 or 8 (i.e. an even number). So, F, D and B are even numbers (2, 4 or 8). Therefore, A & C are 1 or 7 (only two remaining choices. After deleting 4 digits from the right, the resulting number (ABC) is divisible by 3, so now as per the divisibility rule, B must be 4 (A & C are already known as 1 or 7, A+B+C must be divisible by 3) Now, C & D cannot be 7 and 8 as then C+E or D+E will exceed highest option 12, so won't fit any of the options. So, C = 1 and D = 2 So, C+D+E = 1+2+5 = 8
6.	**A**	Consider the turning point as starting point and both facing north, ignore initial 50m. X moves East 60 m and 50 m South Y moves West 40 m and 50 m South Distance is only horizontal and 60 m + 40 m (50 m South can be ignored as we did for the starting 50 m, for being common for both)

7.	**D**	Considering 5th June 2022, Sunday as the reference date (date on which UPSC CSE prelims 2022 was conducted), we can work out the June 2099 Sundays too. Every year has 7*52 = 364 + 1 day and leap year has 7*52 = 364 + 2 days So, 5th June 2023 will be Monday (+1 day), 5th June 2024 will be Wednesday (+2 days) Now, difference between both the years = 2099 – 2022 = 77 years Number of leap years in between = 77/4 = 19 (Quotient) Hence, till 2099 we will have 58 normal years and 19 leap years. Number of days to be added = (58 × 1) + (19 × 2) = 58 + 38 = 96 96/7 gives 5 as the remainder. So, 5th June 2099 will be Sunday + 5 = Friday i.e. 7th June 2099 will be a Sunday.
8.	**D**	Total amount = Rs. 1840 Let the number of 50, 20, and 10 denomination notes be x, y and z respectively. so, 50x+20y+10z = 1840. Statement 1: 25 notes of 50 denomination were used. So, remaining amount = 1840 – (25 × 50) = 1840 – 1250 = 590. Now, even if we assume all the remaining 25 notes are of 20 denominations (highest denomination remaining), we will only get 500 (25x20) So, Statement 1 is incorrect. Statement 2: 35 notes of 20 denomination were used. So, remaining

		amount = 1840 – (35 × 20) = 1840 – 700 = 1140. Now, even if we assume all the remaining 15 notes are of Rs. 50 denominations (highest denomination remaining), we will only get 750 (15x50). So, Statement 2 is also incorrect. Statement 3: 20 notes of 10 denomination were used. So, remaining amount = 1840 – (20 × 10) = 1840 – 200 = 1640. Now, even if we assume all the remaining 30 notes are of Rs. 50 denominations (highest denomination remaining), we will only get 1500 (30x50). So, Statement 3 is also incorrect.
9.	**B**	The given numbers 240, 321, 418, and 812 can be simplified to 240, 321, 236, and 236. Now, 240 cannot be the smallest and also, we cannot have two correct answers, so answer must be 321 If there were a need to find the smallest between 236 and 321, we can factorize them to compare and usually there is a big difference so that we don't have to calculate completely. E.g. 236 = 2x25x7 = 2x327 321 = 33x7 = 277 Now, obviously second number is smaller, we can check by observing only.
10.	**C**	We can only use three of the four digits – 2, 3, 7, and 9, in the first row. Also, since third row is also a 3-digit number and thrice the first-row number, maximum value of first row can be 987/3 i.e. 329. So, we are left with following combinations only: 237, 273, 239, 293, 279, 297, 327, and

		329. We will check these numbers by doubling and tripling respectively to check feasibility - 237 × 2 = 474 (digit repetition, so eliminated) 273 × 2 = 546; 273 × 3 = 819 (passes both) 239 × 2 = 478; 239 × 3 = 717 (digit repetition, so eliminated) 293 × 2 = 586; 293 × 3 = 879 (digit repetition, so eliminated) 279 × 2 = 558 (digit repetition, so eliminated) 297 × 2 = 594 (digit repetition, so eliminated) 327 × 2 = 654; 327 × 3 = 981 (passes both) 329× 2 = 658; 329× 3 = 987 (digit repetition, and so eliminated) So, only two cases are possible. answer is (c)
11.	**C**	Option (a) is incorrect because it only captures the premise of the passage and fails to include the conclusion i.e. the suggestion made by the author to choose the best administrators when state is ill/malfunctioning. Option (b) is incorrect because of the usage of word "selected" (as opposed to elected) which is not suggested by the author. Author is not against election. Option (c) is correct because the passage suggests that there should be a method in place to prevent incompetence from occupying public office. This implies the need for a system that ensures individuals in positions of power have the necessary qualifications, expertise, and competence to administer a state effectively. Therefore, statement (c) best reflects the message conveyed by the author. Option (d) is incorrect because it is contradictory to the suggestion of the author.

12.	**D**	Option (a) is incorrect. The methodology to count the 'poor' is debatable because it emphasizes on income dimension primarily. Other dimensions of poverty like lack of opportunity are excluded. Therefore, this answer option is incorrect. Option (b) is incorrect because the passage does not delve into the classification of urban and rural poverty and is thus beyond the scope of the passage. Option (c) is incorrect because the passage talks about the Indian scenario in particular, and not global standards. The passage nowhere makes a mention of global standards of poverty estimation. Hence, this answer option is incorrect. Option (d) is correct because it clearly mentions why poverty estimation methodology used in India is debatable. The line "...it exclusively relies on the notion of poverty as insufficient income or insufficient purchasing power" indicates the core limitation of the methodology. The passage clearly says that lack of sufficient income should not be the sole criteria to estimate poverty. The state of poverty could also be due to other social and personal circumstances that restricts a person to access wider choices for an improved life.
13.	**A**	Answer A : Option (a) is correct: According to the passage, the poverty line exclusively relies on the notion of poverty as insufficient income or insufficient purchasing power. It also says, "...if poverty is ultimately about deprivations affecting human well-being, then income poverty is only one aspect of it." Therefore, it is correct to say that it ignores other kinds of deprivations. Option (b) is incorrect as it is mentioned in the passage that the relevance of low incomes, meagre possessions, and other aspects of what are

		standardly seen as economic poverty relate ultimately to their role in curtailing capabilities and alternative choices to lead life. Thus, there is a correlation between lack of purchasing power and other deprivations. Hence, it is incorrect to say that other deprivations in human life have nothing to do with lack of purchasing power. Option (c) is incorrect as the passage does not talk about the temporal nature of income poverty. It does not discuss whether income poverty is a temporary or a permanent condition. Hence, this answer option is beyond the scope of this passage. Option (d) is incorrect as the passage does not mention anything about the duration for which income poverty restricts human choices. Hence, this answer option is also beyond the scope of this passage.
14.	**A**	Option (a) is correct. The passage says, "Poverty of a life, lies not merely in the impoverished state in which the person actually lives but also in the lack of real opportunity given by social constraints as well as personal circumstances - to choose other type of living." The term 'Poverty of a life' is used to highlight the multi-dimensional nature of poverty. In addition to economic or income deprivations, poverty encompasses other aspects like lack of opportunity, curtailed capabilities, inability to choose a better alternative etc. All these are effectively captured in this answer option. Option (b) is incorrect because the passage talks about poverty in general and not rural and urban poverty in particular. Options that go beyond the scope of the passage should be eliminated. Option (c) is incorrect. Refer to the line: "Poverty of life, in our view, lies not only in the impoverished state…" It clearly indicates that 'poverty of life' goes much beyond the impoverished state of the poor people. 'Poverty of life' is a sum total of all the opportunities missed in personal, social and

		economic life. Hence, this answer option is incorrect. Option (d) is incorrect. The statement seems to be a logical choice except that it uses the term 'permanently' in the end, which gives the idea that deprivations are final and cannot be addressed, which is not true in the context of the passage.
15.	**B**	Since speeds are in ratio of 3:2, when X completes 3km race i.e. 10 full rounds of the circular course, Y would have completed 6.66 rounds only (2/3*10). Now, X and Y meet every two rounds. So, by the time X completes, they meet only thrice.
16.	**D**	Just like in case of ranks from top and bottom, formula is Letter Original Position + Reverse Letter Position = 26 (Total Alphabets) + 1 To find the reverse letter of each of the letters in LUCKNOW - 27 – 12 = 15 i.e. O 27 – 21 = 6 i.e. F 27 – 3 = 24 i.e. X 27 – 11 = 16 i.e. P 27 – 14 = 13 i.e. M 27 – 15 = 12 i.e. L 27 – 23 = 4 i.e. D Therefore, the answer is OFXPMLD.
17.	**C**	The tournament starts with 150 players. After first round 75 remain (75 matches are held & 75 players are eliminated) After second round 38 remain (37 matches are held & 37 players are

		eliminated, 1 qualifies directly to next round) Similarly, after third round 19 remain.(19 matches) After fourth round, 10 remain.(9 matches) After fifth round 5 remain.(5 matches) After sixth round 3 remain.(2 matches) After seventh round (in which 1 match is held): 1 player is eliminated, and 2 remain. After eighth round (in which 1 match is held): 1 player is eliminated, and 1 remain. So, total number of matches = 75 + 37 + 19 + 9 + 5 + 2 + 1 + 1 = 149
18.	**B**	We need to find three-digit numbers in which: All digits are odd. So, the three digits must be from amongst 1, 3, 5, 7, and 9. The number is divisible by 5, i.e. the units digit is 5. The number of ways we can fill the first two digits from amongst 4 distinct digits = 4 × 3 = 12.
19.	**D**	Let's consider the two statements one by one. Statement 1: x/3 is not an integer. x may or may not be an integer. For example, if x = 1, x/3 is not an integer. Statement 2: 3x is an integer. x may or may not be an integer. For example, if x = 1/3, 3x will be an integer. On combining the two statements also, x may or may not be an integer. For example, if x = 1, even then x/3 will not be an integer. But 3x = 3 will

		be an integer. If x = 1/3, even then 3x will be an integer. But x/3 = 1/9 will not be an integer.
20.	**B**	Let the initial price be Rs. 100. After 25% rise, the new price = 100 + 25% of 100 = Rs. 125 After 20% fall, the new price = 125 – 20% of 125 = Rs. 100 After 10% rise, the new price = 100 + 10% of 100 = Rs. 110 So, final percentage increase in price = 10%
21.	**D**	Statement 1 is incorrect. Refer to the lines: "Techniques developed in the West are being adapted in some places to make tropical crops more productive". This mentions techniques are developed in developed countries. However, use of extreme word "confined to" makes this incorrect. Hence, this answer option is incorrect. Statement 2 is incorrect. As mentioned earlier, the passage states that techniques developed in the West are being adapted.
22.	**A**	Assumption 1 is valid. The passage clearly recommends the need to extend latest agricultural practices in simple matters like the timing and amount of fertilizer usage. This highlights the need to change agricultural practices. Therefore, this assumption is valid. Assumption 2 is not valid. In the concluding lines the role of infrastructure and reduction of food wastage in ensuring food security is mentioned but applying Negation test we can clearly observe that negation of this statement doesn't weaken the author's argument of suggesting these changes for farmers of Africa and Asia.
23.	**A**	Assumption 1 is valid. In the very beginning of the passage, the author

		highlights issues like plateauing of wheat and rice production, issues in raising yield through technology, non-availability of new areas of cultivation etc. These issues pose a challenge to ensure food security for future generations. Hence, this assumption is valid. However, the author is optimistic about harnessing technology and adapting it to address the challenge. Assumption 2 is invalid. The passage does not touch upon corporate farming at all. It deals primarily with how technology can be leveraged to ensure food security. Hence, this option is beyond the scope of this passage.
24.	**C**	There are exactly 2 letters between A and E. So, the fifth letter must be either beside A or E. So, the following four arrangements are possible: A _ _ E _ _ A _ _ E E _ _ A _ _ E _ _ A The three blank spaces can be filled by three distinct letters in 3 × 2 × 1 = 6 ways So, total possible arrangements = 6 × 4 = 24
25.	**D**	Statement 1: X is the brother of Y, and Y is the brother of Z. We know from this that all 3 are siblings but gender of only X and Y are clear. We do not know whether Z is a male or a female. So, we cannot say whether Z is the brother or sister of X. Statement 2:

		X, Y, and Z are siblings. Here also gender of Z is unknown. So, even if we combine the two statements, we cannot answer the given question as gender of Z remains unknown.
26.	**B**	This question is a bit tricky and looking at the options we get some red flags too. Remember, if there are only two plants, distance between them would be 1.01 km and not 1.01/2 km. Length of the road is given 1.01 km = 1010 m 101 plants are planted at equal distance from each other. So, there will be 100 gaps between those plants. Length of each gap = 1010/100 = 10.1 m Now, there are 4 gaps between 5 consecutive plants So, required distance = 4 × 10.1 = 40.4 m
27.	**C**	Number of ways to go directly from A to C = 3 Number of ways to go from A to B = 3, and Number of ways to go from B to C = 4. Therefore, Number of ways to go from A to C, via B = 3 × 4 = 12 So, total number of ways to go from A to C = 3 + 12 = 15
28.	**D**	Assume number of coins with A, B, C and D before giving as A, B, C & D respectively The number of coins with D = 10 (smallest 2-digit number) Let's work backwards now. D = (C/2) + 2 Or C/2 = 10 – 2 = 8 Or C = 16

		Similarly, C = (B/2) + 2 Or B/2 = 16 – 2 = 14 Or B = 28 And finally, B = (A/2) + 2 Or A/2 = 28 – 2 = 26 Or A = 52 So, A initially had 52 coins.
29.	**C**	The given series is: AABABCABCDABCDE… The pattern being followed here is: A, AB, ABC, ABCD, ABCDE, … Number of alphabets increase in arithmetic progression. We have to estimate how many such terms will be included when we have total 100 letters. If we have an arithmetic series, 1, 2, 3 …, then: Sum of first n terms = (n/2) (2a + (n-1)d), where 'n' is the number of terms in the series, 'a' the first term, and 'd' the difference between two terms i.e. 1. So, n(n+1)/2 >= 100, solving/estimating we get n=14. For n=13, we have sum = 13x14/2 = 91. so, 92nd is A, 93rd is B and so, 100th is I.
30.	**A**	There are 4 persons between A and B, and 7 persons between B and C. So, there are four cases possible, as depicted below: A_ _ _ _ B _ _ _ _ _ _ _ C

		B_ _ _ _ A _ _ C C_ _ _ _ _ _ _ B _ _ _ _ A C _ _ _ _ A _ _ B Now, there are 11 persons ahead of C and 13 behind A. As there are more than 11 persons ahead of C in first case depicted above, we can eliminate it. We can proceed with the remaining three cases and eliminate all but second one. _ _ _B_ _ _ _ A _ _ C _ _ _ _ _ _ _ _ _ _ Minimum possible number of people in the queue = 22.
31.	**C**	Statement 1 is correct. The passage clearly states that organisms go extinct as a function of environmental or biological assaults for which their inheritance deems them ill-equipped. Therefore, the very fact that inadequately prepared species face extinction indicates that natural selection cannot anticipate the future environment on earth. Statement 2 is incorrect as it makes a sweeping and fatalistic prediction that the entire existing species would get extinct in future. Eliminating statement 2 helps us mark the correct answer - option (c). Statement 3 is correct because according to the passage, the failure to survive can be attributed to the genomes which are unable to withstand geological vagaries or biological mishaps. Had the genomes been prepared to predict the future environment and adjust accordingly the probability of survival would be higher. Statement 4 is correct. Had the phenomenon of natural selection been able to predict the future environment on earth, extinction might not be a 'common feature'. Therefore, the very fact that extinction of species is a common feature indicates that natural selection cannot anticipate the future environment on earth.

32.	**B**	Refer to the line: "Evolution happens - this is a fact." According to the author, because evolution is a fact, it does not need any theory to explain. Therefore, Darwin's theory is not a theory per se. Let us consider the answer options. Option (a) is incorrect. The reference to 'creationist doctrine' is made to highlight the inability to explain the extinction of 90% of the species that have lived on the earth so far. Even though the statement is correct, it is not a sufficient reason for Darwin's theory being called a theory. Option (b) is incorrect. The statement could be logical per se, but like the previous option, it does not give the exact reason for Darwin's theory being called a theory. The reasons for extinction do not have much to do with whether Darwin's theory is a theory or not. Option (c) is correct. According to the passage, "The Darwinian explanation for extinct life is once again simple, elegant and at once convincing……. therefore, the so-called Darwinian theory is not a theory at all." The passage further says that the mechanism of evolution is amply supported by scientific data and that to date no single zoological, botanical etc. or physical evidence has refuted either of the central two main Darwinian ideas. It means that theories should have a scope of refutability. And, since Darwin's theories have not been refuted so far, it falls under the domain of law, not theory. 'Darwin's theory' is more like a law that explains the natural phenomena of evolution and extinction accurately, amply supported by evidence and hitherto uncontested. Option (d) is incorrect because the creationist doctrine is already refuted in the passage even before the issue of calling Darwin's theory a theory is

		discussed. Hence, this answer option can be outrightly rejected
33.	**A**	Statement 1 is correct. The opening lines of the passage state that the set of organisms that exist currently cannot fully prepare for the impending environmental catastrophes. Those species that cannot overcome environmental adversity as a result of their genomes' incapacity to withstand geological vagaries or biological mishaps will go extinct. Only those species that develop the ability to overcome these mishaps will survive and perpetuate. Statement 1 aptly captures these arguments. Statement 2 is incorrect as it makes a calculated prediction of future extinction which is uncertain. The passage only says that more than 90% of species that have ever lived on earth are now extinct. It does not talk about the extent of extinction of currently existing species in future. Statement 3 is incorrect as Darwin's theory discusses only the phenomenon of evolution and not ALL the natural phenomena.
34.	**D**	The question asks us to identify the crux of the passage. For this, it is important to take note of the opening lines and ending lines of the passage. We need to choose the option that conveys the essential message of the passage and not those options that are peripheral to the core idea. Option (a) is incorrect because it suggests reversing the emerging trend of food consumption, which is impractical. Also, the passage does not solely deal with dietary trends. It also talks about trends in transportation and gadget use. Option (b) is incorrect. The statement seems logical but is not the crux of

		the passage because it suggests improving agricultural and energy efficiency separately without dealing with the core issue of water use efficiency that is common to both agriculture and energy production. Option (c) is incorrect. According to the passage, the changing trends in consumption behavior is due to the growing affluence among the middle class, and not due to modern technological developments. It is the affluence which helps them access modern technological developments like gadgets and vehicles. Option (d) is the correct answer. The passage clearly mentions that switching from cereal-based to protein-based diet entails increased water consumption. Increasing use of machines and vehicles also requires more energy which needs water to generate. Both the changing dietary practices and energy use practices puts a strain on the water resources ultimately. Thus, as the number of middle-class families with water-intensive habits is set to rise exponentially, water management practices should also need to change dramatically in the coming years.
35.	**D**	x minutes = 60x seconds x hours = 60x minutes = 3600x seconds x days = 24x hours = 1440x minutes = 86400x seconds x weeks = 7x days = 7 × 86400x seconds = 604800x seconds So, total time in seconds = 604800x + 86400x + 3600x + 60x + x = 694861x seconds Now, this question could also have been easily solved without calculating full. by just writing 60 X 60 X 24 X 7 you can see that the solution would be of much greater than 5 digits, so rules out options a and b. Eliminating

		c is easy since last one second is bound to add a unit's digits in the final answer.
36.	**D**	Draw the family tree as per the information provided in the question.
37.	**D**	As we do not know the **relative** positions of P and Q, we cannot find the distance between them, even after using the information in both the statements.
38.	**D**	Conclusion I contradict with statement 1& 2 Conclusion II contradicts with statement 2 Conclusion III contradicts with statement 2 Conclusion I contradict with statement 1& 2
39.	**C**	We can see that conclusions I and III follow.
40.	**D**	The various possible circular arrangements, as per the information provided in the passage, have been depicted below: We can see that none of (a), (b), or (c) is definitely correct.
41.	**B**	The passage highlights the issues associated with overworked individuals (different from hard work). They are so drained at their workplace that they cannot engage in serious activities at home. These serious activities include self-introspection, self-improvement, spiritual activities etc. They prefer to remain mentally idle and therefore engage in activities like watching cinema, crime stories etc. as they demand less mental involvement. They are very much capable of thinking constructively, self-improvement, engaging in spirituality etc. It is the overwork that prevents them from these constructive exercises.

		From the above discussion, options (c) and (d) can be rejected. The author is against overworking and not treating workers as human beings. He is not against hard work per se. This makes option (a) incorrect, and option (b) the correct answer.
42.	**B**	It is a straightforward and easy question once you read all the options. The passage clearly mentions that excessive work leads to over strained individuals. This leaves them with no time and energy to engage in activities like self-improvement, spirituality and thinking constructively. Option (a) is incorrect as the author does not doubt the intellectual capability at all. Option (b) is correct as excessive work does not leave adequate time to engage in self-improvement. Option (c) is incorrect as there is no reference to materialism in the passage. Hence, this option is beyond the scope of this passage. Option (d) is incorrect. Because of excessive work individuals prefer those alternatives that keep them mentally idle and help them forget their daily routine activities. It would be incorrect to say that they do not seek self-improvement because they love amusement and are mentally idle. Hence, this answer option is incorrect.
43.	**B**	Statement 1 is incorrect. Demographic dividend is an increase in the share of the working age group in the total population of a country. In the context of the passage, demographic dividend is not inherently related to illiteracy. The author only states that education helps reap the benefits of demographic dividend. Therefore, this statement cannot be accepted to happen invariably. Statement 2 is correct. Refer to the line: "...means that the relative ratio of

		very young and very old will, for a while, be on the decline…" This statement talks precisely about this increase in relative ratio of the very old and the very young. Hence, this statement is correct. Statement 3 is incorrect. There is no indication towards stabilization of population growth. Whether or not it will quickly stabilize is even more far-fetched in the context of this passage. Therefore, we cannot comment on the facts stated in this statement. Only statement 2 is correct. This makes option (b) the most appropriate answer.
44.	**D**	The word "essential" is an extreme word which should generate necessary caution in your mind. Statement 1 incorrect: As per the passage, demographic dividend provides an opportunity for economic growth. However, this does not imply that is an "essential condition" for economic growth i.e. economic growth might be possible even if a country is not in its demographic dividend phase. So, this is a far-fetched statement and hence, incorrect. Statement 2 incorrect: Again, we cannot confirm promotion of higher education as an essential condition as per the passage. We reject this option due to extreme word "essential" or compulsory.
45.	**A**	As per the information provided in the question: Statement 1 -> Z = X + 8 …(i) Statement 2 -> P + Q = 21 …. (ii) Statement 3 -> Q = P – 5 …. (iii) Statement 4 -> X + Y = 28 …. (iv) Statement 5 -> P = X + 5 …. (v)

		Total number of Books = P + Q + X + Y + Z Solving equations ii and iii, we get: P = 13 Q = P – 5 = 8 Using above result and equation v, we get: X = P – 5 = 8 Using above result and equation i, we get: Z = X + 8 = 16 Using iv, we get: Y = 28 – 8 = 20 So, P + Q + X + Y + Z = 13 + 8 + 8 + 20 + 16 = 65 So, total cost of all the notebooks = 65 × 40 = Rs. 2600 There is no shortcut in this problem. If the options had very large differences, then we could simply have eliminated 3 options on basis of equations i, ii and iv, which gives 21+28+ x + 8 = so minimum 58 (x will be minimum 1). Now, 58x40 = 2320. So, answer can be this or any number bigger than this. Similarly, we can calculate upper limit quickly too. But in this question, this approach is futile.
46.	**D**	While solving this question, ignore village clock timing in initial calculations as it is faulty. If you use that information initially, you will get wrong answer or get confused. Total time taken by the man to come back home = 14:30 to 16:00 = 90 minutes now subtract time for which he stayed in the village i.e. 25 minutes. therefore, total travelling time = 90 – 25 = 65 minutes

		using, time speed distance formula, total time t1 + t2 = (distance 1/speed 1) + (distance 2/speed 2) 65 = d/s + 1.25d/2s solving we get, d/s = 65x2/3.25 = 40 So, the man took 40 minutes to reach to the village. So, the correct time = 14:30 + 40 minutes = 15:10 hours Therefore, the village clock is 15:15 – 15:10 = 5 minutes fast.
47.	**C**	Now, this is a classical problem, but with a twist pens with A B C D E and F - all should be even. Otherwise, we could have solved by simply taking LCM, i.e. LCM of 2, 3, 4, 5, and 6 = 60 but now we have to check all values, B C D E F number of pens with B = 60/2 = 30 number of pens with C = 60/3 = 20 number of pens with D = 60/4 = 15 (an odd number) number of pens with E = 60/5 = 12 number of pens with F = 60/6 = 10 Now since adding is not an option, we can simply multiply by 2 convert odd numbers to even. Therefore, A becomes 60 × 2 = 120 Similarly doubling all and adding we get total number of pens bought by X = 120 + 60 + 40 + 30 + 24 + 20 = 294
48.	**D**	Neither of the two statements is sufficient alone due to lack of information. In such questions we need a lot of data points to arrive at a unique solution. Now only option c and d remain. Even on combining the two statements, we are unsure about position of A relative to others. So, we can mark d as both not sufficient to answer the Question.

49.	**C**	Since each statement alone has only one equation while solving for two variables generally requires two unique equations, neither of the two statements is sufficient alone. Now we check if both the statements are sufficient together. Let the present ages of Manisha and her mother be x and y respectively. As per statement 1, y = x + 24 As per statement 2, (x + 5)/ (y + 5) = 3/5 Or 5x + 25 = 3y + 15 Or 3y – 5x = 10 Or 3(x + 24) – 5x = 10 (using statement 1) Or 3x + 72 – 5x = 10 Or x = 31 So, Manisha is 31 years old at present. Both statements together are sufficient to answer the question. Note: Usually in case we have two equations with relationship with two variables, we can get a solution, so we can confidently mark yes without solving but both equations should not be able to be simplified to the same equation. In any case, stop calculating once you are sure of getting an answer to save time. Make it a habit.
50.	**D**	Since each statement has too little information, neither of the two statements is sufficient alone. Even after using both statements, we get multiple possible cases. (Even if you identity two different solutions, you can mark the answer as no) So, Both Statement-1 and Statement-2 are not sufficient to answer the Question
51.	**C**	Option (a) is incorrect: The passage states the premise as machines

		leading to increase in leisure. Conclusion is that people must be educated properly so that this increased leisure is enjoyable or happy. Now, benefits of economic progress can be multiple besides leisure so the use of "only" here makes us to rule out this choice. Option (b) is incorrect as it suggests an extreme idea which is not supported by the passage. Use of extreme word "All" should have raised a red flag. Option (c) is correct. Refer to the last line or the conclusion. It conveys the tone clearly that author is advocating education as one of the solutions that increases happiness. Therefore, we can choose this as the correct answer.
52.	**B**	According to the author, as we grow up, we tend to become more cautious, more anxious and more skeptical. We start overthinking which prevents us from enjoying the moment. We are either being anxious about our future or being tensed analyzing our past. There is nothing wrong with the innate capacity to enjoy the moment. This makes options (a) and (d) incorrect. The author has clearly highlighted the above-mentioned reasons why adults feel less thrilled by presents. Hence, option (c) is also incorrect. We are now left with option (b) which is the correct answer. There are multiple reasons - being anxious, skeptical, cautious, overthinking about past and present rather than enjoying the present - because of which adults feel less thrilled by presents. Hence, option (b) is the most appropriate answer.
53.	**A**	It is a tricky question as the answer options are close. Let's consider the

		answer statements. Option (a) is correct. The core agenda of the passage is discussing the importance of enjoying the present. This includes being thrilled by presents or gifts. According to the passage, as we grow there is a reduction in enjoying the moment. That's because we tend to worry too much about the past and future. Option (a) talks precisely about the same - the author is against worrying too much about past and future. Option (b) is incorrect. The passage does not talk about thinking about presents or gifts that we receive. It talks about being thrilled by these presents or gifts, which has declined as we overthink about past and future. Therefore, this answer option is not quite in the domain of this passage. Option (c) is incorrect. This answer option is close. The author does support the idea of being thrilled by presents or gifts. The reference to presents or gifts is made to drive home a larger message - reduce being obsessed with past or future, and live in the moment. Option (a) is more appropriate than this answer option. Option (d) is incorrect. This answer option is also close. It is clearly mentioned that we have lost the fullness of the joy of giving, and thus the fullness of the joy of receiving. Again, that is a passing reference made by the author to lend support to the core argument - reduce overthinking about past or future. Option (a) is the most appropriate answer.
54.	**A**	The three-digit numbers have been represented by ABC, wherein A, B, and C are non-zero digits. Using 3 distinct digits we can make 3 × 2 × 1 = 6 three-digit numbers.

		So, x will be the sum of these 6 three-digit numbers. We need to find the two values of x closest to 1000, one just below it (which will be the greatest 3-digit value of x), and the other just above it (which will be the lowest 4-digit value of x). Now, we have to do a bit of hit and try, so that the value of x reaches close to 1000. Let the three digits be the minimum possible ones, i.e. 1, 2, and 3. So, we get x = 123 + 132 + 213 + 231 + 312 + 321 = 1332 This is the least possible value of x. So, statement 1 is correct, but statement 2 is incorrect.
55.	**C**	The PIN contains three digits out of – 1, 2, 3, 4, 5, 6, and 7 Case I: The rightmost digit is 1 The possible combinations are: 531, 631, 731, 641, 741, 751 (i.e. 6 possible combinations) Case II: The rightmost digit is 2 The possible combinations are: 642, 742, 752 (i.e. 3 possible combinations) Case III: The rightmost digit is 3 The possible combinations are: 753 (i.e. 1 possible combination) The rightmost digit cannot be more than 3. (due to difference of 2 between each) So, the total number of possible combinations of the PIN = 6 + 3 + 1 = 10
56.	**A**	With eight equidistant points on a circle - A, B, C, D, E, F, G, and H. We can have 4 unique diameter lines connecting the opposite points.

		We are aware of the property that whenever diameter of a circle is one side and opposite vertex is on the circle, it forms a right-angle triangle. Therefore, we can get 6 unique right-angle triangle using 6 remaining points. Since, with each diameter we can form 6 unique triangles, we have total number of right-angled triangles that can be drawn = 4 x 6 = 24
57.	**D**	Since we have only one equation and 2 variables, it is not possible to solve. Hence, the data is inadequate to draw any conclusion.
58.	**D**	The key to solving this question is knowledge of divisibility tests. We check 1261 with all prime numbers one by one. First hit is 13 (2, 3 & 5 can easily be ruled out. Then try 7 and 11). Remaining number i.e. 1261/13 is 97. 1261 = 1 × 13 × 97 Now, 91 is divisible by 13 and 97 itself is present. So, 1261 will completely divide the expression. Hence, the remainder = 0
59.	**C**	Statement I: It is not possible to cut a rectangle into exactly 4 square sheets. But the 4 squares don't have to be equal in area. So, we can have 4 squares - 8x8, 8x8, 4x4, 4x4 Statement II: Now we know that by merging two equal area congruent triangles we can form a rectangle. So, we have 5 equal sized rectangles instead of 10 triangles. We can easily cut 1 rectangle into 5 equal sized rectangles. Hence, both statements 1 and 2 are correct.
60.	**A**	To simplify we write percentages in decimal form,

		0.7 x + y = 1.65 y Or 0.7 x = 0.65 y Or x/y = 0.65/0.70, which is less than 1. Hence, x < y …. (i) Now, 0.6 x + z = 1.65 z Or 0.6 x = 0.65 z Or x/z = 0.65/0.60, which is greater than 1. Hence, x > z …. (ii) From (i) and (ii), we get: z < x < y
61.	**C**	To answer this question, it is important to simplify the first line of the passage. It states that among the people who fail to accumulate sufficient money, the majority are easily influenced by external opinion. The author nowhere indicates that the majority of the people fail to accumulate sufficient money for their needs. Neither does the author state that most of the people are able to accumulate sufficient money for their needs. The passage adopts a balanced stand and at the same time recommends the importance of money. All these aspects are best captured in option (c).
62.	**A**	Statement (a) is correct. From the very first line, the author talks about the influence of the opinions of others. In the last line of the passage, the author outrightly says that you will not succeed in any initiative if you are influenced by the opinions of others. Therefore, there is a clear suggestion towards not being influenced by the opinion of others. Statement (b) is incorrect. The passage underlines the importance of

		accumulating sufficient money to meet one's needs. Because those who do not accumulate sufficient money end up being influenced by external opinions. This, nowhere, means that people should accumulate as much money as they can. Statement (c) is incorrect. The author only recommends not being influenced by the opinion of others. There is no mention of giving opinions. Therefore, this answer option is not completely within the domain of this passage. Statement (d) is incorrect. The last line of the passage states that if you are influenced by the opinion of others, you will not succeed in any of your ventures. The other way round need not necessarily be true. There is no guarantee that if you do not accept any opinion at all, you are bound to succeed. There could be other factors that are crucial for success. Hence, this answer option is incorrect.
63.	**C**	Statement 1 is correct. The author has said that the right of social order does not come from nature. It comes from convention. Social order is founded on conventions i.e. social order is emerging from conventions and social order is basis of all other rights. Hence, this statement is correct. Statement 2 is correct. If we negate this statement, the passage will become false because if rights of man can be exercised without social order, it cannot be called as basis of all other rights. Hence, by negation test we can say that this is correct as per the passage.
64.	**A**	Since there are only two candidates, if X got 56%, Y got 44%. Difference is of 12%.

		Now, Difference is given as 1440 (12% of votes casted). Therefore, total casted votes = 12000 Now, only 80% voted, so total voters = 12000/.80 = 15000
65.	**C**	LCM of 6, 9, 12, 15 and 18 = 180 Smallest number greater than 1000 which is a multiple of 180 is 1080. So, the required number with remainder 3 = 1080 + 3 = 1083
66.	**D**	Let p be a two-digit number and q be the number consisting of same digits written in reverse order. If p x q = 2430, then what is the difference between p and q? (a) 45 (b) 27 (c) 18 (d) 9
67.	**D**	Since all statements say "can be", we just need to find one case that is possible for each statement. This is not tough to do as shown below. p is a prime number. So, p can be 2, 3, 5, 7, 11, 13…… q is a composite number. So, q can be 4, 6, 8, 9, 10…. Statement 1: p × q can be an odd number, e.g. (3 × 9 = 27). Thus, statement 1 is correct. Statement 2: q/p can be a prime number, e.g. (4/2 = 2). Thus, statement 2 is correct. Statement 3: p + q can be a prime number, e.g. (3 + 4 = 7). Thus, statement 3 is correct. Thus, all the statements 1, 2 and 3 are correct.
68.	**C**	Statement 1:

		In 1 minute, Hour hand covers 0.5 degrees. So, at 3.16 pm, hour hand position in degrees = 192x0.5 = 96 In 1 minute, minute hand covers 6 degrees. So, at 3.16 pm i.e. 16 minutes, minute hand position in degrees = 16x6 = 96 Hence, statement 1 is correct. Statement 2 is bound to be correct as second-hand travels through entire clock in one minute. So, it will coincide with minute hand when it is between 4:58 p.m. and 4:59 p.m. Thus, both statements 1 and 2 are correct.
69.	**A**	After 20 ml of milk transferred from container X to container Y, Milk in container X = 100 – 20 = 80 ml Amount of solution in container Y becomes = 100 ml water + 20 ml milk = 120 ml Ratio of milk in container Y solution = 20: 120 = 1: 6 By corollary, ratio of water in Y solution = 5: 6 (100: 120) After 20 ml of milk transferred from container Y to container X, Milk in container X = 80 + 1/6 *20 = 83.33 ml Amount of water in Y = 5/6 * 100 = 83.33 ml Thus, m = n
70.	**D**	One of the easiest and quickest question in this paper. Any circle including a pie-chart has sum of internal angles as 360 degrees. Therefore, Angle A in the pie-chart = 360 – (90 + 50 + 45 + 75) = 100 So, Percentage of expenditure on item A = (100/360) × 100 = (250/9) %
71.	**C**	This question is more about the tone of the passage in terms of the value of research. Refer to the line: "Scientific research is probably never

		completely valueless." Option (c) expresses exactly the same point of view. The author adopts an optimistic approach towards the outcome of scientific research. The only concern is with reference to the nature of research. According to the author it should be original and not literary or historical.
72.	**C**	To arrive at the correct answer, it is important to observe the tone of the author. Refer to the line: "...there is always a chance that the result is of value to the investigator of talent..." It is highly likely that the result of scientific research is of value to an intelligent investigator in one way or the other. It is noteworthy that the author has stopped short of adopting an extreme stand - the result is always of value to the intelligent investigator. This cautioned stand of the author is aptly captured in option (c).
73.	**D**	Option (d) is correct as buffer stocking of water through dams and recharging aquifers would mean that the excess water is being stored above and below ground for later use i.e. managed and regulated for future consumption during lean season. Option (a) is incorrect as the passage discusses the temporal aspect of the same- 'too much' water during 120 days and 'too little' for the remaining 245 days and not the spatial or geographical aspect. Canals are solutions for geographical balance/distribution rather than temporal or time variance if rain. Therefore, it is not very suitable. Option (b) is incorrect as it is too farfetched solution and beyond the scope of the passage. Option (c) is incorrect as well as mentioned in option a solution.
74.	**B**	$15 \times 14 \times 13 \times 12 \times 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 3m \times n$

		Numbers which are multiple of 3 = 15 × 12 × 9 × 6 × 3 = (3 × 5) × (3 × 4) × (3 × 3) × (3 × 2) × 3 = (3x3x3x3x3x3) × (5 ×4 × 2) Therefore, the maximum value of m is 6.
75.	**B**	We need to break down the numbers into their multiples to observe the pattern clearly: 1 x 1 x 2, 2 x 2 x 3, 3 x 3 x 4, 4 x 4 x 5, 5 x 5 x 6, ... Next number is 6 x 6 x 7 = 252 Hence, option (b) is the correct answer.
76.	**C**	There are 9 non-zero digits i.e. 1, 2, 3, 4, 5, 6, 7, 8 or 9 There are 5 vowels and 21 consonants in English alphabet (capitals only) The password starts with a vowel and ends with a consonant. So, the digit will come at the middle. The number of such passwords = 5 × 9 × 21 = 945 Hence, 945 such passwords can be generated.
77.	**D**	The cups will be arranged in a 3 × 3 matrix. We need to remove cases where any one row contains only Tea i.e. all 3 Teas in a single row. This can happen in 3 ways - first, second or third row. Therefore 3 cases need to subtracted from total combinations possible. Total arrangements = 9! / (6! x 3!) (by formula) Required answer = total arrangements possible - 3 = 84 - 3 = 81 Hence, option (d) is the correct answer.
78.	**C**	Let the 3 consecutive integers be x - 1, x, and x + 1 According to the question, sum = product, therefore (x – 1) + x + (x + 1) = (x - 1) × x × (x + 1) ⇒ 3x = x × (x - 1) × (x + 1)

		⇒ x = 0, 2 or -2 Therefore, there are 3 such possibilities. Hence, option (c) is the correct answer. (Note that taking x, x + 1, x + 2 is only recommended in case of whole numbers and not integers which can be negative)
79.	**A**	Since, X and Y are distinct non-zero digits - 1 to 9 XY can be arranged in = 9 × 8 ways = 72
80.	**C**	Question looks unsolvable in the first glance due to high number of variables but is easily solvable as we don't need to find each variable but only the desired average. (A + B + C)/3 = 40 (given) => (A + B + C) = 120 .....(i) (B + D + E)/3 = 42 (given) => (B + D + E) = 126.....(ii) F = B..... (iii) From equations (i) and (ii), we get: A + B + C + B + D + E = 120 + 126 Or A + B + C + D + E + F = 246 (replacing one B with F as F = B from equation iii) So, average weight of A + B + C + D + E + F = 246/6 = 41
81.	**B**	The passage highlights the issues associated with overworked individuals (different from hard work). They are so drained at their workplace that they cannot engage in serious activities at home. These serious activities include self-introspection, self-improvement, spiritual activities etc. They prefer to remain mentally idle and therefore engage in activities like watching cinema, crime stories etc. as they demand less mental

		involvement. They are very much capable of thinking constructively, self-improvement, engaging in spirituality etc. It is the overwork that prevents them from these constructive exercises. From the above discussion, options (c) and (d) can be rejected. The author is against overworking and not treating workers as human beings. He is not against hard work per se. This makes option (a) incorrect, and option (b) the correct answer.
82.	**B**	It is a straightforward and easy question once you read all the options. The passage clearly mentions that excessive work leads to over strained individuals. This leaves them with no time and energy to engage in activities like self-improvement, spirituality and thinking constructively. Option (a) is incorrect as the author does not doubt the intellectual capability at all. Option (b) is correct as excessive work does not leave adequate time to engage in self-improvement. Option (c) is incorrect as there is no reference to materialism in the passage. Hence, this option is beyond the scope of this passage. Option (d) is incorrect. Because of excessive work individuals prefer those alternatives that keep them mentally idle and help them forget their daily routine activities. It would be incorrect to say that they do not seek self-improvement because they love amusement and are mentally idle. Hence, this answer option is incorrect.
83.	**B**	Statement 1 is incorrect. Demographic dividend is an increase in the share of the working age group in the total population of a country. In the context of the passage, demographic dividend is not inherently related to illiteracy. The author only states that education helps reap the benefits of demographic dividend. Therefore, this statement cannot be accepted to

		happen invariably. Statement 2 is correct. Refer to the line: "...means that the relative ratio of very young and very old will, for a while, be on the decline..." This statement talks precisely about this increase in relative ratio of the very old and the very young. Hence, this statement is correct. Statement 3 is incorrect. There is no indication towards stabilization of population growth. Whether or not it will quickly stabilize is even more far-fetched in the context of this passage. Therefore, we cannot comment on the facts stated in this statement. Only statement 2 is correct. This makes option (b) the most appropriate answer.
84.	**D**	The word "essential" is an extreme word which should generate necessary caution in your mind. Statement 1 incorrect: As per the passage, demographic dividend provides an opportunity for economic growth. However, this does not imply that is an "essential condition" for economic growth i.e. economic growth might be possible even if a country is not in its demographic dividend phase. So, this is a far-fetched statement and hence, incorrect. Statement 2 incorrect: Again, we cannot confirm promotion of higher education as an essential condition as per the passage. We reject this option due to extreme word "essential" or compulsory.
85.	**A**	As per the information provided in the question: Statement 1 -> $Z = X + 8$ ....(i) Statement 2 -> $P + Q = 21$ ....(ii)

		Statement 3 -> Q = P – 5 ….(iii) Statement 4 -> X + Y = 28 ….(iv) Statement 5 -> P = X + 5 ….(v) Total number of Books = P + Q + X + Y + Z Solving equations ii and iii, we get: P = 13 Q = P – 5 = 8 Using above result and equation v, we get: X = P – 5 = 8 Using above result and equation i, we get: Z = X + 8 = 16 Using iv, we get: Y = 28 – 8 = 20 So, P + Q + X + Y + Z = 13 + 8 + 8 + 20 + 16 = 65 So, total cost of all the notebooks = 65 × 40 = Rs. 2600 There is no shortcut in this problem. If the options had very large differences, then we could simply have eliminated 3 options on basis of equations i, ii and iv, which gives 21+28+ x + 8 = so minimum 58 (x will be minimum 1). Now, 58x40 = 2320. So, answer can be this or any number bigger than this. Similarly, we can calculate upper limit quickly too. But in this question, this approach is futile.
86.	**D**	While solving this question, ignore village clock timing in initial calculations as it is faulty. If you use that information initially, you will get wrong answer or get confused. Total time taken by the man to come back

		home = 14:30 to 16:00 = 90 minutes now subtract time for which he stayed in the village i.e. 25 minutes. therefore, total travelling time = 90 – 25 = 65 minutes using, time speed distance formula, total time t1 + t2 = (distance 1/speed 1) + (distance 2/speed 2) 65 = d/s + 1.25d/2s solving we get, d/s = 65x2/3.25 = 40 So, the man took 40 minutes to reach to the village. So, the correct time = 14:30 + 40 minutes = 15:10 hours Therefore, the village clock is 15:15 – 15:10 = 5 minutes fast.
87.	**C**	Now, this is a classical problem, but with a twist pens with A B C D E and F - all should be even. Otherwise, we could have solved by simply taking LCM, i.e. LCM of 2, 3, 4, 5, and 6 = 60 but now we have to check all values, B C D E F number of pens with B = 60/2 = 30 number of pens with C = 60/3 = 20 number of pens with D = 60/4 = 15 (an odd number) number of pens with E = 60/5 = 12 number of pens with F = 60/6 = 10 Now since adding is not an option, we can simply multiply by 2 convert odd numbers to even. Therefore, A becomes 60 × 2 = 120 Similarly doubling all and adding we get total number of pens bought by X = 120 + 60 + 40 + 30 + 24 + 20 = 294
88.	**D**	Neither of the two statements is sufficient alone due to lack of information.

		In such questions we need a lot of data points to arrive at a unique solution. Now only option c and d remain. Even on combining the two statements, we are unsure about position of A relative to others. So, we can mark d as both not sufficient to answer the Question.
89.	**C**	Since each statement alone has only one equation while solving for two variables generally requires two unique equations, neither of the two statements is sufficient alone. Now we check if both the statements are sufficient together. Let the present ages of Manisha and her mother be x and y respectively. As per statement 1, $y = x + 24$ As per statement 2, $(x + 5)/(y + 5) = 3/5$ Or $5x + 25 = 3y + 15$ Or $3y – 5x = 10$ Or $3(x + 24) – 5x = 10$ (using statement 1) Or $3x + 72 – 5x = 10$ Or $x = 31$ So, Manisha is 31 years old at present. Both statements together are sufficient to answer the question. Note: Usually in case we have two equations with relationship with two variables, we can get a solution, so we can confidently mark yes without solving but both equations should not be able to be simplified to the same equation. In any case, stop calculating once you are sure of getting an answer to save time. Make it a habit.
90.	**D**	Since each statement has too little information, neither of the two statements is sufficient alone.

		Even after using both statements, we get multiple possible cases. (Even if you identity two different solutions, you can mark the answer as no) So, Both Statement-1 and Statement-2 are not sufficient to answer the Question
91.	**C**	Option (a) is incorrect: The passage states the premise as machines leading to increase in leisure. Conclusion is that people must be educated properly so that this increased leisure is enjoyable or happy. Now, benefits of economic progress can be multiple besides leisure so the use of "only" here makes us to rule out this choice. Option (b) is incorrect as it suggests an extreme idea which is not supported by the passage. Use of extreme word "All" should have raised a red flag. Option (c) is correct. Refer to the last line or the conclusion. It conveys the tone clearly that author is advocating education as one of the solutions that increases happiness. Therefore, we can choose this as the correct answer.
92.	**B**	According to the author, as we grow up, we tend to become more cautious, more anxious and more skeptical. We start overthinking which prevents us from enjoying the moment. We are either being anxious about our future or being tensed analyzing our past. There is nothing wrong with the innate capacity to enjoy the moment. This makes options (a) and (d) incorrect. The author has clearly highlighted the above-mentioned reasons why adults feel less thrilled by presents. Hence, option (c) is also incorrect. We are now left with option (b) which is the correct answer. There are

		multiple reasons - being anxious, skeptical, cautious, overthinking about past and present rather than enjoying the present - because of which adults feel less thrilled by presents. Hence, option (b) is the most appropriate answer.
93.	**A**	It is a tricky question as the answer options are close. Let's consider the answer statements. Option (a) is correct. The core agenda of the passage is discussing the importance of enjoying the present. This includes being thrilled by presents or gifts. According to the passage, as we grow there is a reduction in enjoying the moment. That's because we tend to worry too much about the past and future. Option (a) talks precisely about the same - the author is against worrying too much about past and future. Option (b) is incorrect. The passage does not talk about thinking about presents or gifts that we receive. It talks about being thrilled by these presents or gifts, which has declined as we overthink about past and future. Therefore, this answer option is not quite in the domain of this passage. Option (c) is incorrect. This answer option is close. The author does support the idea of being thrilled by presents or gifts. The reference to presents or gifts is made to drive home a larger message - reduce being obsessed with past or future, and live in the moment. Option (a) is more appropriate than this answer option. Option (d) is incorrect. This answer option is also close. It is clearly mentioned that we have lost the fullness of the joy of giving, and thus the fullness of the joy of receiving. Again, that is a passing reference made by

		the author to lend support to the core argument - reduce overthinking about past or future. Option (a) is the most appropriate answer.
94.	**A**	The three-digit numbers have been represented by ABC, wherein A, B, and C are non-zero digits. Using 3 distinct digits we can make 3 × 2 × 1 = 6 three-digit numbers. So, x will be the sum of these 6 three-digit numbers. We need to find the two values of x closest to 1000, one just below it (which will be the greatest 3-digit value of x), and the other just above it (which will be the lowest 4-digit value of x). Now, we have to do a bit of hit and try, so that the value of x reaches close to 1000. Let the three digits be the minimum possible ones, i.e. 1, 2, and 3. So, we get x = 123 + 132 + 213 + 231 + 312 + 321 = 1332 This is the least possible value of x. So, statement 1 is correct, but statement 2 is incorrect.
95.	**C**	The PIN contains three digits out of – 1, 2, 3, 4, 5, 6, and 7 Case I: The rightmost digit is 1 The possible combinations are: 531, 631, 731, 641, 741, 751 (i.e. 6 possible combinations) Case II: The rightmost digit is 2 The possible combinations are: 642, 742, 752 (i.e. 3 possible combinations) Case III: The rightmost digit is 3 The possible combinations are: 753 (i.e. 1 possible combination)

		The rightmost digit cannot be more than 3. (due to difference of 2 between each) So, the total number of possible combinations of the PIN = 6 + 3 + 1 = 10
96.	**A**	With eight equidistant points on a circle - A, B, C, D, E, F, G, and H. We can have 4 unique diameter lines connecting the opposite points. We are aware of the property that whenever diameter of a circle is one side and opposite vertex is on the circle, it forms a right-angle triangle. Therefore, we can get 6 unique right-angle triangle using 6 remaining points. Since, with each diameter we can form 6 unique triangles, we have total number of right-angled triangles that can be drawn = 4 x 6 = 24
97.	**D**	Since we have only one equation and 2 variables, it is not possible to solve. Hence, the data is inadequate to draw any conclusion.
98.	**D**	The key to solving this question is knowledge of divisibility tests. We check 1261 with all prime numbers one by one. First hit is 13 (2, 3 & 5 can easily be ruled out. Then try 7 and 11). Remaining number i.e. 1261/13 is 97. 1261 = 1 × 13 × 97 Now, 91 is divisible by 13 and 97 itself is present. So, 1261 will completely divide the expression. Hence, the remainder = 0
99.	**C**	Statement I: It is not possible to cut a rectangle into exactly 4 square sheets. But the 4 squares don't have to be equal in area. So, we can have 4

		squares - 8x8, 8x8, 4x4, 4x4 Statement II: Now we know that by merging two equal area congruent triangles we can form a rectangle. So, we have 5 equal sized rectangles instead of 10 triangles. We can easily cut 1 rectangle into 5 equal sized rectangles. Hence, both statements 1 and 2 are correct.
100.	**A**	To simplify we write percentages in decimal form, 0.7 x + y = 1.65 y Or 0.7 x = 0.65 y Or x/y = 0.65/0.70, which is less than 1. Hence, x < y ….(i) Now, 0.6 x + z = 1.65 z Or 0.6 x = 0.65 z Or x/z = 0.65/0.60, which is greater than 1. Hence, x > z ….(ii) From (i) and (ii), we get: z < x < y
101.	**C**	To answer this question, it is important to simplify the first line of the passage. It states that among the people who fail to accumulate sufficient money, the majority are easily influenced by external opinion. The author nowhere indicates that the majority of the people fail to accumulate sufficient money for their needs. Neither does the author state that most of the people are able to accumulate sufficient money for their needs. The passage adopts a balanced stand and at the same time recommends the importance of money. All these aspects are best captured in option (c).

102.	**A**	Statement (a) is correct. From the very first line, the author talks about the influence of the opinions of others. In the last line of the passage, the author outrightly says that you will not succeed in any initiative if you are influenced by the opinions of others. Therefore, there is a clear suggestion towards not being influenced by the opinion of others. Statement (b) is incorrect. The passage underlines the importance of accumulating sufficient money to meet one's needs. Because those who do not accumulate sufficient money end up being influenced by external opinions. This, nowhere, means that people should accumulate as much money as they can. Statement (c) is incorrect. The author only recommends not being influenced by the opinion of others. There is no mention of giving opinions. Therefore, this answer option is not completely within the domain of this passage. Statement (d) is incorrect. The last line of the passage states that if you are influenced by the opinion of others, you will not succeed in any of your ventures. The other way round need not necessarily be true. There is no guarantee that if you do not accept any opinion at all, you are bound to succeed. There could be other factors that are crucial for success. Hence, this answer option is incorrect.
103.	**C**	Statement 1 is correct. The author has said that the right of social order does not come from nature. It comes from convention. Social order is founded on conventions i.e. social order is emerging from conventions and social order is basis of all other rights. Hence, this statement is correct.

		Statement 2 is correct. If we negate this statement, the passage will become false because if rights of man can be exercised without social order, it cannot be called as basis of all other rights. Hence, by negation test we can say that this is correct as per the passage.
104.	**A**	Since there are only two candidates, if X got 56%, Y got 44%. Difference is of 12%. Now, Difference is given as 1440 (12% of votes casted). Therefore, total casted votes = 12000 Now, only 80% voted, so total voters = 12000/.80 = 15000
105.	**C**	LCM of 6, 9, 12, 15 and 18 = 180 Smallest number greater than 1000 which is a multiple of 180 is 1080. So, the required number with remainder 3 = 1080 + 3 = 1083
106.	**D**	The given product p × q = 2430 …(i) The last digit is 0, so one two of the digits must be 5 and other one an even number 2, 4, 6 or 8. Let this unknown digit be x. So, p = 10x + 5 and q = 50 + x putting in (i), (10x + 5) × (50 + x) = 2430 Now, try 2, 4, 6 and 8, x = 4 (we can easily eliminate others as they will yield either too big or small number than 2430)

		Therefore, p = 45 and q = 54 Required difference = q - p = 54 – 45 = 9
107.	D	Since all statements say "can be", we just need to find one case that is possible for each statement. This is not tough to do as shown below. p is a prime number. So, p can be 2, 3, 5, 7, 11, 13, ... q is a composite number. So, q can be 4, 6, 8, 9, 10, ... Statement 1: p × q can be an odd number, e.g. (3 × 9 = 27). Thus, statement 1 is correct. Statement 2: q/p can be a prime number, e.g. (4/2 = 2). Thus, statement 2 is correct. Statement 3: p + q can be a prime number, e.g. (3 + 4 = 7). Thus, statement 3 is correct. Thus, all the statements 1, 2 and 3 are correct.
108.	C	Statement 1: In 1 minute, Hour hand covers 0.5 degrees. So, at 3.16 pm, hour hand position in degrees = 192x0.5 = 96 In 1 minute, minute hand covers 6 degrees. So, at 3.16 pm i.e. 16 minutes, minute hand position in degrees = 16x6 = 96 Hence, statement 1 is correct. Statement 2 is bound to be correct as second-hand travels through entire clock in one minute. So, it will coincide with minute hand when it is between 4:58 p.m. and 4:59 p.m. Thus, both statements 1 and 2 are correct.

109.	**A**	After 20 ml of milk transferred from container X to container Y, Milk in container X = 100 – 20 = 80 ml Amount of solution in container Y becomes = 100 ml water + 20 ml milk = 120 ml Ratio of milk in container Y solution = 20 : 120 = 1 : 6 By corollary, ratio of water in Y solution = 5 : 6 (100 : 120) After 20 ml of milk transferred from container Y to container X, Milk in container X = 80 + 1/6 *20 = 83.33 ml Amount of water in Y = 5/6 * 100 = 83.33 ml Thus, m = n
110.	**D**	One of the easiest and quickest question in this paper. Any circle including a pie-chart has sum of internal angles as 360 degrees. Therefore, Angle A in the pie-chart = 360 – (90 + 50 + 45 + 75) = 100 So, Percentage of expenditure on item A = (100/360) × 100 = (250/9)%
111.	**C**	This question is more about the tone of the passage in terms of the value of research. Refer to the line: "Scientific research is probably never completely valueless." Option (c) expresses exactly the same point of view. The author adopts an optimistic approach towards the outcome of scientific research. The only concern is with reference to the nature of research. According to the author it should be original and not literary or historical.
112.	**C**	To arrive at the correct answer, it is important to observe the tone of the author. Refer to the line: "...there is always a chance that the result is of value to the investigator of talent..." It is highly likely that the result of scientific research is of value to an intelligent investigator in one way or the other. It

		is noteworthy that the author has stopped short of adopting an extreme stand - the result is always of value to the intelligent investigator. This cautioned stand of the author is aptly captured in option (c).
113.	**D**	Option (d) is correct as buffer stocking of water through dams and recharging aquifers would mean that the excess water is being stored above and below ground for later use i.e. managed and regulated for future consumption during lean season. Option (a) is incorrect as the passage discusses the temporal aspect of the same- 'too much' water during 120 days and 'too little' for the remaining 245 days and not the spatial or geographical aspect. Canals are solutions for geographical balance/distribution rather than temporal or time variance if rain. Therefore, it is not very suitable. Option (b) is incorrect as it is too farfetched solution and beyond the scope of the passage. Option (c) is incorrect as well as mentioned in option a solution.
114.	**B**	15 × 14 × 13 × 12 × 11 × 10 × 9 × 8 × 7 × 6 × 5 × 4 × 3 × 2 × 1 = 3m × n Numbers which are multiple of 3 = 15 × 12 × 9 × 6 × 3 = (3 × 5) × (3 × 4) × (3 × 3) × (3 × 2) × 3 = (3x3x3x3x3x3) × (5 ×4 × 2) Therefore, the maximum value of m is 6.
115.	**B**	We need to break down the numbers into their multiples to observe the pattern clearly : 1 x 1 x 2, 2 x 2 x 3, 3 x 3 x 4, 4 x 4 x 5, 5 x 5 x 6, ... Next number is 6 x 6 x 7 = 252 Hence, option (b) is the correct answer.

116.	**C**	There are 9 non-zero digits i.e. 1, 2, 3, 4, 5, 6, 7, 8 or 9 There are 5 vowels and 21 consonants in English alphabet (capitals only) The password starts with a vowel and ends with a consonant. So, the digit will come at the middle. The number of such passwords = 5 × 9 × 21 = 945 Hence, 945 such passwords can be generated.
117.	**D**	The cups will be arranged in a 3 × 3 matrix. We need to remove cases where any one row contains only Tea i.e. all 3 Teas in a single row. This can happen in 3 ways - first, second or third row. Therefore 3 cases need to subtracted from total combinations possible. Total arrangements = 9! /(6! x 3!) (by formula) Required answer = total arrangements possible - 3 = 84 - 3 = 81 Hence, option (d) is the correct answer.
118.	**C**	Let the 3 consecutive integers be x - 1, x, and x + 1 According to the question, sum = product, therefore (x – 1) + x + (x + 1) = (x - 1) × x × (x + 1) ⇒ 3x = x × (x - 1) × (x + 1) ⇒ x = 0, 2 or -2 Therefore, there are 3 such possibilities. Hence, option (c) is the correct answer. (Note that taking x, x + 1, x + 2 is only recommended in case of whole numbers and not integers which can be negative)

119.	**A**	Since, X and Y are distinct non-zero digits - 1 to 9 XY can be arranged in = 9 × 8 ways = 72
120.	**C**	Question looks unsolvable in the first glance due to high number of variables but is easily solvable as we don't need to find each variable but only the desired average. (A + B + C)/3 = 40 (given) => (A + B + C) = 120 .....(i) (B + D + E)/3 = 42 (given) => (B + D + E) = 126 .....(ii) F = B .....(iii) From equations (i) and (ii), we get: A + B + C + B + D + E = 120 + 126 Or A + B + C + D + E + F = 246 (replacing one B with F as F = B from equation iii) So, average weight of A + B + C + D + E + F = 246/6 = 41